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TIME IN OUR TIMES

STRETCHING CONTEMPORARY UNDERSTANDINGS OF TIME

Edited by Astrid Marie Holand

NORD University

NORD STUDIES IN REALITY FORMATIONS

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Astrid Marie Holand and Per Bjarne Ravnå

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Astrid Marie Holand

1 Conscious of Time? An Introduction

What is happening to perceptions of time, durability, and reality in the 21st century – and how do we deal with it? These are big and startling questions. Nowadays, nothing seems fixed. Even time itself appears to have become unpredictable: the Earth is spinning slightly faster, putting the atomic clocks slightly out of rhythm, with larger consequences in the digital world. And how about our rhythms in working and social life? The one thing that seems certain about the 21st century, is that most of the time we must deal with uncertainty. Although technology has eased daily life and supposedly provided more time, time actually seems to be quite limited all the time, and people seem to struggle with their time management in different contexts and situations.[1]

In this regard, we continue to experience the uncertainty felt by previous generations in their respective times. It is only in retrospect that we can fully grasp the course of events that would eventually be referred to as "our time."[2] More intangibly, but still noticeably, time looks different from separate standpoints and, as philosopher and sociologist Henri Lefebvre argued, "[w]hen we evoke 'time' we must immediately say what it is that moves or changes therein."[3] As pointed out by historian and horologist David Rooney, history of time is just as much a history of human motivation, in particular to measure, understand, and control time.[4] It is the history of power, control, money, morality, and belief.[5]

In this anthology we share unconventional observations about the nature of time in the contemporary moment, as seen from the Northern hemisphere, a peripheral perspective so to speak, with an interdisciplinary orientation. Among other things, we discuss how a mainstream perspective on time influences issues of public health and the environment, of technology and ethics, of stabilising or destabilising society.

1 Hartmut Rosa, *Beschleunigung: Die Veränderung der Zeitstrukturen in der Moderne* (Frankfurt am Main: Suhrkamp, 2005), 10–11.

2 Peter Siller and Ole Meinefeld, "Zur Einführung: Was heißt 'Zeitdiagnose'? Anmerkungen zu einem Nachgefragten Genre," *in Stichworte zur Zeit: Ein Glossar*, ed. Heinrich-Böll-Stiftung (Bielefeld: Transcript, 2020), 11.

3 Henri Lefebvre, *The Production of Space* (Cambridge, MA: Blackwell, 1991), 12.

4 See exemplary Frank Jacob, *Florentine Ariosto Jones: A Yankee in Switzerland and the Early Globalization of the American System of Watchmaking* (Wilmington, DE: Vernon Press, 2021), 1–28.

5 David Rooney, *About Time: A History of Civilization in Twelve Clocks* (London: Penguin Books, 2022), 8.

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Plenty evidence suggests that time is more fleeting, ephemeral, or fast for people now – more compressed, but also more complicated, complex, layered, and multi-faceted – accelerating but not simplifying. We seek to investigate if and why this might be so, taking a closer look at possible effects and consequences as well. To understand the new time emerging, we need to join forces of several scientific disciplines – as well as investigate how this new time is experienced by different people in different contexts. This orientation requires that we step outside of accepted ways of seeing time and see time anew: What can looking at different time perceptions right now tell us? What can historical, sociological, or phenomenological perspectives add? How can philosophical perspectives even enhance sociological perspectives and phenomenological perspectives on time? What resonance might it bring to compare the hurried pulse of urban everyday life to the slower pace of nature itself, or to the eon rhythm of geology?

Sociologist Hartmut Rosa describes a so-called *dynamic stabilisation* as a main characteristic of today's society.[6] The term underlines the idea that modern society maintains and stabilises itself through constant – and accelerating – change. The acceleration affects all parts of life. In his discussion of the social processes of acceleration Rosa refers to the mutually reinforcing processes of change characterising late modernity: technological acceleration; acceleration in the pace of social transformations; and acceleration in the pace of everyday life. People live more frenetic and task-packed lives, at least that seems to be a widespread opinion, and society is changing faster than it was in previous generations, not least due to the acceleration of technological change.

In this book, we deal with the acknowledged sociological approaches to the study of time summed up by Jiří Šubrt; time as *passing*, time as *duration,* time as *measure*, time *for something*, and time as *change*.[7] We do so through our own research on a diversity of cases across human society and history. Additionally, we observe the accelerating changes in the natural world.[8] Humanity is facing challenges in previously unhandled scales, and we do not really know how long we have got before these become insurmountable.[9] This again results from layers of

6 Hartmut Rosa, *Alienation and Acceleration: Towards a Critical Theory of Late-Modern Temporality* (Copenhagen: NSU Press, 2010); Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2015); Hartmut Rosa, *Resonance: A Sociology of Our Relationship to the World* (Cambridge/Medford: Polity Press, 2019).

7 Jiří Šubrt, *The Sociology of Time: A Critical Overview* (Cham: Palgrave Macmillan, 2021), 2–3.

8 David McKay et al., "Exceeding 1.5 °C Global Warming Could Trigger Multiple Climate Tipping Points," *Science* 377, no. 6611 (2022): 1–10, https://www.science.org/doi/10.1126/science.abn7950.

9 IPCC, "Climate Change 2021: The Physical Science Basis," August 9, 2021, accessed November 25, 2023, https://www.ipcc.ch/report/ar6/wg1/.

uncertainty; in how *society* will respond, in how *ecosystems* will respond, and finally the impact of biophysical feedbacks in the atmosphere, land surface, and oceans (see chapter 5).

Thus, with time and the pace of life itself brought into focus, several important questions arise: What *is* time to us; is it predominantly treated as a *social* or an *economic* resource, are we heading for short-term or long-term payoffs for time invested, and what sort of pay-offs could it be? What will be the future outcomes of the way we use our time today? How much acceleration can we eventually handle? What are the implications of seemingly shrinking planning horizons and attention ranges, when we collectively have to devote quality time into coming up with cogent solutions to the world's mounting problems? Would anything change if we took Heidegger's stance and saw ourselves as "cast into time" with a focus on the future, or if we took an indigenous perspective considering the seventh generation coming after us in our present words, work, and actions?

An overarching answer to questions like these could be that we need to be *time conscious*. Being time conscious is closely related to a mindful consideration of how time is spent, individually and collectively.[10] Given the premise that our present technology and social structures are outcomes of past enactments in temporal horizons (see chapters 3 and 4) – the aggregated sum of today's choices and actions will eventually shape tomorrow's technology, structures, and scope of possible actions, thus tomorrow's response-ability to meet future challenges. That may be the way in which our time will eventually be seen in retrospect. We will return to this in the concluding reflections (chapter 14).

This is a book about multi-layered time and theories of time, encompassing the philosophy of time, the sociology of time and the lived experience of time. Our purpose is to explore a diversity of insights about time in "our time"; challenges and opportunities regarding aspects of time, as seen from our historical and geographical standpoint, that of contemporary society in the Northern hemisphere. All contributions discuss how time can be seen, and how these views relate to changes in nature, technology, economy, working life, politics, religion, or philosophy specific to our own time. Findings are discussed within three themed sections; *In search of a deeper theory of time, Time as social expectancy*, and *Time as lived experience*.

In the first section, we introduce some fresh theoretical concepts to understand time today. In this section we demonstrate how perspectives from formal logics, history, complexity theory and geology together create a deeper under-

10 For a theoretical discussion see, among others, Sheila Liming, *Hanging Out: The Radical Power of Killing Time* (New York: Melville House, 2023).

standing of time per se. Furthermore, these perspectives together provoke contemplation over how human understanding of time informs and guides our actions. Our understanding of time influences our planning horizons, our sense of faith or (in)determinism and of future scenarios, just to mention a few examples. Thus, if a different kind of time is emerging, or is commonly expected to be emerging, society will change.

In the second section, we investigate what could be summed up as *social times*, demonstrating, through a set of social examples, that a different kind of time is in fact emerging. Overall themes are the compression and acceleration of time, why and how *expectations* of time are changing, and how this in turn leads to layering into more than one time, of work time and leisure time alike, in ways previously not thought possible. There is a social unease in these chapters: A dissonance and protest against the compressed and accelerating time and its consequences is imminent, in itself contributing to further layering of time.

In the third section, we explore individual experiences of time in various life pursuits, fleeting or enduring, grappling with eternity or timelessness. The people in focus here represent possible countering voices to the contemporaneous account of time, but at the same time confirming voices, because what they in various ways stand or step outside of is namely the mainstream compression, acceleration, layering of time right now. By actively not taking part, however (in)voluntarily or (in)permanently, they confirm the existence of the phenomenon not taken part in. While similar contrasts would have been observable some years ago, because acceleration of time has gone on for some years, with increasing acceleration the discrepancy is only increasing. What these opponents (in a wide sense) do demonstrate, though, is that other modes of living time *are* possible, even though people pursuing – or being stuck in – such other modes may struggle now. However, this clarity through contrast is required to properly understand the full picture of time in Our Times, but then also to suggest that time (as well as our perception of it) might change again.

The key concept of 'rhythm' comes into play when thinking about the diverse ways in which people fit their lifestyles and life choices into their individual time horizons. As Johannessen discusses further in chapter 3, the individual rhythm shapes the individuals' time horizon, and planning horizon. The most intriguing part is how different these rhythms can be, varying with place, context, and social practice (some widely dissimilar examples appear in part 3 of this book). The point is that awareness of how rhythms define both expectancies and experiences of time subjectively (individual time) and socially (social time), is part of being conscious of time. A human capacity exists that allows us to sense an elasticity in our experience of rhythm and time, which also helps us define how we can

change tempo in our activities and thought patterns. This is a capacity we need to be aware of.

In this anthology, we will encounter various types of time rhythms. While all chapters deal with large social rhythms (especially chapter 4 and 14), individual rhythms get more emphasis in part 3 (chapters 10–13). Elsewhere, primacy is given to work rhythms (chapters 6–9), nature-related rhythms (chapters 9, 11, 12), the planet's own rhythm (chapter 5), religious/spiritual rhythms (chapters 2, 11, 13), and cyber-rhythm (chapter 3). What is notable, is how technology changes individual and social rhythms, with chapter 3 providing key examples of this.

If we look to philosophy and sociology, or more specifically; to medieval thought further elaborated by sociologist Pitrim Sorokin, any socio-cultural understanding of time corresponds to some given socio-cultural conditions, and changes as these conditions and their rhythms change. Sorokin further holds that a predominantly qualitative 'socio-cultural time' exists alongside a quantitative 'mathematical time', and that challenges arise when these are envisioned to be equivalent, which they are not. So, even if, say, a calendar is based on the movement of the sun, moon, and earth ('mathematical time' or 'astronomical time'), its function is to synchronise social activities ('socio-cultural time').[11]

Timestyle could be a suitable term for a socio-culturally conditioned understanding of time, containing the contemporaneously relevant layers of time. Building on Sorokin, the dominant timestyle of the last two centuries has become increasingly focused on what is dynamic, fleeting, and passing, in contrast to medieval thought which was more preoccupied with eternity, and what was eternal or lasting.

In this book, we will encounter some different socio-cultural timestyles. Shortcomings of the currently dominant timestyle will be thematised in some of the chapters, while others take a more explorative approach. In total we aim to contribute to a deeper understanding of the interrelation between social time and social reality, which Šubrt calls for.[12] If the social sciences wish to be conscious of time, namely analysing the timestyle of any society in focus would be prerequisite.

In the following sections, we will introduce the chapters in more detail. While doing so, we might challenge some widespread popular perceptions of the concept of time and the way it relates to our everyday lives.

11 Pitrim A. Sorokin, *Sociocultural Causality, Space, Time: A Study of Referential Principles of Sociology and Social Science* (New York: Russel & Russel, 1964).
12 Šubrt, *The Sociology of Time*, 124.

In Search of a Deeper Theory of Time: Constructing and Defining Time

How do humans collectively *construct* time, and what are the consequences of these constructions? For instance, how we construct time relates to how we envision the passage of time. Does time pass or approach us, evolve in dialectic patterns, oscillate, or maybe even repeat itself in cycles? Traditionally, a main difference would be between a *linear* and a *circular/cyclic* understanding of time. Given, then, that mainstream time in our times is linear, how about the concept 'The *end* of time'? What does that mean? Does the line have an end? *How* does time eventually 'end'? Will there be something afterwards, maybe a new start of some kind? Or does 'end of time' for us simply mean 'end of Anthropocene'?

Just mentioning these examples serves to flag up a variety of connotations, relating to large questions of religion, politics, nature, science, and economics – but also to different aspects of everyday life. What would a society's construction of time have to say for the collective and individual planning horizons? What could it mean for technology development, mediated expressions, or *cyberity* (the human and technological cyber activity)? Will there be a teleological end to a fulfilled technological development? When we think in terms of preconditioned scenarios, is that itself not a construction of different versions of a possible future, regardless of the latter being near at hand or a bit further ahead in time?

Constructs of time are of course highly context- and discipline-reliant. A physicist like Einstein, a religious thinker like Calvin and a computer scientist would of course have completely different approaches to what time 'is', 'means', 'contains' or 'does'. Or – could there be a link between their separate constructs of 'time', if seen in a larger picture? In the first section of the book, we aim to let philosophy, formal logics, complexity theory, history, life sciences and geology complement each other, developing a larger picture of time with more depth of field.

Metaphorically speaking, we may all be said to be on a journey through a branching time structure of possibilities, a way of "parallel-reality"-thinking that has inspired literature in fascinating ways. Starting from this philosophical angle, Peter Øhrstrøm (chapter 2) follows the steps of logician Arthur N. Prior (1914–69), a leading scholar within modern philosophy of time. Prior's formalism was used in computer science to logically analyse all the probable ways in which a certain computer program can run. Over the years, his tense logic has inspired computer programming language, and, in due course, language used in development of artificial intelligence. Øhrstrøm demonstrates how Prior's *tense logic* and philosophy of time provides a conceptual framework for the study of essential problems re-

garding time and reality, such as determinism versus indeterminism. Branching time then represents a fruitful intake to understanding layering time, coping with time and scenario thinking, and to which extent free choice exists.

These questions get another twist when Stig O. Johannessen (chapter 3) draws on complexity theory as he explores how time changes when technological cyber activity (*cyberity*) morphs with physical, social, and cultural reality (society). He suggests a shift from seeing technology and social structures as physical and static objects (systems), towards seeing them in terms of *past enactments* in temporal horizons of time and space. Throughout such processes, the premises for future events and actions are entangled with the experiences of what has gone before. The argument underlines the importance of understanding patterning processes, where rhythm is essential. Johannessen mentions several established rhythms, and suggests that there is a *cyber-rhythm* for human and technological cyber activity. He also points to an alarming feature of these patterning processes, which is that they may *seem* organised, when in fact they are not. This then, of course, evokes another (perceived) aspect of determinism versus indeterminism, regarding the range of choice in coping with the acceleration of time.

Drawing on historical examples, Frank Jacob (chapter 4) demonstrates that even the eventual outcome of revolutionary attempts relies on the sum of patterning processes in their contemporary society. Revolutions are of course embedded in a specific time, but still usually determined by events outwith the control of active revolutionaries. This was undoubtedly an issue of frustration for those who argued within their own historical context that the time be ripe for revolutionary action; they could not alone decide this and could not know the outcome. Generic models for the analysis of revolutionary processes show that protests turn into full-fledged revolutions only when they pass a "certain point of no return."[13] However, when we later historicise such events, knowing the outcome, our constructed narratives will not necessarily chime with how the revolutionary time was experienced by partakers and eyewitnesses. As a consequence, we have to understand and analyse revolutionary time with three distinct ideas (or layers) in mind; revolutionary *past time*, revolutionary *present time* and revolutionary *future time.*

The notion of 'uncertain future' has several layers of meaning. Some of these are already touched upon when we discuss (in)determinism, but perhaps most commonly, such an expression will be associated with risk scenarios. For the political establishment, an imminent revolution would of course represent a risk scenario. But how likely is it to happen? Different future scenarios could well be

13 Frank Jacob, *#Revolution: Wer, Warum, Wann und Wie Viele?* (Marburg: Büchner, 2022).

pictured as a branching time 'tree', where we see some possible alternatives, and where our actions today influence which alternative will materialise, again an enactment of the future. However, an 'uncertain future' also implies that the greater the distance in time, the less foreseeable the future. What does it imply that a far-off future is barely recognisable to us in our time? What are the consequences, for instance, for our common ability to relate to this future? What is our actual limit for imagining the future?

Surprising perceptions about planning horizons, and "future" as something quite close in time, is the starting point for Dag O. Hessen, Manjana Milkoreit and Christina Nadeau (chapter 5). They draw attention to the fact that climate projections typically end in 2100. This is an incredibly short time span in the history of the planet, and in the perspective that climate change will not plateau by then, but will continue over the next centuries. We as a species are in every way unprepared to face it, yet we will not escape having to confront it. Discussions of tipping points, reaction ranges and the future consequences of today's actions place time horizons and constructs of time in a deeply moral context as well. Is what happens 1000 years, or even 100 years down the line irrelevant to us? Time horizons in natural sciences, the "deep" time, geological time, and biological time, offer highly relevant perspectives in a climate future context. Planning, or rather caring, for those further down the timeline is taken to another level in these long perspectives.

The length of our planning horizon is particularly relevant in the context of climate change and nature degradation, where the choices we make today will affect the life for future generations of humans and all other life forms. What would make us, collectively, more ready to act? Might it be some belief that we have eternity at our disposal, or the actual realisation that our own time (and thus our own individual time to act) is limited? In chapters 5 and 13 we will encounter very different approaches to a long-lasting future, with accordingly different thinking concerning climate and the need for an environmentally friendly lifestyle.

One of the philosophical takeaways from section 1 is this question: What are the consequences of seeing the future as something *separate from us*, in contrast to seeing the future as something *enacted by us*, or in contrast to something being *predetermined for us*? How might philosophical questions like these find their place at all when time appears to be both *accelerating* and *compressed*? Let's keep this in mind as we move on to investigate social time in our times.

Time as Social Expectancy: Regulating and Mastering Time

A universal social expectancy is that members of society comply to their society's expectancies. What these expectancies more specifically demand, of course varies by time and place. However, how to spend time, and how long various tasks are allowed to take, are among the central social expectancies. If time in contemporary society appears to be both accelerating and compressed, how would that be reflected in contemporary social expectancies? Would not one such expectancy be that we keep up with the pace? And how would that come to light, if not in situations where keeping pace seems difficult? Exactly where social expectations come from can be hard to pin-point, as any authority typically represents the system more than representing themselves in these matters. Sometimes, expectations are even projected onto others (e.g. audiences, see chapter 8). But by studying social practices, the norms and conventions guiding these practices, and also the challenges and mismatches, we can uncover that such expectations exist. We can also find that different roles and responsibilities may encompass diverging expectations. This in turn contributes to a layering of time, where the different expectations of time usage represent different layers. This is a way of coping simultaneously with the incompatible, but then also contributing to a new time emerging; the timestyle of our times.

Some of these questions are old, though. Historians, social scientists, and sociologists have long been occupied with aspects of time. Historians have, among other topics, focused upon what we can learn about our ancestors' perception and regulation of time in their times. Historians of time have well documented how authorities exercising control over people's time is nothing new, rather it is the rule throughout millennia.[14]

In classical sociological theory, the discussion on time traces back to ideas about an increased time pressure associated with capitalism and modernism. In economic practices following the Industrial revolution in the 18th century, it pays off to get more done in less time. A desire to regulate and master time for economic purposes was the premise advocated by Benjamin Franklin (1748) in his *Advice to a Young Tradesman*: "Remember that Time is Money." Franklin's instruction is to spend both commodities in the 'best' way: "Waste neither Time nor Money, but make the best Use of both."[15] This thinking fit well with the ideas pro-

14 E.g. Rooney, *About Time*.

15 Benjamin Franklin, "Advice to a Young Tradesman," *National Archives*, accessed May 9, 2023, https://founders.archives.gov/documents/Franklin/01-03-02-0130.

pounded during the Scottish Enlightenment of the 1770s, encouraging globalisation, market liberalism and competition based on the principle of survival of the fittest.[16] This is a philosophy of time efficiency which is still alive and kicking.

Sociological analysis of time starts with addressing the consequences of a factory system with continuous work forced by machines, and excessive lengthening of the working day. Durkheim, Simmel, and Marx all focused on aspects of time in their analyses. The mechanical clockwork was seen as the gamechanger, clearly changing the employers' expectations of how workers should spend their time. According to Šubrt, this is how the problem of time first appears in the early stages of sociological thought.[17]

These concerns have achieved renewed attention due to intertwined development trends of marketisation, globalisation and digitalisation in the late 20th century, addressed by Giddens among others.[18] With the 1970s and 1980s *neoliberal shift* in international politics, political thinking has become increasingly predominated by a market logic with great emphasis on competitiveness and efficiency.[19] Surely, this influenced time expectancies everywhere in society. In the public sector, commodification of time seems to have increased with New Public Management (NPM), an efficiency-oriented managerial logic accompanying the neoliberal shift (see chapters 6 and 7).

Literature on late modernity picked up on these themes, emphasising how the acceleration in the pace of life was leading to ever-increasing time pressure.[20] Coinciding with the initial phase of the neoliberal shift, sociological attention to time issues started rising in the mid-1970s.[21] Time became central in various subdisciplines within sociology, notably, historical sociology, sociology of work, and sociology of technology. The recent decades have seen a huge interest in time

16 Henry William Spiegel, *The Growth of Economic Thought* (Durham, NC: Duke University Press, 1991).

17 Šubrt, *The Sociology of Time,* 29.

18 Anthony Giddens, *Reith Lectures: Runaway World: Lecture 1: Globalisation*, accessed May 14, 2023, http://downloads.bbc.co.uk/rmhttp/radio4/transcripts/1999_reith1.pdf.

19 Francis Sejersted, "Frihetsrevolusjonen," *Nytt Norsk Tidsskrift* 24, no. 3 (2007): 256–267; Einar Lie, *Norsk økonomisk politikk etter 1905* (Oslo: Universitetsforlaget, 2012).

20 See Charles Tilly, "Reflections on the History of European Statemaking," in *The Formation of National States in Western Europe*, ed. Charles Tilly (Princeton, NJ: Princeton University Press, 1975), 3–83; Arlie R. Hochschild, *The Time Bind: When Work Becomes Home and Home Becomes Work* (New York: Metropolitan Books, 1997); Leslie A. Perlow, "The Time Famine: Toward a Sociology of Work Time," *Administrative Science Quarterly* 44, no. 1 (1999): 57–81; Judy Wajcman, *Technofeminism* (Cambridge: Polity Press, 2004); Wiebke Bijker and John Law, *Shaping Technology/Building Society: Studies in Sociotechnical Change* (Cambridge: The MIT Press, 1992).

21 Jiří Šubrt, *The Sociology of Time*, 2.

pressure, especially in the workplace, as indicated by a large and still-growing volume of academic and popular literature. A common claim based on US data, was that people were working longer days, and that this applied generally across the spectrum of income and family type.[22] Just before the turn of millennia, economist Leslie A. Perlow addressed what she called a *time famine* in workplaces: Employees felt that they always had too much to do, never enough time to do it, plus they were expected to always be available for more work. Perlow asked whether this famine must exist.[23]

As will be shown in part 2 of this book, the time famine still exists. Along with other issues resulting from structural problems, it has proven hard to place the responsibility for expectancies like these properly and concretely, and when unaddressed they remain projected as the individual's problem. Characteristics of "the new working life" have been an increasing demand for the individual's adaptability, looser attachment to the workplace or employer, and pressure on collective rights which, among other things, used to regulate working hours.[24] Hot topics in popular books of the recent decades are time pressure, 24/7-society and time acceleration.[25] These titles received high media exposure, and it is evident that the term 'timesqueeze' in modern life has become a 'folk narrative' about our times.[26] In Scandinavia, the academic and parent Bodil Jönsson provided some thoughtful advice concerning how to take back control over time.[27]

Over the past decades, an efficiency 'speedrun' towards a more cost-efficient working life has been associated with the neoliberal shift. In this, time has proven

22 Juliet Schor, *The Overworked American: The Unexpected Decline of Leisure* (New York: Basic Books, 1992).

23 Perlow, "Time Famine."

24 AAD, *NOU 2004:5 Arbeidslivslovutvalget – Et arbeidsliv for trygghet, inkludering og vekst* (Oslo: Arbeids- og administrasjonsdepartementet, 2004); Jørn Ljunggren, "Det 'nye' arbeidslivet," *Norwegian Journal of Sociology* 4, no. 1 (2020): 51–57; Line Eldring and Elin Ørjasæter, *Løsarbeidersamfunnet* (Oslo: Cappelen Damm Akademisk, 2022); James Bloodworth, *Innleid og underbetalt: Undercover i et arbeidsliv uten rettigheter* (Oslo: Res Publica, 2019).

25 Respectively, Brigid Schulte, *Overwhelmed: Work, Love, and Play When No One Has the Time* (New York: Farrar, Straus and Giroux, 2014); Jonathan Crary, *24/7: Late Capitalism and the Ends of Sleep* (London/New York: Verso, 2013); Robert Colvile, *The Great Acceleration: How the World is Getting Faster, Faster* (London: Bloomsbury, 2016).

26 Dale Southerton and Mark Tomlinson, "'Pressed for Time' – the Differential Impacts of a 'Time Squeeze'," *The Sociological Review* 53, no. 2 (2005): 215–239; Judy Wajcman and Nigel Dodd, *The Sociology of Speed: Digital, Organizational, and Social Temporalities* (Oxford: Oxford University Press, 2017); Judy Wajcman, *Pressed for Time: The Acceleration of Life in Digital Capitalism* (Chicago: The University of Chicago Press, 2015).

27 Bodil Jönsson, *Ten Thoughts About Time: A Philosophical Enquiry* (London: Constable & Robinson, 2003).

to be a major economic asset, just as Franklin advised. Commodification of time, and the tyranny of the clock are central topics in the second part of this anthology, as are measures which attempt to regulate and master time. If time is money, then it must be accounted for, which is a central premise in chapters 6–8. As an overall theme, part 2 of this book deals with examples of dissonance between a qualitative 'socio-cultural time' and a quantitative 'mathematical time' in our times.

Because of its cultural and historical backdrop, the Scandinavian context is well-suited for shedding a critical light on the expectancies accompanying time regulatory regimes that have otherwise gone mainstream. This is in part because neoliberal thinking has proven to be less compatible with core ideals of social egalitarianism in the Nordic Social Democracy.[28] Also, unions have been resilient here, in itself an effective determinant of economic equality.[29] The lurch towards neoliberalism has thus been less pronounced here, and NPM reforms were implemented more incrementally in Norway than in countries such as the UK.[30] Still, a restructuring of several major state workplaces between 1985 and 2001 is referred to as "the transition from 'governance' to 'market'."[31]

Both municipalities (chapter 6) and academia (chapter 7) have seen similar reforms, and these have been contested. Yet another characteristic feature of these trends, affecting public institutions like hospitals and universities, was top-down arranged mergers into larger units, justified by a strong belief in large-scale advantages and synergies.[32] However, as Jacob Dahl found, once a corporation, public or private, reaches a certain size, time-consuming extra-administrative work, like unneeded meetings and unnecessary reports, starts to occur.[33] These are more prop-

28 Astrid Marie Holand, "Egalitarian Norway in Three Stages – A Historical Overview," in *The End of Norwegian Egalitarianism? Limits and Challenges to a Cherished Idea*, eds. Astri Dankertsen and Christian Lo (Oslo: Universitetsforlaget, 2023), 119–139; Synnøve Bendixen, Mary B. Bringslid and Halvard Vike, *Egalitarianism in Scandinavia: Historical and Contemporary Perspectives* (Cham: Palgrave, 2017), 276.

29 Walter Scheidel, *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century* (Princeton, NJ: Princeton University Press, 2018).

30 Berge Furre, *Norsk historie 1914–2000: Industrisamfunnet – frå vokstervisse til framtidstvil* (Oslo: Det norske samlaget, 2000); Tom Christensen and Per Lægreid, "New Public Management i norsk statsforvaltning," in *Den fragmenterte staten*, eds. Bent S. Tranøy and Øyvind Østerud (Oslo: Gyldendal, 2001), 67–95.

31 AAD, *Arbeidslivslovutvalget*, 63.

32 See respectively Linda H. Haukland, *Nye høyder* (Stamsund: Orkana Akademisk, 2015); Wilhelm Karlsen, Astrid Marie Holand and Ole Georg Moseng, "*Medicinalindretningen": Nordlandssykehusets historie 1796–2020: Somatikken* (Oslo: Cappelen Damm, 2021).

33 Jacob Dahl, *In Search of Time: Understanding the Nature and Experience of Time for a Better Life* (London: LID Publishing, 2022).

erly labelled large-scale *dis*advantages, which negatively affect employees' job satisfaction, as both their perceived time autonomy and the perceived meaningfulness of working tasks decline. As we shall see in chapters 6 and 7, work resonance is essential for work-life survivance in today's timestyle.

Firstly, we might ask how today's timestyle prepares grounds for cross-sectoral work. This is a highly relevant question in light of the call for responsibility in chapter 5. The UN's sustainability goal (SDG) No 17 "Partnership for the goals" has been implemented in state demands on municipalities, as has co-creation as a more inclusive working method. Nevertheless, based on a longitudinal case study, Astrid Marie Holand and Tanja Ellingsen (chapter 6) reveal that time is a major restraining factor when it comes to the potential success of such work. Finding time for co-creation was a real challenge in the cases studied here. Informants also felt that they had to justify that the time invested paid off, thus a time-is-money way of thinking. Lack of resources at present and in the future are central motivators for attempting to get more out of less through co-creative work with SDGs. This becomes a paradox when a time-consuming working method is launched as the solution to a scarcity problem – including time shortage. For instance, co-creative SDG work in Norwegian municipalities presupposes cooperation with NGOs. But in our times, notably fewer people seem to find the time for volunteering on a regular basis.[34] This leads to a situation where, to a larger degree, NGOs hire employees instead of solely using volunteers.[35] However, as shown in chapter 6, NGO employees sometimes volunteered as well, when their work demanded extra hours and they found it meaningful. But this, in turn, indicates that co-creation works in spite – not because – of the NPM-induced time regimes in the public sector. Instead, it relies on the individual's commitment.

Camilla S. Stenberg and Karianne S. Olsen (chapter 7) found parallel examples when they examined tyranny-of-the-clock-like challenges in the *accelerating academia,* where more work is required in less time. During the past 20 years, employees in higher education saw an increase in managerial and market-oriented reforms with an NPM approach. Unrealistic demands on task efficiency, here exemplified by *time budgeting,* are reported to undermine job satisfaction. But, like the NGO employees, many academics volunteer if their work demands extra hours. One example is the extra hours needed to manage the swift transfer into all-digital teaching during Covid-19 lockdown. Norwegian Unions calculated that unpaid academic

34 Ivar Eimhjellen et al., "Changing Patterns of Volunteering and Participation," in *Scandinavian Civil Society and Social Transformation: The Case of Norway*, eds B. Enjolras and K. Strømsnes (New York: Springer, 2018), 25–65.

35 "SSB: 08520: Årsverk, etter statistikkvariabel, årsverk, aktivitet (ICNPO) og år," *Statistics* Norway, accessed June 6, 2023, https://www.ssb.no/statbank/table/08520/tableViewLayout1/.

volunteer work was worth 2 billion NOK in 2021.[36] Naturally, it comes at the expense of other activities associated with the ideal modern lifestyle. For example, these workers can forget about finishing work at 5 pm. A main question is whether an assembly-line like academia, with scholars experiencing extensive fragmentation of time, is feasible for meeting the needs of the future. Lost opportunities to think long, coherent thoughts – for both lecturers and students – could thus be unregistered costs.

Mads Skauge and Arve Hjelseth (chapter 8) address the issue of adherence to shrinking attention ranges in yet another field, with their examination of how time is structured in sporting events. Their point of departure is the notion of *compressed* time, in the sense that short-time representations threaten to replace the longer ones.[37] This is evident in many fields, including popular culture, music, literature, news – and sports. A sports competition often lasts for a significant amount of time. How then to tackle the decreasing number of spectators and TV viewers able to follow an event over a longer timespan? To explore these issues, the authors conducted fieldwork during the biathlon World Championship in Oberhof, Germany, in February 2023. The Biathlon seems well suited for this analysis. The competition contains a mix of cross-country skiing and performances on the shooting range, with the latter being regarded the most exciting, but, where *waiting* for the shooting to begin is a necessary part of the dramaturgy. Hjelseth and Skauge investigate how the International Biathlon Union (IBU) frames the events with a view to keeping potentially impatient spectators engaged. But, knowing that this adaptation has its limits, they also explore how a World Cup weekend can instead lead people to suspending their routines of everyday life, offering a different mode of time, or rhythm.

In industrial and post-industrial societies, time is often talked about as our most precious resource because by its nature it is so limited.[38] This has arguably led to the emergence of what historian Edward P. Thompson calls 'clock time' as opposed to 'task time'.[39] As we will see, the individuals observed in chapters 6, 7 and 8 all struggle in various ways with aligning 'task time' to 'clock time'. Mainly, it is this struggle that produces time pressure, when tasks (like getting to know

36 Martin Bergesen, "Tiden er ute," forskerforbundet.no, accessed June 16, 2023, https://kampanje.forskerforbundet.no/.

37 Thomas Hylland Eriksen, *Tyranny of the Moment: Fast and Slow Time in the Information Age* (London: Pluto Press, 2001).

38 Julia Hiemer and Maike Andresen, "When Less Time is Preferred: An Analysis of the Conceptualization and Measurement of Overemployment," *Time & Society* 29, no. 1 (2020): 74–102.

39 Edward P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past & Present* 38 (1967): 56–97.

new potential collaborators, advising a student, or finishing a skiing lap) need to be done, but a realistic amount of time is not available i.e. Perlow's *time famine*.

Informants in chapter 9 have sought to escape this time struggle. Tom Bratrud discusses a key motivation for urban-rural migration in Norway, based on ethnographic research in a Norwegian highland valley in 2020–22. His interlocutors report to have experienced a time squeeze in the city, and he goes on to show how they were able to take proactive action with a view to improving their situation and live a life more in tune with their values. A desire for a different rhythm, and a wish to increase the value of life seems central.[40] Here, one's experiences and constructions of *time* is inextricably linked to the qualities of the *place* and vice versa.[41] The migration could well be seen as an expression of the overlapping of times, as an example of the book's identifying of the greater acceleration, even an ostensible example of rebellion against that. Moving to a different place where one can allow oneself to live at a different pace or rhythm is an autonomous and empowered way of escaping unwanted time pressure. However, maybe it also involves making such a large lifestyle choice that it might be easier to just do it part-time?

Time as Lived Experience: Living Your Time at Your Own Pace?

Being *time conscious* in our understanding refers to an attentive and considerate attitude regarding how time is constructed, regulated, and spent, both individually and collectively. This requires an awareness not only of how past, present, and future options, actions and responsibilities play off each other – but also increased awareness of how lived time is *felt*. This is not to be confused with *time consciousness*, which can be defined as the *conscious experience of time* itself.

However, when discussing experienced time, we are approaching the fields of neuroscience and of phenomenology. The latter tradition offers some noteworthy theories explicating that an experience happens within an 'extended present', a unified temporal and spatial whole which contains the whole experience, for example, psychologist and philosopher William James' "stream of consciousness" and philosopher and funding phenomenologist Edmund Husserl's "inner time

40 Nancy Munn, *The Fame of Gawa: A Symbolic Study of Value Transformation in a Massim Society* (Durham, NC: Duke University Press, 1986).

41 Jon Thrift and Nigel May, *Timespace: Geographies of Temporality* (London and New York: Routledge, 2001).

consciousness."[42] According to Kent and Wittman, this is in opposition to the neuroscience tradition of researching consciousness as series of impulses, each with a very limited time range. They argue that *neural, functional*, and *phenomenal* aspects of time need to be triangulated in order to understand the key features of *time consciousness*. They further argue that the aim would be to

> arrive at a theory that simultaneously explains how underlying neural dynamics in time generate a conscious experience of time, how the experience of time affects how people perceive, think or act at specific times, and how those perceptions, thoughts, and actions feedback to shape (or a complementary to) the underlying neural (temporal) dynamics and conscious experience.[43]

Central features are perceived *extension/duration* and *continuity/flow*, features that we focus on in the third part of this anthology. However, we seek to examine how people in different life situations themselves report how they respond to diverging and conflicting constructions – and thus diverging and conflicting perceptions – of time. In this part, investigating situations where individuals may feel out of pace with mainstream societal time is central.

To some extent, experiences collected here can be seen as counter-reactions to the time regulation regimes portrayed in part two of this anthology. Certainly, lived time is not necessarily perceived as 'linear' or as a 'fast stream forward'. Instead, individuals in various ways have to escape the hurry, and even the linear perception of time. This might indicate that a linear way of living time does not necessarily come naturally to us, neither does the assembly line lifestyle that some regulatory measures seem to produce. At one end of the scale, urban-rural migration and outdoor recreation are counter-reactions to a stressful urban lifestyle, indicating that individuals search for a different and more harmonious way of living their time. At the other end of the scale, involuntary non-participation in society can be seen as a symptom of *society's* dysfunctionalities rather than individuals' dysfunctionalities regarding what is a liveable pace of life. Again, we encounter issues that might be structural problems, but which are turned into individuals' problems when unaddressed.

More recent influential theories on the topic of speed-up, particularly that of 'social acceleration', draw on elements from both classical and late modern litera-

42 Respectively, William James, *The Principles of Psychology* (London: Macmillan, 1890); Edmund Husserl, *On the Phenomenology of the Consciousness of Internal Time (1893–1917)* (Dordrecht: Springer, 1991 [1928]).

43 Lachlan Kent and Mark Wittman, "Time Consciousness: the Missing Link in Theories of Consciousness," *Neuroscience of Consciousness* 7, no. 2 (2021): 1–10, doi: 10.1093/nc/niab011.

ture.[44] As globalisation, automation and digitalisation increased from the 1990s and early 2000s onwards, sociologists have paid increasing attention to speed and acceleration,[45] and to the relationship between time and technology, digitalisation, and automation.[46] In the words of Anthony Giddens: "For better or worse, we are being propelled into a global order that no one fully understands, but which is making its effects felt upon all of us."[47]

The arrival of the world wide web during the 1980s, followed by media digitalisation, online publishing without the traditional deadlines, and the emergence of social media have further contributed to the perception of accelerating time.[48] This is even more pronounced, now that non-mediated gaps in everyday life are rapidly disappearing.[49] As Skauge and Hjelseth point out (chapter 8), the gaps in everyday life are filled with media content. The many online activities compete for people's time against any other human activity, including sleep.[50] According to a literature review of work-life studies conducted during the Covid-19 pandemic and lock-down, extensive online working blurred work-life boundaries even further, resulting in even greater time pressure, and causing psychological stress and emotional exhaustion.[51]

This is part of the backdrop for the chapters in both the second and third part of this anthology, which focus on *time as social expectancy* and *time as lived experience*, respectively. Some common expectations of how time should ideally be spent

44 Rosa, *Alienation*; Rosa, *Social Acceleration*; Rosa, *Resonance*.

45 Zygmunt Bauman, *Liquid Modernity* (Hoboken, NJ: Wiley, 2000); Manuel Castells, *Rise of the Network Society* (Hoboken, NJ: Wiley, 1996); Manuel Castells, *Communication Power* (Oxford: Oxford University Press, 2009); Wajcman, *Pressed for Time*.

46 Rosa, *Social Acceleration*; Wajcman and Dodd, *Sociology of Speed*; Leslie Perlow, *Sleeping with Your Smartphone: How to Break the 24/7 Habit and Change the Way You Work* (Brighton, MA: Harvard Business Review Press, 2012); Jens Beckert, *Imagined Futures: Fictional Expectations and Capitalist Dynamics* (Cambridge, MA: Harvard University Press, 2016); Jonathan Martineau, *Time, Capitalism and Alienation: A Socio-historical Inquiry into the Making of Modern Time* (Leiden: Brill, 2015); Filip Vostal, *Accelerating Academia: The Changing Structure of Academic Time* (London/New York: Palgrave Macmillan, 2016).

47 Anthony Giddens, *Reith Lectures: Runaway World: Lecture 1: Globalisation*.

48 Ana-Maria Cazan, "The Digitization of Working Life: Challenges and Opportunities," *Psihologie Resurselor Umane* 18, no. 1 (2020): 3–6.

49 Wajcman, *Pressed for Time*; Trine Syvertsen and Gunn Enli, "Digital Detox: Media Resistance and the Promise of Authenticity," *Convergence* 26, no. 5–6 (2019): 1269–1283.

50 Lena Lindgren, *Ekko* (Oslo: Gyldendal, 2021); Johann Hari, *Stolen Focus: Why You Can't Pay Attention* (London: Bloomsbury Publishing PLC, 2022).

51 Xi Wen Chan et al., "Work, Life and COVID-19: A Rapid Review and Practical Recommendations for the Post-Pandemic Workplace," *Asia Pacific Journal of Human Resources* 61, no. 2 (2023): 257–276.

in contemporary urban everyday life in Norway prove equally central to discussions in both parts. These expectations are recognisably described by Anvik and Gustavsen, based on interviews with young people who did *not* feel that they lived up to these norms themselves:

> Early to rise, fresh and rested, preferably exercising before work, or on the way to work, shower, have a healthy breakfast, deliver the kids. You're supposed to work until 4 pm but you stay until 5. You work a lot, it's busy, but no stress, you fix everything, including the collegial and social parts. Pick up the children, come home, cook dinner; which should be local, organic, homemade. [. . .] One is never tired. Read all the newspapers you haven't been able to read, familiarise yourself with the news, watch the daily TV news and understand everything that is said there. Meet others, friends or neighbors, eat with them, have a great time, go to the movies, have a coffee, do volunteer work, socialise and be generous. And afterwards talk of all the exciting things you're going to do this weekend, plan an excursion; pack your fishing gear, book a cabin and stuff like that. And then you tidy the house, so that everything is in order, and then you have to start planning for the next day of work and then you switch on your computer, you are very updated on social media, you have been doing that all day; sent out tweets and e-mails and stuff, and you might watch an exciting and important documentary before you go to bed at 10.30pm.[52]

Resembling Thommesen's informants in chapter 10, Anvik's informants described their own everyday life as a day-to-day struggle, this all being far removed from the apparent ideal. Central to their descriptions of the perfect everyday life is the fast pace, and the need for time effectiveness both at work and at home. There seems to be few or no pauses. Potential pauses are filled with taking in information. Keeping up is not even enough in itself; one is expected to cope *easily* with all this, one is never to be stressed out or tired.[53] Despite being unworkable for many, such societal requirements encompass normative, formative demands (often unspoken) on how time *should* be spent. This also gives an idea of what expectations informants in chapters 6 – 13 reacted to, one way or the other.

Hanne Thommesen (chapter 10) explores how people with mental health and drug-related problems talk about time, everyday life, and social participation – or rather their lack of participation in the community. To live a regular working life is not that easy for them. Thommesen asks whether this situation is due to some people's lack of ability to participate, or to society's failure to incorporate disabled people into the mainstream of everyday life. It could even be that both explanations apply. Alternatively, the lack of involvement in social settings may be due to their understanding or *mis*understanding of time when encountering the demands of society at large. Informants typically perceive time like an uneven flow

52 Cecilie H. Anvik and Annelin Gustavsen, *Ikke slipp meg!* (NF Report 13/2012), 169–173.
53 Anvik and Gustavsen, *Ikke slipp meg!*, 173.

of events, activities, thoughts, and haunting memories. In other words, their time is lived in sequences and periods, not as a linear progression, which makes planning hard, and living up to the standards of "the new working life" even harder.

But as reflected in chapters 6–9 and 11–12, even those who apparently do keep up with the pace find it troublesome. They seek ways around it, or pauses from it, in various ways worth exploring. In chapter 11 we literally dive into a flow of timeless time. Especially cold-water swimming or ice swimming has become increasingly popular after the Covid-19 pandemic and lockdown. Dagmar Dahl starts from her personal meditative experience of swimming out in nature – and finds several similar autobiographical descriptions. Among reported experiences are feelings of being outside time, the feeling of flow, happiness, and wellbeing. Essential for Buddhist philosophy and meditation practices, is the experience of non-existing time.[54] *Dissolution of time*, lifted out of linear perceptions into an experience of being here and now, allows connections to the philosophy of Zen Buddhism and Mihaly Csikszentmihalyi's *flow concept*, which is well-known in the world of sport.[55]

Sliding down similar slopes in chapter 12, Svein Halvard Jørgensen uses French philosophers of time Henri Bergson (1849–1951) and Gaston Bachelard (1884–1962) as sparring partners when he reflects upon how time could be understood and defined independently of any external structuring device or global measurement system. Hence, time is a phenomenon independent of our structuring of it in discrete units, be it through clocks or elaborate theories of physics – or so we at least perceive it. This also resonates with the experience of extension/duration and continuity/flow which phenomenal aspects of time can offer to the study of time and how we perceive it.

Last but not least, we will surpass the whole time scale by involving questions of eternity. Perception of time in a religious context encompasses existential questions for believers. The hallmark of organised religion is, simply put, to make people live according to rules passed down by a higher power. Doctrines and guidelines on how to live your life with a view to pleasing a divine authority is a characteristic feature of most religions, and is often combined with the hope of an eternal (after) life as a reward. Therese Thuv (chapter 13) focuses on how the time aspect in the teachings of Jehovah's Witnesses (JW), impacts upon life choices of its members – and mainly, how former members who have grown up as a JW deal with a seminal transition after leaving the movement. From being taught that eternal life on earth is to be expected, they come to believe in a limited and ending lifespan. What such a

54 Rolf Elberfeld, *Phänomenologie der Zeit im Buddhismus* (Stuttgart: Frommann-Holzboog, 2004).

55 Mihaly Csikszentmihalyi, *Flow: The Classic Work on How to Achieve Happiness* (London: Rider, 2002).

transition entails for the individual, is hard to envision. Some informants report that with such a drastically altered time perspective, one becomes more engaged in doing something good for the sake of future generations – so namely more *time conscious*, maybe?

Concluding Remarks

Overall, this book has a clear aim – to step outside accustomed ways of understanding time, and to see what heaves into sight. Constructions, expectations, perceptions, and regulation of time shape individuals' experience of time, personally, in the working life, and in other social arenas. Returning to the suggested perspectives on the future – as something *separate from us*, something *enacted by us*, or in something being *predetermined for us* – this too depends on the current timestyle. And so does the room for spending time on philosophical questions.

Stenberg and Olsen (chapter 7) address regulation of time in academia, the authors' own workplace. As they contend, time pressure in an 'accelerating academia' reshapes academic cultures, and more so in other parts of the world than in Norway. Still, when possible, academics wish to practice 'task time' rather than 'clock time', when they allow tasks to take their actual time, for example when supervising students or writing academic publications. This is being true to the actual aim of our educational system, that of educating and supporting critically-thinking, problem-solving and responsible people, who possess the necessary 21st century skills, as named by the Norwegian Ministry of Education and Research.[56]

How then to make the best – meaning the most conscious – use of time in order to navigate the ever-changing everyday life, to handle both the challenges presented by the acceleration of time in modern life, and the unseen and uncertain future, with insight and courage? Planning, or rather caring, for those further down the timeline is taken to another level in the long perspectives raised in chapter 5. But, sadly, challenges regarding how we collectively spend our time in other arenas today already seem to be more than we can handle. Could this then, to some degree, explain why we don't seem to have the capacity for taking on the larger challenges? Has acceleration already outrun us?

Being *time conscious* requires reflection and awareness of the entanglement of past, present and future options, actions, and responsibilities. If the 'best' use of time is understood as the *most conscious* use, some widespread understandings

56 KD, *NOU 2018:2 Fremtidige kompetansebehov I – Kunnskapsgrunnlaget* (Oslo: Kunnskapsdepartementet, 2018).

of time in our times will have to be challenged. Thus, the success of the time regulatory regimes presented here can be discussed precisely in the terms of what is conscious use of time – which is what we aim to do here.

Being *time conscious* eventually invites to expand the understanding of how diverse perceptions of '*being-in-time*' can be, how different rhythms of life can spring from these perceptions, and the effects that can accumulate from these rhythms. Several chapters point to the most alarming feature of our large patterning processes; they may *seem* organised, but they are not. Our flexibility in how we can change tempo in our activities and thought patterns, is a capacity we need to be more aware of, because this can prove both a salvation and a curse to us as a species.

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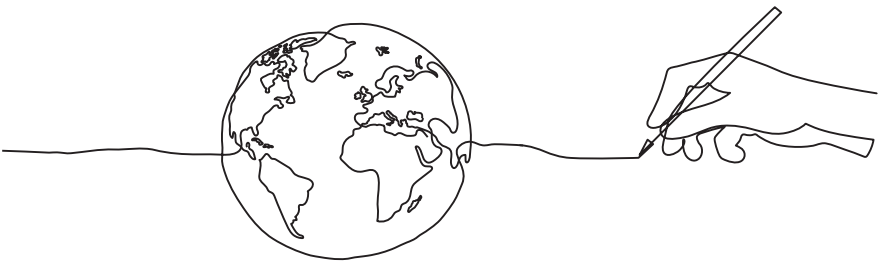
Part I: **In Search of a Deeper Theory of Time: Constructing and Defining Time**



Peter Øhrstrøm

2 Travelling in Branching Time: A Priorean Perspective

Introduction

In 1954 Arthur N. Prior (1914–69) introduced tense-logic as a new research paradigm for the study of time. Earlier he had for several years supported a physicalistic view on time along with a strong belief in Calvinistic determinism. During the 1940s he gradually changed his mind.

Arthur N. Prior has contributed very significantly to modern philosophy of time, mainly because he managed to establish a new research paradigm for the study of time. This paradigm is based on his tense-logic, which is an extension of propositional logic with room for indeterminism, free choice and a fundamental asymmetry between past and future. It has sometimes been seen as an alternative to the time of physics. After Prior's death, tense-logic was introduced in computer science mainly by Amir Pnueli (1941–2009), who in 1996 received the ACM Turing award "For seminal work introducing temporal logic into computing science and for outstanding contributions to program and system verification."[1]

However, for several years before launching his new approach to time in 1954, Prior defended a physicalist view of time, taking Einstein's theories of relativity into account. In a longer essay on the scientific approach to reality written as early as 1931 at the end of his last year in high school, he formulated his view in the following manner: "I prefer Einstein's view, and try to paint on the tableau of my mind his picture of Space-Time as a vast void wreathed into the strange and shadowy shapes of stars and atoms and life and humankind."[2]

Here reality is seen as a four-dimensional structure of space-time, of which time is one of the dimensions. The young Prior was apparently even ready to follow Minkowski's view, according to which it is difficult to consider time as independent of space. At least Prior refers to Minkowski's famous statement from

1 *Amir Pnueli – A Short biography*, accessed June 13, 2023, https://cs.nyu.edu/faculty/pnueli/shrtbio.html.

2 David Jakobsen et al., eds., *Three Little Essays: Arthur Prior in 1931*, Vol. 3 of *Logic and Philosophy of Time,* ed. Per Hasle, Patrick Blackburn and Peter Øhrstrøm (Aalborg: Aalborg University Press, 2021), 288, accessed November 15, 2023, https://vbn.aau.dk/ws/portalfiles/portal/384984801/PRIOR3_OA.pdf.

https://doi.org/10.1515/9783111428970-002

1908: "Henceforth space and time in themselves sink to mere shadows, and only a kind of union of the two preserves an independent existence."[3]

Prior found that space and time should be understood as suggested by Einstein, to whom he often referred in his early writings: "Personally, I think his views on the fixity of events (an extreme form of determinism) though having a firm basis in physics and mathematics, are highly philosophical; also the views of the relativists on the ultimate nature and destiny of the Universe."[4] As a teenager, Prior had become a Calvinist, which had led him to a strong belief in determinism. He found it obvious that something similar can be found in Einstein's worldview. It apparently seemed to him that important aspects of his Christian belief in determinism could be backed up by science. According to the physicalist view which Prior accepted for several years, time should be represented by the readings on synchronized clocks. According to this view, time simply corresponds to all possible values of the synchronized clock-time. In this way, time is formally represented as a set of moments ordered by the before-after-relation.

As Prior became more and more interested in logic, he found the logical approach to reality increasingly appealing. To analyse questions on time and reality in terms of logic, we need a basic language designed for the formal description of the world as we understand it. This means that we assume the existence of a set of objects and a set of possible properties that the objects may or may not have. Obviously, the language may also be supposed to include more complicated components and constructions. If the world described in terms of this language is changing, there will be propositions that are true at one moment in time and false at another, i.e., it might be that an object, O_1, has the property P_1 at the moment m_1 whereas the object does not have this property at the moment m_2. As part of the language, we may introduce readings on some standard clock. This would allow us to state, for instance, that the moment of time, m_1, is a certain number of time units (e.g., days or hours) before the moment m_2. Within such a system of synchronized clock-time we may assume that there is a unique instant a certain number of time units earlier and similarly a unique instant a certain number of time units later – at least if we assume that time is without beginning or end.

Time itself can in fact be discussed in terms of this simple approach. For instance, we can explain what it would mean for time to be circular. This claim would just be that there is a certain positive number, N, such that if an arbitrary

3 Jakobsen et al., *Three Little Essays*, 239.
4 Jakobsen et al., *Three Little Essays,* 230.

statement is true at a certain instant, then this statement will also be true at a moment *N* time units later.

It should be noted that the logic needed here should operate with statements or propositions the truth-values of which may vary from time to time. The acceptance of the understanding of propositions and truth-values is in fact the first step towards a temporal logic.

Using this logical approach, time is formally represented as an ordered set of moments or instants, where the ordering is the before-after-relation. Given this view, it is straightforward to formulate what it means for time to be transitive, dense, never ending, linear etc. In Appendix 1 I have presented a list of properties which most of us normally assume when we discuss temporal relations in daily life. Prior speaks about "the l-calculus," which refers to the earlier/later-than-organisation of the temporal instants involved in the discussion of what happens at which instants. In fact, in terms of the properties mentioned in Appendix 1, the common-sense view of time is often conceived as a dense, transitive, linear structure, without beginning or end, i.e., an unlimited timeline of instants which in principle includes any time at which events may occur.

During the 1940s Prior became increasingly aware of the fact that this kind of physical time is not the only way in which we may understand and experience time – and probably not the most important way either. He found that the distinctions between past, present and future (i.e., the tenses) are essential for the human understanding of time. According to Prior, we should insist on focussing on tense in order to obtain a proper and satisfactory approach to time. This idea led him to the introduction of tense-logic, which formally is an interesting extension of classical propositional logic, and even more important, an approach to the study of time based on Prior's philosophical ideas on the primacy of tense.

Prior showed that there is a tense-logical alternative to traditional and numerical time as it is known from physics. He managed to establish a research paradigm that many philosophers and logicians have found very useful and relevant for the understanding and exploration of time.

Among many other things, Prior showed that all the potential properties of time defined in the traditional manner can just as well be presented in terms of tense-logic. Let us reconsider the concept of circularity mentioned above as an example. It seems quite obvious that this property can just as well be formulated in terms of a tense-logical language (based on past, present and future) as in terms of an earlier-later-language. In other cases it is more complicated to show

that Prior's is correct. In fact, the full proof had to wait until Prior's book, *Papers on Time and Tense* in 1968.[5]

In the following sections we shall discuss the tense-logical approach to time and its relation to the B-theoretical approach know from physics and other accounts of the earlier-later-structures.

The Tense-Logical Approach to Time

In the beginning of the 1950s Prior had concluded that tenses should be regarded as essential for a satisfactory understanding of time. The reason for this is that the tenses turn out to reflect a very important aspect of temporal realism. In an undated note, Prior presented his basic belief in the following manner: ". . . what we see as a progress of events is a progress of events, a coming to pass of one thing after another, and not just a timeless tapestry with everything stuck there for good and all . . ."[6]

For this reason, Prior established his logical formalism in which the tenses are incorporated as a crucial feature. In this way, he became the founding father of modern tense-logic. He presented his tense-logic for the very first time as a part of his presidential address at a conference for philosophers in Wellington, New Zealand on the 27 August 1954. What he presented in this lecture was the first version of a very powerful formalism in terms of which the classical problems of time and modality can be handled in a precise manner. This included the logical problem he had himself been struggling with for years, i.e., the problem concerning the doctrines of divine foreknowledge and human freedom. By restating the problem in terms of the new formalism it turned out to be possible to explore what it takes if we want to maintain both doctrines. Having this tool at hand Prior was able to analyse the problem in a more precise and clear manner than ever before.

Prior's ideas became known among logicians rather quickly, although the publication of the manuscript from his presidential address had to wait four years.[7] He published on the topic of time and determinism in terms of a formal-

5 Arthur N. Prior, *Papers on Time and Tense* (Oxford: Oxford University Press, 1968).

6 Arthur N. Prior, "Some Free Thinking about Time" (undated), accessed November 17, 2023, https://nachlass.prior.aau.dk/paper/some-free-thinking-about-time, 2023.

7 Arthur N. Prior, "Diodorus and Modal Logic: A Correction," *The Philosophical Quarterly* 8, no. 32 (1958): 226–230.

ised version of the so-called Master argument,[8] and he was asked to come to Oxford to give the John Locke lectures 1955–1956, which he published as the book, *Time and modality* in 1957.[9]

Over the years Prior's tense-logic has become much studied, and since his death in 1969 many logicians and philosophers of time have continued his work. In particular, the formalism has turned out to be very useful within computer science. It makes it possible to analyse logically all the possible ways in which a certain computer programme can run.

To appreciate the full power of Prior's paradigm, one probably has to work carefully with the details of his formalism. On the other hand, there are important aspects of his tense-logic that can be studied without digging down into all the technicalities of Prior's formalism. In the present paper, I'll try to present some of his main ideas with a minimum of symbolic logic. Some more formalism will, however, be presented in the appendices to show how it can help us to make the concepts more precise.

Prior's basic idea is the use of propositional operators, P and F, representing past and future respectively. For instance, if q stands for the present tense statement "It rains in Oslo," the Pq becomes "It has been raining in Oslo" (or "It was raining in Oslo"), and Fq becomes "It will be raining in Oslo" (or "It is going to rain in Oslo").

Prior agrees with the physicalists that we could introduce clocks based on certain time units at this rather early stage of the conceptual analysis. We could do so by referring to measurements of durations added to the tense-operators. In this way we obtain so-called metric-operators, $P(x)$ and $F(x)$. Using the above example, $P(x)q$ would mean "It was raining in Oslo x time units ago," and $F(x)q$ would mean "It will be raining in Oslo in x time units." In his famous book *Time and modality* (1957), Prior worked with both metric and non-metric operators in his logic. The use of metric tense-operators may, however, in many cases be simpler and intuitively more appealing than non-metric tense-operators.

In Appendix 2, a simple version of Prior's metrical tense-logical formalism is introduced. In terms of this logical system several theorems may be proved. Prior referred to this kind of accounting for the temporal aspect of reality as the *PF*-calculus (i.e. his tense-logical formalism). There are a lot of technical details to investigate when proofs using this type of calculus are carried out. Prior's most important message here is, however, not technical but metaphysical. He emphasises that the rational discussion of events occurring at instants organised in a

8 Arthur N. Prior, "Diodoran Modalities," *The Philosophical Quarterly* 5, no. 20 (1955): 205–213.
9 Arthur N. Prior, *Time and Modality* (Oxford: The Clarendon Press, 1957).

later-than-structure as presented in Appendix 1 could without any loss be replaced in terms of a tense-logic like one presented in Appendix 2. In other words, the physicalistic discussion of events occurring at various instants can without any loss of meaning be replaced by a tense-logical discourse. According to Prior, we may even have good reasons to prefer the latter approach since it appears to be closer to life and reality than the former. Prior's reason for this claim is that the discussion of what happens at which instants leaves out an essential aspect of reality, namely the "now." He finds we should think of the *PF*-calculus as closer to reality than the l-calculus. In his famous 1954 lecture he said:

> As an "interpretation" in the metaphysical sense of the "now" which is understood in all the "propositions" with which the PF-calculus is designed to deal ("Socrates is sitting down" means "Socrates is sitting down *now,*" "Socrates will be sitting down" means "It is *now* the case that it will be the case that Socrates is sitting down," and so on), the "z" which we have used in the l-calculus is surely a complete sham. For "now" is not the name of a date (it has the same meaning whenever it is used, but does not refer to the same date whenever it is used). In fact the whole movement of events from the future through the present into the past is inexpressible in the l-calculus.[10]

In this way, Prior argued that from an ontological point of view we should give the *PF*-calculus (i.e. the tense-logical approach) primacy rather than the l-calculus. It appears that his view gave rise to some debate at the congress. In the letter written to his wife the same evening Prior wrote:

> There was a very pugnacious priest at the back who said that he was "a Thomist & a strict-Thomist," that this was the first exhibition he had seen of "logistics," & that (this very aggressively & totally irrelevantly) he wanted to know if I was a "realist." I had a great deal of pleasure in telling him that I was far more of a realist than he was, & that he would in fact classify me as an "extreme" realist.[11]

It is very likely that the part of Prior's lecture that sparked the reaction of this very pugnacious priest was the following: "At least in many of its presentations, relativity theory seems to be as closely bound up with the "spread-out-eternally" view of time underlying the l-calculus as medieval theology was."[12]

Here Prior's view is obviously that medieval theology, just as many modern presentations of relativity, is based on the l-calculus. Although Thomas Aquinas is not mentioned by name here, it seems obvious to relate Prior's claim to famous statements by Thomas, such as the following: "Things that are present, past, or

10 Arthur N. Prior, "The Syntax of Time-Distinctions," *Franciscan Studies* 18, no. 2 (1958): 105–120.
11 Arthur N. Prior, *Letter from Arthur to Mary Prior*, August 27, 1954, accessed November 17, 2023, https://nachlass.prior.aau.dk/paper/arthur-prior-to-mary-prior-27-08-1954.
12 Prior, "The Syntax of Time-Distinctions," 119–120.

future to us God knows in His power, in their proper causes, and in themselves. The knowledge of such things is said to be a knowledge of vision."[13]

The usual interpretation of Thomas Aquinas' view is that the tenses are mainly related to human cognition whereas there is a higher and tenseless reality behind the world as it appears to us, and that God (and maybe even to some extent science) has access to this higher reality. According to the tenseless understanding of reality the basic propositions in the description of the world will be claims like "the object, *O*, has the property, *P*, at the moment, *m*," i.e., the basic components of the l-calculus. According to this approach, claims regarding what is the case now will not be conceived as proper knowledge.

Prior, however, maintained that reality is tensed, and that several important aspects of reality will remain unaccounted for if we limit the discussion of reality to the l-calculus (i.e., the tenseless discourse). He found that if we want to express what is in fact going on in the real world then we must make use of the *PF*-calculus. Over the years Prior continued to work with the view that the *PF*-calculus is essential for a proper understanding of reality. On the other hand, he also held that the l-calculus is a very useful construction, although it should be conceived as derived from the *PF*-calculus. In his most important book, *Past, Present and Future* from 1967,[14] he made use of McTaggart's ideas of A- and B-series in his analysis of the questions regarding the relation between these two important kinds of temporal reasoning. In fact, it turned out that the *PF*-calculus may be presented as conceptually closely related to the A-series, whereas it is obvious to discuss the l-calculus in terms of the B-series.

A Tense-Logical Approach to Indeterminism

Prior's strong belief in the primacy of tense was the result of a long intellectual journey.[15] Actually, the same journey brought him from determinism and rejection of free will to indeterminism and defence of free will. After this journey Prior wrote that one important belief had to be added to his belief in the primacy of tense:

13 Thomas Aquinas, *Summa Contra Gentiles*, transl. by Anton C. Pegis, (Notre Dame, IN: University of Notre Dame Press, 1975), I, 66 and 8.

14 Arthur N. Prior, *Past, Present and Future* (Oxford: Oxford University Press, 1967), 1–8.

15 Peter Øhrstrøm, "From A-time to B-time: Prior's Journey There and Back Again," in *The Metaphysics of Time: Themes from Prior*, eds. Per Hasle, David Jakobsen, Peter Øhrstrøm (Aalborg: Aalborg Universitetsforlag, 2020), 13–24.

> This belief of mine . . . is bound up with a belief in real freedom. One of the big differences between the past and the future is that once something has become past, it is, as it were, out of our reach – once a thing has happened, nothing we can do can make it not to have happened. But the future is to some extent, even though it is only to a very small extent, something we can make for ourselves . . . .[16]

Prior's personal motivation for developing his approach to time obviously had to do with his Christian ideas. He used to be a Calvinist and a determinist, who rejected the traditional ideas of human freedom of choice. However, during the 1940s he gradually changed his mind and became an indeterminist and a defender of free choice. On the other hand, he still wanted to hold on to the doctrine of divine foreknowledge (or put in secular terms: the assumption that there are truths about all possible future events). However, the challenge here is that there are powerful classical arguments according to which the doctrines of divine foreknowledge and human freedom contradict each other. One of the most remarkable arguments of this kind is the so-called Master Argument of Diodorus Cronus (died about 284 BC). Prior had learned about this argument from Benson Mates' book, *Stoic logic* from 1953.[17] According to which the argument somehow demonstrated that at least one of the following three claims must be rejected:

1. Every true proposition concerning the past is necessary.
2. The impossible does not follow from the possible.
3. Something that neither is nor will be is possible.

The details of the Diodorean Master Argument are not known, but it must somehow have been equivalent with an argument from past determinism to future determinism. In fact, it must formally have been equivalent with an argument in favour of the inconsistency of the combination of the doctrines of divine foreknowledge and human freedom. Prior found that tense-logical formalism could be used to analyse the argument from past determinism to future determinism in a very powerful and clear manner. In 1954 Prior even formulated a reconstruction of The Master Argument in terms of his tense-logical formalism, and in his lecture at the congress he referred to his article on Diodoran modalities[18] as "forthcoming."[19]

It is obvious that Prior already in August 1954 when he presented his tense-logic for the very first time, was aware of the fact that his tense-logical formalism

16 Prior, *Free Thinking*.
17 Benson Mates, *Stoic Logic* (Berkeley, CA: University of California Press, 1953).
18 Arthur N. Prior, "Diodoran Modalities."
19 Prior, *Time-Distinctions*, 110.

could be used to analyse the argument from past determinism to future determinism in a very convincing and clear manner.

To formulate the argument in terms of symbolic logic we need an additional operator, L, corresponding to necessity, or as Prior suggests "now-unpreventability." From this operator we may define the operator M corresponding to what we may obtain. (See Appendix 2.)

The claim of determinism (i.e., the denial of any free choice) may be formulated in the following manner:

$$(\text{Det})\ LF(x)p \vee LF(x){\sim}p$$

If (Det) is a theorem, it means that for an arbitrary statement, p, such as "Olav goes to Oslo," it is either true that p necessarily (now-unpreventably) will be the case in x days (e.g., tomorrow), or it is true that not-p necessarily (now-unpreventably) will be the case tomorrow. In the case of Olav, it is either the case that he necessarily goes to Oslo tomorrow, or it is the case that he necessarily does not go to Oslo tomorrow. No matter what Olav does, he acts based on necessity. In fact, there is only one possible future, if (Det) is a theorem about how things are in the universe. Given (Det) as a theorem, Olav can in no situation have genuine choice between alternatives. Clearly, a defender of the doctrine that humans at least sometimes have libertarian freedom, will have to find a way to reject the general validity of (Det). In terms of the example regarding Olav, the denial of (Det) clearly means that Olav may obtain be in Oslo tomorrow and that he may also obtain not to be in Oslo tomorrow. It is in his power to obtain any of the two mutually exclusive possibilities tomorrow.

Prior found the Master Argument of Diodorus very fascinating, and he carried out some remarkable studies to come up with modern reconstructions of the argument in terms of tense-logic.[20] The most important premiss of the Master Argument of Diodorus can be stated in our formalism in this manner:

$$(\text{Dio})\ P(x)p \supset LP(x)p$$

(In natural language: If p was the case x days ago, it is now necessary that p was the case x days ago.)

It may appear intuitively obvious that (Dio) should be a theorem since it appears just to be an expression of the fixity of the past. If something took place some days ago, it certainly appears to be now-unpreventable that it took place. However, it turns out that if (Dio) is accepted without any limitations (i.e. no matter

20 Prior, "Diodoran Modalities," and Prior, "Diodorus and Modal Logic."

what *p* stands for) then (Det) follows logically. There are several versions of this formal tense-logical deduction. One of them is given in Appendix 3. The key to the understanding of how determinism (i.e., Det) can be deduced from the fixity of the past (i.e., Dio) is that any statement about the future apparently can be formulated as a past-tense statement in disguise. The reason behind this is what we might call the *PF*-principle:

> A proposition, *p*, is true now, if and only if for any *x*, it was the case *x* time units ago that *p* was going to be the case in *x* time units, i.e. $P(x)F(x)p$.

According to this principle, the claim that it is going to rain in Oslo tomorrow, appears to be fully equivalent with the claim that yesterday it was going to rain in Oslo in two days. And then the application of the fixity of the past, means that it is now-unpreventable that it was going to rain in Oslo in two days, which apparently is just a clumsier way to state that it is now-unpreventable that it is going to rain in Oslo tomorrow. If this line of reasoning is accepted, it means that if something is true about the future, then it must be true, i.e., if I am going to Oslo tomorrow, then I must go to Oslo tomorrow. According to a defender of free choice like Prior, this kind of reasoning clearly must be invalid, and it must be explained why.

Prior argued that there are two obvious ways out of the problem of the apparent deduction of (Det) from (Dio). According to the first, we can reject the above reasoning by rejecting that (Dio) holds for propositions about the past future. According to the second way out, we reject the *PF*-principle, but we accept that if it is true that I am going to Oslo tomorrow, then I must go to Oslo tomorrow. This view also implies that if it is not necessary that I go to Oslo tomorrow, but just a possibility, then the claim that I am going to Oslo tomorrow will simply be false. According to this view there is no truth about what still depends on free choice.

Prior traces the first of these solutions back to William of Ockham (c. 1287–1347), whereas he relates the second to the philosophy of C.S. Peirce (1839–1914). In the following section we shall consider the two solutions in more detail.

It should be noted that the discussion is related to the very understanding of divine foreknowledge. Some might hold that the Peircean solution is inconsistent with the traditional Christian belief that God has complete foreknowledge about the future. Against this, Prior holds that the Peircean view is consistent with the claim that God knows all truth there is about the future. It is just that there are no true propositions about what I am going to do freely tomorrow. On the other hand, from a traditional Christian point of view it sounds strange that God does not know whether or not I'll be in Oslo tomorrow. Even from a secular point of view, it is somewhat surprising that neither the proposition "I am going to be in Oslo tomorrow at noon" nor the proposition "I am not going to be in Oslo tomor-

row at noon" is true now. According to traditional common sense, one of the two propositions must be true, whereas the other is false. According to the Peircean view, we should make a distinction between "Tomorrow at noon, I am not going to be in Oslo" and "It is not the case that I am going to be in Oslo tomorrow at noon." Prior himself chose this way out, although he was aware of the problems it gives relative to common sense and traditional use of natural language to have such a distinction. However, as we shall see in the following sections, this view can in fact be illustrated and expounded in an understandable manner.

The Idea of Branching Time

In 1957 Prior became interested in further development of the notion of possible futures. Obviously, when we are planning which way to choose, we normally take several future possibilities into consideration. Apparently, Prior was looking for a way to represent such considerations in an intuitively appealing manner. It seems that the solution came when Saul Kripke, in a letter to Prior dated 3 September 1958, suggested the idea of branching time. In his letter, Kripke, who was then only 17 years old, wrote:

> Now, in an indetermined system, we perhaps should not regard time as a linear series, as you have done. Given the present moment, there are several possibilities for what the next moment may be like – and for each possible next moment, there are several possibilities for the next moment after that. Thus, the situation takes the form, not of a linear sequence, but of a "tree" . . . [21]

Prior immediately embraced Kripke's idea, and he and the many logicians working within his paradigm developed it further over the following years, as we shall see below.

One possible reason why Prior so quickly accepted Kripke's idea of time as a tree-like structure might be that he had in fact worked with a similar idea already in 1957 when he wrote the paper "Opposite Number," which probably should be seen as Prior's very first analysis of the idea of branching time.[22] In this paper Prior considered a temporal structure like the "big Y," which obviously might be conceived as a very early branching time diagram.[23] He had derived inspiration

21 Thomas Ploug and Peter Øhrstrøm, "Branching Time, Indeterminism and Tense Logic: Unveiling the Prior–Kripke Letters," *Synthese* 188, no. 3 (2012): 374.

22 Arthur N. Prior, "Opposite Number," *The Review of Metaphysics* 11, no. 2 (1957): 196–201.

23 Peter Øhrstrøm and Manuel González, "Prior's Big Y and the Idea of Branching Time," *History and Philosophy of Logic* (2022): 1–4. https://doi.org/10.1080/01445340.2022.2147809.

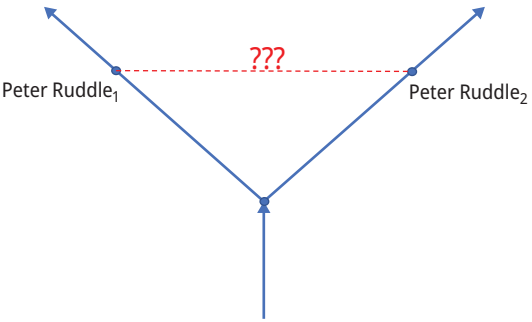


Fig. 2.1: Prior's paper on "the big Y" (Prior, "Opposite Number," 1957) was inspired by a science fiction story by John Wyndham (1956) about Peter Ruddle who is imagined to have a surprising experience about the nature of reality.[24]

for this from a science fiction story about a man who somehow succeeds to travel between the two arms of the "big Y", see Fig. 2.1.

This story, "Opposite Number," by John Wyndham is about Peter Ruddle who one day sees his earlier fiancée, Jean, hand in hand with a man who looks rather familiar. In fact, it turns out that this man is a version of Peter Ruddle coming from the other temporal branch of the "big Y." He and Jean have in this other part of the "big Y" managed to use a machine developed by Jean's father Whetstone, who had died a few years earlier. Using the machine, Jean and Peter had succeeded in travelling between the arms or branches of the "big Y." In this way they find a way to visit the world as it would have been if they had chosen differently at a bifurcation point earlier in their life. In the story Peter actually meets not only Jean but also his double. They are clearly different. One thing is, of course, that the travelling Peter is married to Jean, whereas the other Peter is not. In fact, they are also different in many other ways. Each of them finds it very difficult to accept that they are still both Peter Ruddle, and that they sometime in the past were identical.

Prior obviously found Wyndham's story very interesting. Could it somehow be conceptually conceivable that two different persons, $person_1$ and $person_2$, sometime in the past were identical? Could it be that a person some time in the past simply by choosing between two alternatives actually gave rise to two different persons in two different possible futures (or "arms" of the "big Y"), one choosing the first alternative and the other choosing the other alternative? (It appears that some interpretations of quantum mechanics are close to something like

24 John Wyndham, *The Seeds of Time: Classic Science Fiction* (London: Penguin, 2014 [1956]).

that.) In his paper "Opposite Numbers" from 1957, Prior considers whether such time travel between two "quasi-simultaneous" moments is logically conceivable. The two moments are both n time units after the bifurcation, i.e., the split between the two "arms" and the "big Y."

To answer this question, we have to specify what it means if α and β are identical, symbolically $I(\alpha,\beta)$. Prior assumes Leibniz' principle, according to which two objects are identical if and only if they have exactly the same properties. He also assumes the *PF*-principle mentioned above, which holds that a proposition p is true if and only if $P(n)F(n)p$ is true for any value of n.

A formal argument showing the deduction based on the two principles can be found in Appendix 4. A more informal argument can be given in the following way: Suppose that Peter Ruddle$_1$ n time units after the bifurcation has the property φ. By the *PF*-principle, Peter Ruddle$_1$ also has the property $P(n)F(n)\varphi$. In consequence Peter Ruddle$_1$ has the property $F(n)\varphi$ at the time of bifurcation. Then, since Peter Ruddle$_1$ and Peter Ruddle$_2$ are identical then by Leibniz' principle, Peter Ruddle$_2$ also has the property $F(n)\varphi$ at the time of bifurcation. Therefore, n time units later he has the property $P(n)F(n)\varphi$ and by the *PF*-principle also the property φ. In short, this means that all the properties of Peter Ruddle$_1$ also are properties of Peter Ruddle$_2$. Obviously, the opposite also holds. By Leibniz' principle this means that Peter Ruddle$_1$ and Peter Ruddle$_2$ are identical not only at the time of bifurcation, but also n time units later, which is clearly against the story as it is told.

If we accept the story as conceptually possible, then we have to reject at least one of the two principles. In fact, both Leibniz' principle and the *PF*-principle may be questioned. On the other hand, the two principles are often seen as rather attractive. An interesting alternative would be to insist that after the bifurcation of the big Y only one of the two possible futures is real. The possible future which is not chosen will then be counterfactual. For this reason, the real Peter Ruddle can never even in principle meet the counterfactual Peter Ruddle. All we are saying is that Peter Ruddle could presently have been different from the actual Peter Ruddle, if he and others had chosen differently in the past.

Although time travelling may only be possible metaphorically or at least only if we consider the branching time diagram as some sort of abstract landscape, it may still be a useful idea in order to understand what holds and what has to be rejected tense-logically. However, the ways we can do our metaphorical "time travel" will be very limited. We can only travel from past to future, but we should keep a logbook (a record) of where we have been in the branching time diagram. It should also be mentioned that we cannot leave the routes in the diagram, which means that the kind of time travel imagined by John Wyndham in his science fiction story has to be ruled out. Finally, it is assumed that the branching structure is like the big Y, i.e., backwards linear and forwards branching in the

sense that whenever we as time travellers reach a bifurcation point, we are free to continue our "journey" along any one of the continuations available. This interpretation of branching time became the standard during the 1960s, when the concept was commonly accepted as an important idea in the logic of time. However, the graphical expression of branching time was changed slightly during the early studies, since Prior and his followers decided to turn the branching time diagram 90 degrees, so that the past is to the left and the future is to the right.

Prior's Ockham- and Peirce-Solutions in Terms of Branching Time

As demonstrated above, there is a rather powerful argument from the fixity of the past (Dio) and the *PF*-principle to the deterministic (Det). If we accept the argument as valid, and if we want to avoid (Det), we must reject at least one of the principles, (Dio) and the *PF*-principle. In this section we shall see how Prior's two solutions, named after Ockham and Peirce, may be illustrated in terms of branching time diagrams interpreted in the way suggested above, which means that "time travellers" can only move along the routes and only from past to future.

In Prior's Ockham-solution, the principle of the fixity of the past, (Dio), should be rejected, since it is invalid for propositions about what was going to be the case in the future.

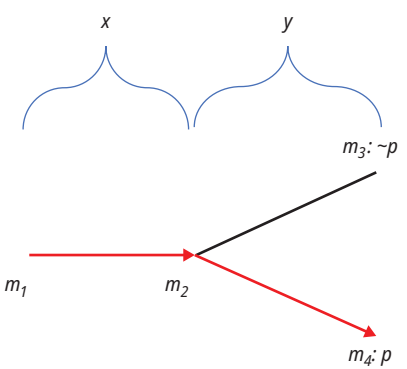


Fig. 2.2: Prior's Ockhamistic model from (1966), in which there is a branch representing "the actual course of events" (in red in the diagram). This is somewhat different from the model he presented the year after in (Prior 1967), in which truth is conceived as relative not only to a moment of time, but also to a chronicle (or a route) in the diagram.

In his first presentation of Ockham's solution, Prior introduced a designated line corresponding to "the actual course of events" which has been drawn in red in Fig. 2.2.[25] The idea of this very special chronicle in the branching time diagram is closely related to the doctrine of divine foreknowledge. According to Ockham this knowledge is not in general available to human beings. In other words, only God knows which of the chronicles (routes) is in fact the red one. As human beings we do not see the red line, "the actual course of events." Instead, we see everything in "black and white". On the other hand, Ockham believed in the doctrine of divine foreknowledge and thereby in the existence of what has here been presented as a red chronicle. It should, however, be noted that there is a secular version of this belief, which simply is the claim that there is truth about future free decisions and other contingent matters, i.e., truth about the world beyond what is empirically accessible to humans.

It is intuitively obvious from Fig. 2.2 that $P(x)F(x)F(y)p$ is true at m_2 in this model, but that $LP(x)F(x)F(y)p$ is false at this moment. The reason is that at m_1 it was certainly not unpreventable that we would have to travel to m_4 later, since the way to m_3 was still open. Obviously, this means that the model falsifies (Dio).

One of the consequences of the choice made at m_2 is that it becomes true that $F(x)F(y)p$ was true at m_1. It has often been debated if this is in fact a kind of backwards causation. Although it may certainly be questioned whether causation is at stake here at all, it is obvious that the truth at m_1 is a consequence of the choice at m_2. If the person(s) involved in the choice at m_2 had chosen m_3 instead of m_4, then $F(x)F(y)p$ would have been false at m_1.

The other solution considered by Prior, the Peirce-solution, can in fact be presented as a fragment of the Ockham-solution, if we define a new future operator F_{Peirce} as the Ockhamistic LF. The Peircean logic simply corresponds to the fragment of the Ockham-logic consisting of all the Ockham-valid formulae in which any occurrence of F is preceded by a necessity-operator, L, and reformulated substituting all occurrences of LF with the Peircean future-operator.

Although it is interesting and useful to know that the Peirce logic can be understood as a fragment of the Ockhamistic tense-logic, in his book from 1967 Prior also showed that the Peircean tense-logic does not have to be seen that way.[26] The

25 Arthur N. Prior, "Postulates for Tense-Logic," *American Philosophical Quarterly* 3, no. 2, (1966): 153–161. In an early draft Prior even suggested that "there is a single designated line (taking one only of the possible forward routes at each fork), which might be picked out in red, representing the actual course of events." See Peter Øhrstrøm and Per Hasle, "Future Contingents," *Stanford Encyclopedia of Philosophy,* Summer Edition 2020, accessed November 12, 2023, https://plato.stanford.edu/entries/future-contingents/, 58–59.

26 Prior, *Past, Present and Future*, 134.

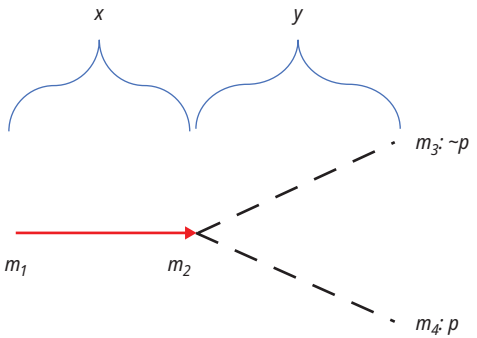


Fig. 2.3: A branching time model corresponding to the so-called Peircean tense-logic, the solution that A.N. Prior preferred. According to this approach the future is completely open, in the sense that all propositions about the contingent future are false.

Peircean system can be presented independently, without any reference to the Ockhamistic system. In the present context, however, we shall stick to the easier way of presenting the Peircean view in terms of the Ockhamist system.

The key idea in Peircean tense-logic is that if a future-tense proposition is true now, then it must (necessarily) be true. If it is open whether or not p is going to be true in y days, then $F(y)p$ as well as $F(y)\sim p$ will both be false now, although y days later we may find that either p or $\sim p$ is the case. The idea may be illustrated as shown in Fig. 2.3 above, according to which p is the case at m_4, whereas $\sim p$ is the case at m_3. It is easy to see that even though p is true at m_4, the proposition $P(y)F(y)p$ will be false at m_4. The reason is that at m_2, which is y days earlier than m_3 and m_4 the proposition $F(y)p$ is false since it is a contingent proposition. In consequence, the *PF*-principle has to be rejected according to the Peircean tense-logic.

The most obvious difference between the two tense-logical systems is that whereas the Ockhamist makes a clear distinction between three expressions: "necessarily, p is going to be the case in x days," "possibly, p is going to be the case in x days" and "p is going to be the case in x days," the Peircean only acknowledges two of them (which he formulates as "p is going to be the case in x days," and "not-p is not going to be the case in x days," respectively). The simple Ockhamistic "p is going to be the case in x days" has no Peircean equivalent. According to Prior, the reason for this is that the simple Ockhamistic $F(x)p$ cannot be true now in the Peircean sense, if it is contingent. In his opinion, "p is going to be the case in x days" can only be true if p is necessarily going to be the case.

It is obvious that given the setup shown in Fig. 2.3 we have to deny $F(y)p$ at m_2, since p is false at m_3, as well as $F(y)\sim p$, since $\sim p$ is false at m_4. This means that

we may deny that p is going to be the case in y days as well as the claim that ~p is going to be the case in y days. In consequence, this means that the Peircean also has to deny the disjunction:

$$F(y)p \vee F(y)\sim p$$

The Peircean holds that both components of this disjunction may be false. According to this view, no contingent proposition about the future can be true. On the other hand, the Peircean obviously accepts the disjunction:

$$F(y)p \vee \sim F(y)p$$

In consequence, the Peircean has to make a distinction between "It is not the case that p is going to be the case in y days" and "not p is going to be the case in y days."

In terms of the debate concerning divine foreknowledge and free choice the Peirecean answer is that there is no truth today specifying what a person is going to freely choose tomorrow. This also means that we can – at least formally – hold that God knows all truths there are regarding the future and still claim that people can make their free choices tomorrow even though God does not know anything about the outcome of these choices today.

The Ockhamist may of course answer that this way out is too easy, since it is like not allowing the problem at stake to be properly formulated. If I have a choice between having a beer tomorrow at noon and not having a beer tomorrow at noon, then it seems obvious that one of the two possibilities will occur, and if I am making a guess right now, it will be either true or false now. It will be a limitation of the classical understanding of divine foreknowledge to say that God does not know whether my guess is right or wrong.

Regarding the disjunction mentioned above, the Ockhamist may simply point out that the denial is perfectly understandable. In terms of tense-logic it can be stated as

$LF(y)p \vee LF(y)\sim p$ (i.e., "either p must be the case tomorrow, or ~p must be the case tomorrow")

which from an Ockhamistic perspective has to be rejected, since it is a claim of determinism.

According to the Peircean denial of the *PF*-principle, the Ockhamist may respond that this is no surprise since what the Peircean is denying – when stated in the Ockhamist language – simply boils down to the denial of $p \supset P(y)LF(y)p$ (i.e., "if p is the case now, it was the case yesterday that p had to be going to be the case in one day") which from an Ockhamistic point of view obviously has to be rejected as a theorem.

Further Developments of Indeterministic Models in Terms of Branching Time

After Prior's death in 1969, several logicians further developed indeterministic models in terms of branching time. In many cases this has, in fact, resulted in elaborations of the Ockhamist approach.

In their famous criticism of the idea of "the actual course of events" (which they called "the thin red line"), Nuel Belnap and Mitchell Green in 1994 argued that the consequences of the idea of an actual course of events are unacceptable if we want an indeterministic model.[27] Their use of the word "thin" is probably part of the criticism of the idea. It seems that they found it problematic that something here is so "thin" that is in fact invisible to humans. However, as pointed out above it is a historically well-known and an integrated part of the very idea of the so-called "thin red line" that it cannot been "seen" by human beings.[28]

Given the interpretation of the branching time diagram according to which any moment in the diagram could have been the actual now, and the assumption that there is a "thin red line" (i.e. "a true future") at any actual now, it seems natural to assume that there is a true future from any moment in the branching time diagram. This means that we not only have a single line, a selected chronicle, representing "the thin red line," but rather a function, TRL, from the set of all moments in the diagram to the set of chronicles. At an arbitrary moment, m, TRL(m) is the chronicle through m representing the past and the future assuming that the moment m represents the now. In this way even more structure is added to the branching time diagram.

Belnap and Green analysed the idea of a TRL-function, and they argued that acceptance of this idea is logically inconsistent with the very idea of branching

27 Nuel Belnap and Mitchell Green, "Indeterminism and the Thin Red Line," *Philosophical Perspectives* 8 (1994): 365–388.

28 As mentioned in Peter Øhrstrøm, "What William of Ockham and Luis de Molina Would have said to Nuel Belnap: A Discussion of Some Arguments Against 'The Thin Red Line'," in *Nuel Belnap on Indeterminism and Free Action* (Outstanding Contributions to Logic, vol. 2), ed. Thomas Müller (Cham: Springer 2014) 175–190, Belnap's and Green's term was inspired by a report from the Crimean War in *The London Times*: "The Russians dashed on towards that thin red-line streak tipped with a line of steel." It has even been suggested that the thin red line should in fact be conceived as infrared indicating "that the Thin Red Line does not imply that mortals are capable of seeing the future." Nuel Belnap, Michael Perloff and Ming Xu, *Facing the Future: Agents and Choices in Our Indeterminist World* (Oxford: Oxford University Press, 2001), 139.Prior's early suggestion of a line "picked out in red, representing the actual course of events" (see footnote 25) was apparently unknown to Nuel Belnap and Mitchell Green in 1994 (see previous footnote).

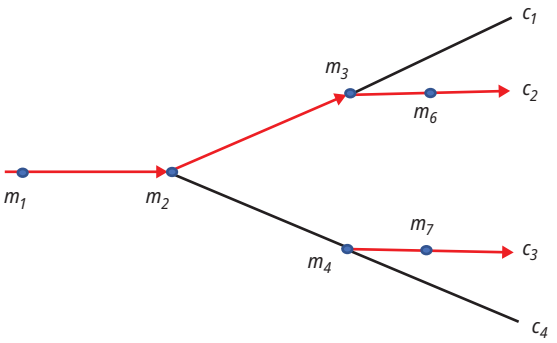


Fig. 2.4: A backwards linear, branching time diagram with moments and chronicles and a thin red line function indicated by arrows and the red colour. Obviously, $\mathrm{TRL}(m_1) = \mathrm{TRL}(m_2) = \mathrm{TRL}(m_3) = \mathrm{TRL}(m_6) = c_2$ and $\mathrm{TRL}(m_4) = \mathrm{TRL}(m_7) = c_3$.

time, if there is going to be proper branching.[29] However, after a scholarly debate over a few years in the 1990s, Belnap accepted that there are branching time models a TRL-function that are logically consistent, if we assume that the TRL-functions have certain specific properties.[30] All the branching time diagrams we discuss in this paper are backwards linear, and the chronicles are maximal linear subsets of the set of all moments, TIME. This means that any two chronicles will have a common past. For instance, c_2 and c_4 have a common past before the moment m_2.

It is very interesting that the idea of a model based on the thin red line function can be seen as a modern version of ideas formulated more than 400 years ago. The model is shown in Fig. 2.4, and it may be understood as a modern interpretation of the ideas suggested by Luis de Molina (1535–1600), according to whom God not only knows everything about the true contingent future, but also the truth about what every person would have done freely in every counterfactual situation.[31] Historically, Molina formulated his theory in response to Martin Luther and John Calvin to show that the doctrine of divine foreknowledge is logically consistent with the doctrine of free choice.

This kind of counterfactual reasoning may for instance be relevant in revolutionary contexts when discussing the best strategy based on a mental landscape

29 Belnap and Green, "Indeterminism."

30 Belnap et al., *Facing the Future*. See also Peter Øhrstrøm and Per Hasle, *Temporal Logic: From Ancient Ideas to Artificial Intelligence* (Dordrecht et al: Kluwer Academic, 1995).

31 Peter Øhrstrøm and Per Hasle, "Future Contingents," *Stanford Encyclopedia of Philosophy*, eds. Edward N. Zalta and Uri Nodelman (Summer Edition 2020), accessed November 12, 2023, https://plato.stanford.edu/entries/future-contingents/.

of future possibilities (see chapter 4 in this volume). In fact, Molina himself used an example of this kind, i.e., the revolutionary story from the Old Testament, I Sam 23:10–12,[32] about David and King Saul. In Molina's words:

> David consulted the Lord about whether Saul was going to descend upon Keilah, and the Lord responded, "He will descend." He consulted again, about whether the men of Keilah, who had received nothing but kindness from David, were going to hand him and the men with him over into the hands of Saul. And the Lord responded, "They will hand you over." Notice, God knew these two future contingents, which depended on human choice, and He revealed them to David. Yet they never have existed and never will exist in reality.[33]

The branching time analysis of this story is pretty obvious (Fig. 2.5). According to the text, David is in the city of Keilah, when he learns that King Saul is on his way to the city. Yet God knows what the citizens of Keilah will choose to do if David chooses to stay. In this way, given that the men of Keilah have freedom of choice Molina clearly argued that there is a need for the notion of the true future (i.e., what we call "the thin red line") if we want to make a model of the semantics of the Old Testament narrative formulated in natural language. Given that we accept the metaphysics on which common-sense argumentation is based, it has to be assumed that God knows not only what we will freely choose in the future, but also what we would freely choose at any counterfactual moment.[34]

It may sound strange that it is seen as meaningful and even part of the divine knowledge what choices a person would freely make if he were placed in a particular counterfactual situation. Obviously, we cannot have any evidence or at least only very limited evidence to support what the person would do in a particular counterfactual situation. On the other hand, it seems that we do in fact in everyday discourse assume that statements related to such counterfactual situations are meaningful. Consider, the following statement which closely corresponds to Fig. 2.5 (setting y=3 days as an example):

> At the moment m_2, David learns that Saul is on his way to Keilah, and he decides not to stay in the area. However, David could have decided to stay in Keilah and after three days the citizens of Keilah based on their free decision would at the moment m_3 hand him over to Saul.

32 I owe this example to Dr. David Jakobsen, Aalborg University.

33 Luis de Molina, *On Divine Foreknowledge: Part IV of the Concordia*, translated with an introduction and notes by Alfred J. Freddoso (Ithaca, NY: Cornell University Press, 1988).

34 Peter Øhrstrøm, "Thoughts on Time, Truth, and Transcendence," in *God, Time, Infinity* (Philosophical Analysis, vol. 75), ed. Mirosław Szatkowski (Berlin/Boston: De Gruyter, 2018), 131–146.

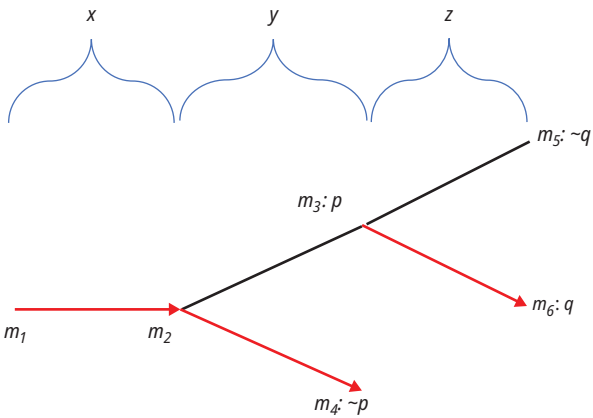


Fig. 2.5: A branching time model based on a thin red line function from the set of moments to the set of chronicles. It has been pointed out that this model is based on ideas very close to the approach to future contingency suggested by Luis de Molina (1535–1600). Relative to the story about David and Saul the proposition *p* stands for "David stays in Keilah," whereas *q* stands for "The citizens of Keilah hands David over to Saul".

Such statements appear to be part of everyday discourse. If it is accepted that statements of this kind are meaningful, they clearly must be represented in terms of a branching time structure such as the one shown in Fig. 2.5. In fact, Molinistic tense-logic may be represented as a further development of Ockhamistic tense-logic, in which even the PF-principle is valid.[35]

The Status of the Moments in the Branching Time Structure

As mentioned earlier, Prior argued against seeing time as "just a timeless tapestry with everything stuck there for good and all."[36] But isn't that exactly what we get if we treat tense-logic in terms of a branching time structure? After all, this mathematical structure of the branching time diagram appears to be rather fixed. However, it should be pointed out that the branching time models should not be taken too seriously, ontologically speaking. After all it is just a mental

35 Øhrstrøm and Hasle, *Future Contingents*.
36 Prior, *Free Thinking*.

landscape. It is also important to remember that the idea of a conceptual structure in which we may travel within certain restrictions is nothing more than a useful metaphor that may help us to evaluate tense-logical statements. According to Prior, the temporal moments mentioned in Appendix 1 have no objective existence. They are just helpful logical constructions. The abstract space of moments may be compared as a cybertime (see Stig Ole Johannesen's chapter in this volume).

In fact, Prior has tried to dig deeper into the matter to explore more about how the moments can be constructed. His basic idea is that, in branching time logic, we should in fact operate with two different kinds of propositions.[37] In addition to the usual tense-logical propositions formed based on atomic constants using various tense-logical operations, there is a special class of so-called instant propositions, *a*, *b*, *c* . . ., with some extremely remarkable properties. In fact, any possible moment in the branching time structure may be represented in terms of an instant proposition.

The very special properties of the instant propositions can be presented in terms of the following three axioms where *a* is an arbitrary instant proposition and where *p* is an arbitrary proposition in the tense-logic:

(I1) $\exists a\colon a$ (There is an instant-proposition that is true now.)

(I2) $\sim L\sim a$ (Any instant-proposition is possible.)

(I3) $L(a \supset p) \vee L(a \supset \sim p)$ (Any instant-proposition necessarily implies *p* or its negation, where *p* is an arbitrary proposition.)

It is obvious from (I1) that we must extend our formal language with a quantification theory that allows propositional quantification over instant propositions.

(I1) states that there is an instant proposition that is true (right now). Actually, we might call this instant proposition *Now*.

(I2) states that any instant-proposition is possible – no matter whether it is past, present, future or even counterfactual.

(I3) means that for any instant proposition, *a*, and any tense-logical proposition, *p*, either *p* or ~*p* follows necessarily from *a*.

Intuitively, we may think of $L(a \supset p)$ as the claim that "*p* is true at *a*." If we substitute *a* with *Now* in (I3), the obvious reading becomes that any tense-logical proposition, *p*, will be either true or false at any moment (instant proposition), *a*, since either *p* or its negation must follow strictly from *a*.

37 Prior, *Time and Tense*, second edition, 122–126.

It is obvious that the use of instant propositions adds significantly to the expressibility of the formal tense-logical language. It is also clear that the instant propositions have some very remarkable properties. In fact, it turns out that everything in the whole branching time structure follows logically from the extremely rich information hidden in any single instant proposition. This means that in a certain sense, the *Now* includes everything that has been, will be, could be true, or could have been. Conceived in this way the *Now* has a cosmic dimension. This idea may be said to be a surprising formal parallel to the experience of a cosmic presentness reported is special situations such as open water swimming (cf. chapter 11 in this volume).

The idea and the properties of the instant propositions were studied carefully by Prior, and even more within the field of so-called hybrid logic which was inspired by Prior and further developed after his death.[38]

Conclusion and Perspectives

It seems evident that tense-logic provides a very powerful approach to the understanding of time. It emphasizes the importance of the tenses as an essential component of reasoning close to life, e.g., to the discussion of the passage of time. It also offers an attractive linguistic and conceptual framework for the study of essential problems regarding time and reality, such as determinism versus indeterminism. The analysis of the conceptual framework shows that we can allow for a branching time model and still have all the usual concepts from science at our disposal.

This idea of branching time has often been explored in movies and in other kinds of fiction. In the movie *Sliding Doors* (1998) it is shown how little it takes to create a bifurcation point leading to rather different courses of events. Other movies like *Groundhog Day* (1993) and *Edge of Tomorrow* (2014) play with what is in fact a Molinistic universe. Here it is imagined how attractive it would be if we could base our free choices on a precise knowledge about what every possible act would lead to, including how other people would react when placed in various situations. However, the stories in these movies of obtaining such knowledge depend on the assumed capability of travelling forward in time and then back to the present. Given that such journeys through time are out of the question

38 Torben Braüner, "Hybrid Logic," in *The Stanford Encyclopedia of Philosophy,* eds. Edward N. Zalta and Uri Nodelman (2022), accessed November 12, 2023, https://plato.stanford.edu/archives/win2022/entries/logic-hybrid/

from a conceptual point of view, it must be accepted that this kind of detailed knowledge of the Molinistic universe is inaccessible to humans.

The study of the use in fiction of branching time and other aspects of time is certainly very interesting.[39] The metaphor of time travel through an abstract space of possibilities may be useful in the discussions on tense-logic. It offers a nice way of exploring the status of various tense-logical statements. Metaphorically speaking, we may all be said to be travelling through a branching time structure of possibilities. On the other hand, it is very important to remember that this way of putting it, is no more than a useful metaphor, and that it will be misleading if it is taken literally. We have no reason to think that the branching time structure has an objective ontological status that would make this kind of time travel possible.

In fact, we should keep in mind that the use of parts of this metaphorical language may be directly misleading. For instance, speaking about a structure of possibilities given once and for all may be a mistake. Things are perhaps much more complicated than this, and we should not rule out that the logic behind everything may allow that complete new and now-inconceivable possibilities may arise. If so, the challenge will be to develop a new sort of dynamic logic even richer and more powerful than the present tense-logic – probably as an extension of it.

Appendix 1

In sciences inspired by physics, time is very often formally represented as an ordered set of moments or instants, (TIME,<), where the ordering is the before-after -relation. Conceived in this manner, time may have several interesting properties:

Denseness: there is a possible moment between any two different moments:

$$\forall m_1, m_2 \in \text{TIME}\ \exists m_3 \in \text{TIME}\colon (m_1 < m_2 \supset (m_1 < m_3 \wedge m_3 < m_2))$$

Transitivity: if one moment is before a second, which is before a third, then the first is before the third moment:

$$\forall m_1, m_2, m_3 \in \text{TIME}\colon (m_1 < m_2 \wedge m_2 < m_3) \supset m_1 < m_3$$

39 Craig Bourne and Emily C. Bourne, *Time in Fiction* (Oxford: Oxford University Press, 2016).

No last moment: there is a later moment after any moment in time:

$$\forall m_1 \in \text{TIME}\, \exists m_2 \in \text{TIME}\colon\ m_1 < m_2$$

No first moment: there is an earlier moment before any moment in time:

$$\forall m_2 \in \text{TIME}\, \exists m_1 \in \text{TIME}\colon\ m_1 < m_2$$

Forward linearity: if two moments both are after a certain moment, then they are either identical or one of them is before the other.

$$\forall m_1, m_2, m_3\colon\ (m_1 < m_2 \wedge m_1 < m_3) \supset (m_2 < m_3 \vee m_2 = m_3 \vee m_3 < m_2)$$

Backwards linearity: if two moments both are after a certain moment, then they are either identical or one of them is before the other.

$$\forall m_1, m_2, m_3\colon\ (m_2 < m_1 \wedge m_3 < m_1) \supset (m_2 < m_3 \vee m_2 = m_3 \vee m_3 < m_2)$$

Appendix 2

In non-metric tense-logic, we study the extension of standard propositional calculus and quantification theory with use of the two propositional operators, *P* and *F*, where *Pp* stands for "it has been that *p*" and *Fp* stands for "it will be that *p*."

In this paper we concentrate on metric tense-logic, in which *P*(*x*)*p* and *F*(*x*)*p* are added to standard propositional calculus and quantification theory.

The metric formulation has been chosen because of its straightforward appeal to the intuition. It is also assumed that all positive numbers can be used. Furthermore, we'll assume that time units are "days."

We'll consider an approach to tense-logic based on the following assumptions that are all valid in a so-called linear tense-logic and also in Prior's Ockhamistic tense-logic. Strictly, they should be presented in an axiomatic manner having a few axioms from which a number of theorems can be proved using a number of inference rules (see Øhrstrøm and Hasle 1995). This formal approach is, however, beyond the scope of this chapter, in which we will just list the theorems etc. that we need in the present context:

a. $$P(x)(p \supset q) \supset (P(x)p \supset P(x)q)$$

(In words: If it was the case *x* days ago that *p* implied *q*, then if *p* was the case *x* days ago then *q* was also the case *x* days ago.)

b. $$F(x)(p \supset q) \supset (F(x)p \supset F(x)q)$$

(In words: If it will be the case in x days that p implies q, then if p will be the case in x days then q will also be the case in x days.)

c. Negation principle for P:

$$P(x) \sim p \equiv \ \sim P(x)p$$

(In words: The claim that not-p was the case x days ago is equivalent with the claim that it is not the case that p was the case x days ago.)

d. Negation principle for F:

$$F(x) \sim p \equiv \ \sim F(x)p$$

(In words: The claim that not-p will be the case in x days is equivalent with the claim that it is not the case that p will be the case in x days.)

e. The PF-principle:

$$p \equiv P(x)F(x)p$$

(In words: The claim of p is equivalent with the claim that x days ago it was the case that p would be the case in x days.)

f. The FP-principle:

$$p \ \equiv \ F(x)P(x)p$$

(In words: The claim of p is equivalent with the claim that in x days it will be the case that p was the case x days ago.)

In addition, we need the standard modal assumption that if p necessarily implies q, then necessary p implies necessary q, i.e.,

$$(\text{Mod})\, L(p \supset q) \supset (Lp \supset Lp)$$

Formally, Mp may be defined as $\sim L \sim p$ i.e., that the negation of p, $\sim p$, may now be prevented, whereby p is obtained.

Finally, we need some rules of inference:

– Assuming that there are neither any first nor any last moments, we have the following rules of inference, where x is an arbitrary positive number:

$$(RP)\ \text{If} \ \vdash p \ \text{then} \ \vdash P(x)p$$

$$(RF)\ \text{If} \ \vdash p \ \text{then} \ \vdash F(x)p$$

This simply means that if p is a theorem, then so are $P(x)p$ and $F(x)p$.

– Furthermore, we have the rule of necessitation, (Nec), which states:
If p is a theorem, then Lp is also a theorem.

Appendix 3. The Tense-Logical Argument in Favour of Determinism

Prior worked a lot with various versions of the Master Argument as well as with possible formalisations of the classical arguments in favour of determinism. In the following we shall present an elaboration of a rather attractive version of Prior's version of the Master Argument in terms of metric tense-logic and based on propositional logic (PC) and the assumptions mentioned above:

i. $P(x)p \supset LP(x)p$ (Dio)
ii. $P(x)F(x)F(y)p \supset LP(x)F(x)F(y)p$ (From (i) and substitution)
iii. $F(y)p \supset LP(x)F(x)F(y)p$ (From (ii) and *PF*-principle)
iv. $P(x)F(x)F(y)p \supset F(y)p$ (*PF*-principle and substitution)
v. $L(P(x)F(x)F(y)p \supset F(y)p)$ (From (iv) and (Nec))
vi. $LP(x)F(x)F(y)p \supset LF(y)p$ (From (v) and (Mod))
vii. $F(y)p \supset LF(y)p$ (From (iii), (vi) and (PC))
viii. $F(y)\sim p \supset LF(y)\sim p$ (From (vii) and substitution)
ix. $F(y)p \vee \sim F(y)p$ (From (PC) and substitution)
x. $F(y)p \vee F(y)\sim p$ (From (ix), Negation-principle and (PC))
xi. $LF(y)p \vee LF(y)\sim p$ (From (x), (vii), (viii) and (PC))

Obviously, (xi) is the same as (Det). This means that if we want to avoid determinism, then we must drop at least one of the assumptions used in the above argument. Much of the logic used above would be very hard to drop, since we are dealing with very basic assumptions and strategies closely linked to human rationality as such. The only of the assumptions used above that we might choose to question are (Dio), the *PF*-principle and the negation principle for *F*. This is in fact a very important theoretical result, since it tells us what options we have if we want an indeterministic approach to time and reality.

Appendix 4

In the story about Peter Ruddle, it is the case that two objects, α and β, were identical n time units ago. However, it may be formally proved that if so the two objects must also be identical now.

i. $p \equiv P(n)F(n)p$ The *PF*-principle
ii. $I(\alpha,\beta) \equiv \forall\varphi{:}(\varphi(\alpha) \equiv \varphi(\beta))$ Leibniz' principle
iii. $P(n)I(\alpha,\beta) \supset \forall\varphi{:}\ (P(n)\varphi(\alpha) \equiv P(n)\varphi(\beta))$ By (ii) and standard tense-logic

iv. $P(x)I(\alpha,\beta) \supset \forall\varphi{:}(P(n)F(n)\varphi(\alpha) \equiv P(n)F(n)\varphi(\beta))$
Substituting the property $F(n)\varphi$ for the property φ
v. $P(n)I(\alpha,\beta) \supset \forall\varphi{:}(\varphi(\alpha) \equiv \varphi(\beta))$ By (i)
vi. $P(n)I(\alpha,\beta) \supset I(\alpha,\beta)$ By Leibniz' principle, (ii)

If we accept the story about Peter Ruddle as conceptually possible, then (vi) has to be rejected. Prior suggests that the *PF*-principle is rejected. One other response could be to question whether $F(n)\varphi$ should be counted as property just because φ is a property. But this option was apparently not considered by Prior. – Still, many scholars may escape the problems just by rejecting the story about Peter Ruddle claiming that it is conceptually impossible.

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3 Cyberity and Society: The Emergence and Entanglement of Time, Space, and Complexity in Virtual and Social Realities

Introduction: The Emergence of Cyberity and Society

In William Gibson's 1984 science fiction novel *Neuromancer*, the term *cyberspace* was described as a space of *unthinkable complexity.* Arguably, our present-day chaotic and blurred virtual reality not only reflects this description but has spiralled beyond fictional imagination. No longer is the issue at hand just the dystopia of how machines can come to rule the human world but rather in what way human cyber activity emerges integrated and transformative together with human activity in physical society.

As we have become immersed in a virtual world of unthinkable complex cyberspace entangled with our physical world, the idea of *time* seems to be a peculiar paradox. On the one hand, people in organizations and societies are characterized and measured by their ability to make time linear using technology and management systems. Time efficiency, time competition, delivery times, lead times, and response times in production networks, supply chains, public services, and even military responses to war is the name of the game. Success in physical society – it seems – is a matter of *reducing* complexity by *increasing* control of time and space with the aid of cyber activity.

At the same time, challenges in business and society demand creativity, innovation, and dynamic strategies of change – processes of creation that embrace non-linear time and lateral thinking "outside the box." Dealing with complex global problems stimulates long-term investments in uncertain futures without time frames, like we see in space technologies, green technologies, security technologies, and cyber technologies. On a global scale, societies produce an infinite number of such paradoxical interactions between people in the physical universe and activities in the cyber universe. As people engage in the interactive and dynamic networks of information and communication, they also commit themselves to endless variations in scales, horizons, and rhythms of time and space. The results are *increased* complexity and *reduced* control of time and space. Thus, even if the products of linear thinking and control are entertained and implemented in

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organizations and societies, there is no escape from dynamic time, space, and complexity.

In this chapter, the term *cyberity* is proposed for the evolving pattern of behaviour in cyber time-space. This stands both in contrast to and in integration with *society*, which is the social pattern evolving in physical time-space. Some key ideas from natural sciences, social theory, and philosophy on time, space, and complexity are invoked to discuss the emergence and entanglement of cyberity in society.

Complexity in Nature and Society

Since the end of the Second World War, theories of complexity in nature and society have been shaped by several research directions,[1] such as general systems theory,[2] chaos theory,[3] non-equilibrium physical theory,[4] and complex adaptive systems theory.[5] As a philosophical theme, complexity has been of interest to philosophers of science taking rationalist approaches,[6] systems approaches,[7] and

1 Stig O. Johannessen, *Complexity in Organizations* (London: Routledge, 2022); Evelyn F. Keller, "Organisms, Machines, and Thunderstorms: A History of Self-Organization, Part Two: Complexity, Emergence, and Stable Attractors," *Historical Studies in the Natural Sciences* 39, no. 1 (2009): 1–31.

2 Ludwig von Bertalanffy, *General Systems Theory* (New York: George Braziller, 1968).

3 Edward N. Lorenz, "Deterministic Nonperiodic Flow," *Journal of the Atmospheric Sciences* 20, no. 2 (1963): 130–141; Edward N. Lorenz, "Designing Chaotic Models," *Journal of the Atmospheric Sciences* 62, no. 5 (2005): 1574–1587; James Gleick, *Chaos: Making of a New Science* (New York: Viking Penguin, 1987).

4 Lars Onsager, "Reciprocal Relations in Irreversible Processes. I," *Physical Review* 37, no. 4 (1931): 405–426; Lars Onsager, "Reciprocal Relations in Irreversible Processes. II," *Physical Review* 38, no. 12 (1931): 2265–2279; Ilya Prigogine, *Introduction to Thermodynamics of Irreversible Processes* (Springfield, IL: Charles C. Thomas, 1955); Ilya Prigogine and Grégoire Nicolis, "On Symmetry-Breaking Instabilities in Dissipative Systems," *The Journal of Chemical Physics* 46, no. 9 (1967): 3542–3550; Ilya Prigogine, *The End of Certainty: Time, Chaos, and the New Laws of Nature* (New York: The Free Press, 1997).

5 Stuart A. Kauffman, *The Origins of Order: Self-Organization and Selection in Evolution* (Oxford: Oxford University Press, 1993); Maurray Gell-Mann, *The Quark and the Jaguar: Adventures in the Simple and the Complex* (New York: W.H. Freeman, 1994); John H. Holland, *Emergence: From Chaos to Order* (New York: Oxford University Press, 1998); Philip Anderson, "Complexity Theory and Organization Science," *Organization Science* 10, no. 3 (1999): 216–232; Peter Allen, Steve Maguire, and Bill McKelvey, eds. *The SAGE Handbook of Complexity and Management* (London: SAGE, 2011); W. Brian Arthur, *Complexity and the Economy* (Oxford: Oxford University Press, 2014).

6 Klaus Mainzer, "Challenges of Complexity in the 21st Century: An Interdisciplinary Introduction," *European Review* 17, no. 2 (2009): 219–236.

7 Edgar Morin, "From the Concept of System to the Paradigm of Complexity," *Journal of the Social and Evolutionary Systems* 15, no. 4 (1992): 371–385.

postmodern approaches.[8] Additionally, organizational scientists have taken inspiration from intersections of pragmatist philosophies[9] and process philosophies[10] in understanding complexity in organizations and society.[11]

Despite differences, the common concern of theories connected to these directions is to explore the dynamics of nature and society in terms of time, space, structure, and complexity.[12] Exploring complexity in society is to study the movement and rhythm (stabilization and change) of human experience and everyday practices with a particular view towards understanding processes and phenomena of emergence, self-organization, paradox, stabilization and collapse of organization, social structure, and patterning processes.[13] Enactments of these processes in the present creates experiences and premises for future events and actions entangled with the past. This includes human experiences with technology.[14] Hence, understanding cyber-time and cyber-space (cyberity) means exploring such processes in terms of theories of complexity.

8 Paul Cilliers, *Complexity and Postmodernism: Understanding Complex Systems* (London: Routledge, 1998); Paul Cilliers, "Complexity, Deconstruction, and Relativism," *Theory, Culture & Society* 22, no. 5 (2005): 255–267; Minka Woermann, Oliver Human, and Rika Preiser, "General Complexity: A Philosophical and Critical Perspective," *Emergence: Complexity and Organization* 20, no. 1 (2018): 1–18.

9 George H. Mead, *Mind, Self and Society,* edited and introduced by Charles W. Morris (Chicago, IL: Chicago University Press, 1977 [1934]); George H. Mead, *The Philosophy of The Present* (New York, NY: Prometheus Books, 2002).

10 Norbert Elias, *The Civilizing Process: Sociogenetic and Psychogenetic Investigations*, revised edition (Oxford: Blackwell, 2000).

11 Ralph D. Stacey, *Complex Responsive Processes in Organizations: Learning and Knowledge Creation* (London: Routledge, 2001); Ralph D. Stacey, *Complexity and Organizational Reality: Uncertainty and the Need to Rethink Management after the Collapse of Investment Capitalism* (London: Routledge, 2010); Stig O. Johannessen, *Strategies, Leadership and Complexity in Crisis and Emergency Operations (*New York: Routledge, 2018); Johannessen, *Complexity in Organizations.*

12 Serres, Michel and Bruno Latour, *Conversations on Science, Culture, and Time,* transl. by Roxanne Lapidus (Ann Arbor, MI: University of Michigan Press, 1995); Johannessen, *Complexity in Organizations*.

13 Stig O. Johannessen and Lesley Kuhn, *Complexity in Organization Studies* (London: SAGE, 2012).

14 Stig O. Johannessen and Ralph D. Stacey, "Technology as Social Object: A Complex Responsive Processes Perspective," in *Experiencing Emergence in Organisations: Local Interaction and the Emergence of Global Patterns,* ed. Ralph D. Stacey (London: Routledge, 2005), 142–163.

Asymmetrical Time and Transformative Causality in Nature

The Nobel Prize winning physicist Ilya Prigogine and colleagues discovered that the notion of symmetrical time, which is fundamental in classical physics, quantum physics and relativity theory does not match with the results of studies of the physics of non-equilibrium states.[15] Counter to what might be expected, they observed that irreversible, novel structures were created in systems where disorder increased and energy dissipated, indicating that time is unidirectional and in effect destroys symmetry between past and future.[16]

This means that there is an *arrow of time* in nature, in which spontaneous emergence of ordered novel structures is irreversibly created in perpetual movement into an unpredictable future filled with surprises.[17] When we think about human life, irreversible time might seem obvious. In physics, however, it upsets a basic principle of natural laws which states that such laws are universally operating independent of time and space. Findings from non-equilibrium physics suggests a fundamentally different and more complex understanding of time, structure, and complexity. Does this have any significance in human society?

Asymmetrical Time and Transformative Causality in Society

Among the most interesting thinkers who worked on asymmetrical time are the American pragmatist philosopher George Herbert Mead and British-German social theorist Norbert Elias. Both position time and space not as mere background dimensions within which human activity occurs but as being integrally bound up

15 Prigogine and Nicolis, "On Symmetry-Breaking Instabilities"; Ilya Prigogine and René Lefever, "Symmetry Breaking Instabilities in Dissipative Systems, II," *The Journal of Chemical Physics* 48, no. 4 (1968): 1695–1700; Prigogine, *The End of Certainty.*

16 Gregoire Nicolis and Ilya Prigogine, *Self-organization in Nonequilibrium Systems: From Dissipative Structures to Order Through Fluctuations* (New York: John Wiley & Sons, 1977).

17 Ilya Prigogine, *From Being to Becoming: Time and Complexity in the Physical Sciences* (San Francisco, CA: W.H. Freeman, 1980); Prigogine, *The End of Certainty*; Prigogine, "Time, Structure, and Fluctuations," in *Complexity in Organization Studies, Volume One*, ed. S.O. Johannessen and L. Kuhn (London: SAGE, 2012), 3–28; Ilya Prigogine and Isabelle Stengers, *Order Out of Chaos: Man's New Dialogue with Nature* (New York: Bantam Books, 1984); Heinz R. Pagels, "Is the irreversibility we see a fundamental property of nature?" *Physics Today* 38(1985): 97–99.

with human experience and sense making. Mead's view on time and space is intimately entwined with human self-consciousness and social interaction.[18] For Mead, ideas about both the past and the future are shaped by the present, and this perspective has profound implications for understanding the self as constituting an intrapersonal and interpersonal temporal process.[19]

Mead was concerned with the process whereby novelty emerges in an unpredictable way as the movement of continuity and transformation in the present.

> A present then, as contrasted with the abstraction of mere passage, is not a piece cut out anywhere from the temporal dimension of uniformly passing reality. Its chief reference is to the emergent event, that is, to the occurrence of something that is more than the processes that have led up to it and by which by its change, continuance, or disappearance, adds to later passages a content they would not otherwise have possessed.[20]

Mead´s insights resonated with those of Elias, who wrote about social structures:

> How a later form or state emerges from an earlier one which in turn emerges from a yet earlier one, and why it is the case; or how a later economic form arises from an earlier one, a later form of knowledge from earlier ones and, more generally, how later forms of human social life emerge from earlier ones.[21]

Elias argued that human society emerges in a non-linear way. Events are not just caused by other events in a straightforward way. The processes of time are complex patterns of human action that are repeated and transformed. Furthermore, Elias held that the past cannot exist for us today in the same way as it did then:

> . . . in human experience it is not only what has gone before that can be posited as the reason for what comes after, for its consequences; in the experience of those who come later even what comes afterwards, the consequences, in part determine the way in which something which happened earlier, the reason, is experienced and understood.[22]

Elias understood social time as both socially embedded and as a socially powerful disciplinary mechanism.[23] He constructed a theoretical paradigm (sociology of

18 Michael G. Flaherty and Gary A. Fine, "Present, Past, and Future: Conjugating George Herbert Mead´s Perspective on Time," *Time & Society*, 10(2001): 147–161.

19 Mead, *The Philosophy.*

20 George H. Mead, *On social psychology: Selected papers. Edited and introduced by Anselm L. Strauss.* (Chicago: Chicago University Press, 1964), 332.

21 Norbert Elias, *Reflections on a Life* (Cambridge, UK: Polity Press, 1994), 152.

22 Elias, *Reflections*, 152.

23 Simonetta Tabboni, "The Idea of Social Time in Norbert Elias," *Time & Society* 10, no. 1 (2001): 5–26.

configuration) wherein the oppositional stance between the conceptual dichotomies common to sociological thought (agents/actors and social structures) is dissolved and individuals and social structures are instead understood as being indivisibly connected.[24]

Mead, Elias, and Prigogine were dealing with different problems concerning the evolution of novelty and complexity in nature and society. All three took a position on causality as *transformative*. For them, time does not exist outside existence as continuum. The discontinuous temporality of existence (structure) breaks the symmetry of time. People interact in the present based on their reconstructions of the past and their expectations of the future. We can only understand the past from the present perspective, and we can only form expectations of the future in the present. This implies that *meaning* is in the present rather than in the past or future.

In recent studies of organizational complexity, we find the idea of transformative causality in the theory of complex responsive processes.[25] It centres around human interaction as the simultaneous iteration of continuity and potential transformation. That iteration is understood to occur in what Mead called *the living present,* incorporating the view of time described above. Burkitt follows a similar line of thought to Mead´s, where he discusses the development of approaches in sociology and social psychology to selfhood.[26] Rather than viewing an individual as an isolated self, a person's sense of self is viewed as socially constructed through participation in discourse. Burkitt argues that the social constructivist approach with its focus on language and discourse needs to be enlarged to consider theories of the embodied self whereby bodily experience is also seen as important to a person's self-construction.

This understanding is different to the widespread idea of dualistic *parts and the whole* in holistic systems thinking. German social theorist Hans Joas makes us aware how this difference to holism is also embedded in Anthony Giddens´ sociological ideas.[27] Giddens' theory of structuration has clear parallels to both Mead and Elias in that it encompasses a paradoxical approach whereby both individual agency and structure are envisioned as ongoing human action producing emergence of simultaneous repetitive stabilization and creative transformation.[28] Gid-

24 Robert van Krieken, *Norbert Elias* (London: Routledge, 1998).

25 Stacey, *Complex Responsive Processes*; Stacey, *Complexity and Organizational Reality.*

26 Ian Burkitt, "The Shifting Concept of the Self," *History of the Human Sciences* 7, no. 2 (1994): 7–28.

27 Hans Joas, "Giddens´ Theory of Structuration: Introductory Remarks on a Sociological Transformation of the Philosophy of Praxis," *International Sociology* 2, no. 1 (1987): 13–26.

28 Anthony Giddens, *The Constitution of Society* (Cambridge, UK: Polity Press, 1984).

dens departs from the structural priority of structuralism and the processual priority of empiricism, and he does not adopt the dualism that we find in holistic systems thinking. Instead, he is suggesting a paradoxical dynamic of structure and process, an idea which is taken significantly further in Stacey's theory on complex responsive processes.[29] Stacey is making the case for the self-organizing and paradoxical nature of detailed local interaction as the ongoing emergence of social complexity.

Thus, ideas from the complexity sciences seem to resonate well with ideas put forward by key social theorists, in conceiving both individuals and social structures as self-organizing, dynamic, and emerging. A language is provided by which individuals and structures are envisaged as a process where neither structure nor the individual are considered as separate 'objects', the dominating factor, or prior to the other, but as paradoxically implicated as different aspects of the same phenomenon – interaction.

Time, Identity, and Knowledge

In phenomenological philosophy there is an idea that time should be seen as streams of individual fragmented moments, in the sense that each moment occurs as something new to each separated individual.[30] Neither history nor future seems to be of interest, only the present subjective moment. The constructions by the individual actor detached from social surroundings are sufficient.[31] Meaning arises in fragmented life stories of autonomous individuals, and as such experience does not matter. The individual takes a primary and supreme position to "*the other*," thus collapsing the importance of the social individual and paradox.

In contrast to this, for Mead and Elias the paradox of the social individual is at the core of human experience and existence. The essence of Mead´s thinking is that individuals' ability to take the position of "the other" is how societies become societies and humans become human. Mead saw individual and group life as two sides of the same process, and he developed an understanding of the emergence of individual and social identity as social behaviour – meaning *social action*. In

29 Stacey, *Complex Responsive Processes.*

30 Henry Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness* (New York, NY: Dover Publications Inc., 2001). See also chapter 12 in this book.

31 Mitsuhiro Tada, "Time as Sociology's Basic Concept: A Perspective from Alfred Schutz's Phenomenological Sociology and Niklas Luhmann's Social Systems Theory," *Time & Society* 28, no. 3 (2018): 995–1012.

this, he asserted that human social life is always in movement, and the development of mind, consciousness, self-consciousness, and society is this ongoing process in which humans act and always relate in some interaction or dependency with others.[32]

Hence, Mead's thinking has as its basic assumption the paradoxical nature of the human social individual. His approach was concerned with ongoing patterning processes in which human interaction simultaneously constructs *identity and difference* – the collective and the individual.

Structure and Process as Movement of Identity and Difference

This parallels what Elias called a radical social understanding of subjectivity, in which the individual subject and the social subject emerge together as an ongoing *process of movement,* and not as separate phenomena.[33]

The individual is not placed first – as the constructing agent of society. Neither is social structure placed first – as a constructing force of human action. These phenomena emerge together, which means that they are constructed as a paradox – the same and different at the same time. This places the exploration of *paradox and emergence* at the centre of attention for knowledge and research. Human interaction is the cause of emergence, and human interaction only creates further human interaction and emergence. Thus, movement of time, history, and human organization is caused by the ongoing construction of the movement itself.

From this standpoint, structure (being) and process (time) are not separated, and do not produce anything like increasingly higher systems levels such as individuals, groups, organizations, and societies. Rather, these are aspects of various scales of patterning processes of social individuals who paradoxically emerge at the same time. When individual life stories are constructed as fragments, these always bear with them generality in relation to other human beings.

Taking these ideas together with ideas from complexity theories, we can see time as movement stretching out to constitute a paradox of simultaneous flow and fragmentation. Each moment of experienced separation (individual identity) is also an experience of flow and continuity of togetherness (collective identity). The experience of this stretched out and paradoxical discontinuous continuity –

32 Mead, *Mind, Self and Society*; Mead, *The Philosophy.*

33 Norbert Elias, *The Society of Individuals* (Oxford, UK: Blackwell, 1991).

is time. The intensity of this lived paradox is every person´s lived anxiety and knowledge. Punctuations of the tensions in this paradox creates a risk of being overwhelmed by feelings of isolated individuality as well as feelings of annihilation of individuality, both of which creates loss of meaning and depravation of knowledge. This notion that human experience and knowledge is related to the experience of paradoxically stretched out time is most certainly a methodological one. Hence, methodologies are ways of thinking about creating *experiences of movement* in stretched out time-space horizons in the living present.

Emergence of Multitudes of Time Horizons in Cyberity

Based on the ideas above, which are drawn from pragmatism, process philosophy, and complexity research, we now turn to the idea of *Cyberity*. This term is proposed for the evolving patterns of behaviour or patterns of relational action – going on in simultaneous cybertime and cyberspace. It is a virtual universe with countless local contexts in which individuals can join and perform various forms of freedom that are not necessarily possible in any physical contexts. Cyberity is a spatial and temporal source domain for a multitude of ideas, forms of communication, power relations, performed identities and values in continuous conflict and coordination with each other. Cyberity holds promises of any kind of virtual social performance.

However, cyberity is paradoxical, just as physical society is. It offers freedom at the same time as it creates the grounds for having freedom taken away. Cyberity provides a substrate for political communities, which are the foundation of group power, rebellion, and democracy. It offers political-economic activity not available in the physical world. But it also creates opportunism, conspiracies, execution of cynical economic power, crime, and violence. Consequently, cyberity has become the object of *cyber government and cyber policing* from both democratic and authoritarian regimes, for example when states monitor, turn off or censor internet access and activity, and create laws where certain activities in cyberity are criminalised (cybercrime). Hence, there is no clear boundary between cyberity and non-cyberity, one example being when individuals are radicalized and groomed in cyberity and act into the physical world to perform terror attacks or school attacks. This raises new questions about the relationship between cyberity and society, for example how to enforce regulation of behaviour and emerging new power figurations between the state, citizen, and distributed groups concerning security and freedom in both cyberity and society.

Time and Communication in Cyberity

The cyber age is first and foremost an era of extreme (hyper)communicative activity. Understanding communication in the emergence of a multitude of time horizons is clearly important. In human society, interactions are formed by communicative actions.[34] The consequences of such interactions within various time horizons cannot be designed or controlled by anyone because people, in their specific actions, also act spontaneously, and their communication and knowledge are associative.[35]

Hence, the reality of human communicative interaction is that no single person, group, or organization can control how communication moves, let alone control the consequences of communication among myriads of people. Rather, human practices and experiences are being organized by communicational themes, and these themes of communication are self-organizing, including any temporal experiences of control. When no single person or group can exert control in emergent organizational processes, it is because experiences of control also are experiences of the emergent self-organizing patterns of interaction. Experiences of control can emerge and become present in one moment, only to disappear in the next.[36] If reality is seen as complex self-organizing processes moving in various time-space horizons, then the shifting patterns we call societies are practices that are repeated and changed as ongoing interactions between people in specific groups and contexts.

Communicative patterns are both competitive and collaborative, and they can create harmony as well as conflict and power dynamics, which regulate and enable behaviours of inclusion and exclusion for individuals and groups.[37] Thus, organization of time and communication practices in cyberity is strongly dependent on the close self-organizing construction of 'us' identities and 'them' identities.

34 Jürgen Habermas, *The Theory of Communicative Action,* vol. 1: *Reason and the Rationalization of Society* (Boston, MA: Beacon Press, 1984); Jürgen Habermas, *The Theory of Communicative Action*, vol. 2: *Lifeworld and System: A Critique of Functionalist Reason* (Boston, MA: Beacon Press, 1987); Mikhail M. Bhaktin, *Speech Genres and Other Late Essays* (Austin, TX: University of Texas Press, 1986).

35 Mead, *Mind, Self and Society*; Jerome Bruner, *Acts of Meaning* (Cambridge, MA: Harvard University Press, 1990).

36 Johannessen, *Complexity in Organizations.*

37 Norbert Elias and John L. Scotson, *The Established and the Outsiders: A Sociological Enquiry into Community Problems* (London: SAGE, 1994); Farhad Dalal, *Taking the Group Seriously: Towards a Post-Foulkesian Group Analytic Theory* (London: Jessica Kingsley, 1998).

Time and Identity in Cyberity

Cyberity offers new identity construction. Groups with internal variations in both physical and virtual societies are dependent upon other groups.[38] This sense of 'other groups', or 'society', has something in common with Mead's idea of 'the generalized other'.[39] Experiences of the generalized other influence and regulate how a group becomes cohesive. Such experience also contributes to a group's tendency to perform similar or coordinated actions in similar contexts, for example in gaming. Most people behave in similar ways in public situations in physical society, despite not knowing each other or having spoken together, or in any way having agreed on how to behave. This is no different in cyberity.

Coordinated social practices emerge because each person imagines, observes, learns, and generalizes what others do. In this way, social behaviour is regulated, coordinated, and organized. Moreover, both individual identities and group identities are created as different aspects of these ongoing social interaction processes. Consider the development of language and thinking. Humans develop linguistic abilities while becoming aware of *self* and *other*.[40] Every person develops an identity, which is both individual and social at the same time. At any point in a person's development, it will be difficult to use the expression 'I am' without referring to 'we are' and vice versa. Humans are not constructing processes of social identity outside their interacting bodies.[41] Identity is an emerging and simultaneous process of mind, self, and society.[42] In this sense, communication is the basis of any new identity figurations in time and space, including those that emerge among people as *cyber identities*, for example computer generated avatars.[43]

Thus, understanding the patterning properties of human communication is to understand the processes by which humans stand out as individuals, at the same time as they create small and large group identities. In cyberity the possibilities of outcomes for identities with different time horizons ingrained to the cyber practices, are endless. Who or what is organizing such patterning processes of time and identity?

Clearly no one. Social patterning processes are self-organizing and emerging, meaning they are a variety of complex identity structures at different scales

38 Dalal, *Taking the Group Seriously.*

39 Mead, *Mind, Self and Society.*

40 Lev S. Vygotsky, *Thought and Language* (Cambridge, MA: MIT Press, 1962).

41 Ian Burkitt, *Bodies of Thought: Embodiment, Identity and Modernity* (London: SAGE, 1999).

42 Mead, *Mind, Self and Society.*

43 John Shotter, *Conversational Realities: Constructing Life Through Language* (Thousand Oaks, CA: SAGE, 1993).

(small and large groups), which are created without any central actor or designer.[44] This means that there are not first and second knowledge structures – no *a priori* when it comes to identity and cyberity. They emerge in experience as two aspects of the same transformative social process. This is in line with the key idea of Mead´s social theory of emergence and identity.[45]

Identity Rhythms and Time Elasticity

In social practices there are differentiation in *identity rhythms*: chronological rhythms, individual rhythms, social rhythms, work rhythms, rhythms in relation to nature, and religious/spiritual rhythms. The rhythms define experiences of subjective time and social time. What about cyber-time and cyber-rhythm? The human brain can think and decide fast and slow and organize time and space.[46] This means that the brain has a *time elasticity*, which defines how we can change tempo in our activities and thought patterns. This is an asset in changing social rhythms, for example from physical time-spaces to cyber time-space tempos.

Groups and organizations are patterns of activities or practices that sustain organizational structures. These practices are dependent on different time perceptions and organizational rhythms.[47] Such rhythms are baselines for time horizons from which individuals experience the limits of their practice forwards and backwards in presence. From this multi-time-space view, past is organized as perpetual movement in the present as people look towards the chaotic and unknown future in search for invariants that can function as guidance for an immediate or strategic action. The horizon stretched out behind and in front of the current time-space reality between an organized imagination of the past and a creative imagination of the future, is the individual experience of a social time horizon.

The rhythms in which these time horizons are created and recreated, represent the limits of human imagination of action. Time rhythms restrain how flexible anyone can be in relation to other individuals, groups, activities, and other forms of rhythms, and are in turn constrained by the elasticity of the rhythms.

44 Stacey, *Complex Responsive Processes.*

45 Mead, *The Philosophy.*

46 Daniel Kahneman, *Thinking Fast and Slow* (New York: Farrar, Straus, and Giroux, 2011); Tsao et al., "Integrating Time from Experience in the Lateral Entorhinal Cortex," *Nature* 561 (2018): 57–62.

47 Johannessen, *Strategies, Leadership and Complexity.*

People are attracted to groups matching their preferred rhythms and the kind of variation allowed by their sense of personal rhythms and those of the group.

Such a view might provide some idea of the difference between a cyber lifestyle and other lifestyles. If we think about what the various rhythms might be, and how they are enacted in different times and places, we might apply the idea of rhythm to differentiate the experiences of cyber-time horizons and physical reality. Differences in time experiences could define or indicate what kind of organized societal form it would be reasonable to say that people experience themselves to be immersed into and excluded from.[48]

Virtual Objects and Social Objects

Performing a social practice means *anticipating* how others will tend to act in different situations.[49] At the same time, the detailed individual actions vary from situation to situation, such that the organized patterns are never repeated exactly in the same way. Even though group patterns are mostly recognizable, they are also dynamic and cannot be predicted when seen from the perspective of the individual actor. Such simultaneous generalized and flexible patterns of action, which include physical objects, were termed *social objects* by Mead.[50] A social object is a pattern of behaviour, which includes all types of technological behaviour.[51] *Generalized patterns* are widespread behaviour that is recognized as typical for a group or society. *Particularized patterns* are all variations and specificities in the actions and ways of thinking of individuals in groups and society.

In the context of activity in cyber time-space (cyberity), a generalized pattern could be the use of computer platforms, screens, and smart phones, while particularized patterns are the detailed activity performed by every individual. In physical society such particularizations are confined to physical time-spaces while in cyber time-space they are not. Virtual localities are physically distributed yet virtually accessible in cyber time-space localities on specific websites, chat rooms, and so on.

48 Johannessen, *Complexity in Organizations.*

49 Herbert Blumer, *Symbolic Interactionism: Perspectives and Method* (Los Angeles, CA: University of California Press, 1969).

50 George H. Mead, "The Mechanism of Social Consciousness," *The Journal of Philosophy, Psychology and Scientific Methods* 9 (1912): 401–406.

51 Johannessen and Stacey, "Technology as Social Object."

Specific individual actions at specific places and times dissipate when someone refers to a generalized practice in a group, organization, or society. Seen from the perspective of an individual, interactional processes in groups are diffuse, so the complex processes are talked about in simplified ways as static physical objects and systems. Groups are for example referred to as "group level" in contrast to "individual level," suggesting that what happens in groups is different from what happens with individuals that make up the group. What is specific and detailed in human practice is then reified as if it were a physical object. Social practices are reduced to physical objects and detached from what are (and have been) complex intersubjective and interactional processes in physical time-space or cyber time-space. In this way, descriptions of detailed, real practices are often replaced with abstract, simplified, and generalized categories of behaviour. However, it is not the abstract physical object or system but the *social object* that emerges as coordinated action.

Hence, physical object and social object are the two different notions of how technology enters into social practices. Cyberity can be seen as a social object because it is a pattern of action generalized and particularized by many actors. However, cyberity is more complex because all activity is performed in an abstract universe. What appears as physical objects are not real but virtual objects, while social objects are the way in which virtual objects are enacted as virtual activities.

Moral and Ethics

Various forms of communication and power relating in cyberity constructs experiences of identity and purpose of what one is doing. Additionally, people who are dependent on performing certain practices make different judgements and valuations of others. They enact different notions of moral and ethics, what is right and what is necessary to do, and what it means to perform good acts in different contexts. As the paradoxical patterns of identities emerge, so do the notions of right and wrong, good, and bad, and the value of other people.

Human morality amounts to the notions and experiences of what one must or should do or be, i.e., obligations and norms.[52] Morality *constrains* human behaviour. By contrast, ethics are the notions and experiences of what one hopes to do or be, i.e., ideals and values. Such ideals and values *enable* human behaviour. Conflicts between moral constraints and ethical emancipation are experienced as

52 Hans Joas, *The Genesis of Values* (Cambridge, UK: Polity Press, 2000).

paradoxical tensions in human existence. Ethics and values are free of conflict because they are idealizations of reality. For example, we can all agree that freedom and justice is good (ethical). However, we often disagree on what freedom and justice means for a particular individual in everyday practical terms (moral). Moral is always a source of practical conflict. Hence, moral-ethical thinking is both enabling and constraining and as such it coincides with the phenomena of power, authority, and violence.

Power, Authority, and Violence in Cyberity

In contrast to *violence*, which is the direct and instrumental application of force by someone or something with immediate effect on one or more persons, power is the potential for action and regulation that can only rise or flow from a community (i.e., a group or organized pattern of behaviour).[53] In this sense, power is related to authority.

Thus, power is generally organized, whereas violence is not.[54] Violence is purely an instrumental gesture towards the immediate future; it is meant to disrupt and create chaos in an already existing organized power pattern, which in turn has come about because of a certain repetition of behaviour during a period. However, a change from violence towards restraining of violent behaviour depends on self-imposed calm, order, and even apathy. There is no such activity as cyber violence because violence belongs to the physical world. However, violence can be mediated by cyberity. Hence, violence is an example of a boundary between cyberity and society. Power and authority are performed in cyberity, while violence is performed in society.

In cyberity, the practice of authority is constantly emerging as people compete and collaborate to gain attention and followers. The boundary between authority and violence has no proper policing like in physical society. Virtual abuse and virtual violence spill over into physical society as physical violence.

Regulating violent behaviour is a necessary condition for a functioning society.[55] Such regulation means stabilizing of long-term power figurations in society (for example by institutions) while the dynamics of free activity moves and

53 Hannah Arendt, *On Violence* (New York: Harcourt, 1970).

54 Michel Foucault, *Society Must Be Defended: Lectures at the Collège de France, 1975–76* (New York: Picador, 2003).

55 Arendt, *On Violence*; Giorgio Agamben, *State of Exception* (Chicago, IL: University of Chicago Press, 2005).

changes short-term patterns of activities. However, regulation of power and authority in cyberity is much more difficult because of the distributed nature of time-space. Hence, violence in physical society might increasingly be linked to the potentiality and movement of power and authority in cyberity.

Culture and Cyberity

In the emergence of cyberity, we can differentiate between *everyday cyber culture* and *long-term cyber culture*. Everyday cyber culture is the immediate and chaotic future being organized by the actors. This is highly dynamic and receptive to spontaneity, creativity, and change. Long-term culture can only be held in place by enduring values rooted in the conscious and unconscious social patterns of a group or physical society of people. It is linked to values, tradition, rituals, and social habits and a way of behaving and thinking in time and space in which people take for granted their acceptance and valuation of a certain way of being. Social values are internalized and basic assumptions about what it means to be human in a specific physical society – a process which cannot take place in cyberity.

Values such as freedom, justice, and equality do not enter people's psyche and social behaviour as immediate or temporal phenomena from a virtual universe. Societal values are created and recreated in people´s mindset and behaviour over generation long periods of time.[56] Everyday cyber cultures, however, whirl around in perpetual change and movement. They can be experienced and observed, but not pinned down or predicted. Their time-spaces establish themselves only sufficiently long so that recognizable patterns are created, in which change, adaptation, growth, expansion, and diversification of virtual groups can be sustained.

Conclusion: Crises and Futures

Cyberity is a social and virtual patterning process, which moves and flows extremely fast through a chaotic and complex cyber time-space. Cyberity shapes what people in relations with their material and natural environment do with respect to creating new organized cyber time-space-rhythms and forming their experience of such time-space-rhythms at the same time. There is no overall plan, design, or central control in cyberity as there is an infinite number of actors in-

56 Joas, *The Genesis of Values.*

teracting. Simultaneously, cyber technologies behave, act, and interact beyond human control in the form of artificial intelligence, automated algorithms, and various interactions with humans in cyberity.

As cyberity self-organizes into stretched out dynamic and interacting *time-space horizons*, new hybrid realities emerge in which actors experience a variety of structures integrated into their behavioural patterns. Cyber time-space becomes organized/structured in the present while the future is open and unpredictable. It is through such self-organization of cyber experience that cyber realities and cyber histories are constructed. Cyberity interacts with physical life and creates new social realities that have never existed before.

Complexity theories are suitable as sources to understand how cyberity emerge and co-evolve with society, because they deal with a type of dynamic processes that are neither stability nor chaos but patterning at different scales. Such processes are intimately connected to crises. Crises and complexity are drivers of cyberity and society by a continuous re-organizing of realities, changing of rhythms, movements of time and space, and spontaneous emergence and collapse of structures. Linking crises to cyberity and complexity implies exploring how social structuration processes evolve, including how cyber-structures emerge as cyber-practices in society.

Cyberity can only seem organized as past experiences. The past can be organized, structured, made sense of, and made linear in human interactions. In organizing past cyberity, we organize *cyber history*. However, *futures* in cyberity and society are radically disorganized because they are self-organizing, non-linear, and emerging. All human interactions are movements towards this non-organized future in which realities are constructed in different time-space horizons while people act with intentions shaped individually or in a group. Because people continuously create experiences, they also create time and structure. Organization of time can therefore only happen as organization of experience of the past in the present. Futures are yet to become.

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4 Revolutions and Concepts of Time: Theoretical Reflections about Revolutionary Transformation Processes and their Multiple Chronological Contexts and Challenges

Introduction

If one takes the relationship between revolution and time, i.e. revolutionary time and the time(s) of revolution, into closer consideration, there are numerous layers of this time-event relationship that need to be closely analyzed. To begin with, we cannot really predict revolutions, and therefore not determine, when the time for a revolutionary change has actually come, because they must be understood as "forms of human behavior" that cannot simply be tied to certain preconditions,[1] although we are often able to link the evolvement of revolutionary processes to a certain time of crises.[2] Nevertheless, revolutions are considered to mark watersheds of human history, and it has recently been argued that they also represent a phenomenon that can only be found in humanity's global modernity,[3] in which waves of revolutions decided the course of history.[4] Revolutions are without any doubt embedded in a specific time, and often determined by events out of reach of active revolutionaries, even if they would have argued within their own historical context that the time is ripe for revolutionary action.[5]

1 Chalmers Johnson, *Revolutionstheorie*, transl. by Karl Römer (Cologne: Kiepenhauer & Witsch, 1971), 21.

2 Hans Wassmund, *Revolutionstheorien* (Munich: C.H. Beck, 1978), 41; Thorsten Thiel, "Die Krise der Demokratie in Europa – und die Krise der Erforschung dieser Krise," in *Europa, wie weiter? Perspektiven eines Projekts in der Krise*, eds. Winfried Brömmel, Helmut König, and Manfred Sicking (Bielefeld: Transcript, 2015), 101.

3 Frank Jacob, *Revolution and the Global Struggle for Modernity,* vol. 1: *The Atlantic Revolutions* (London/New York: Anthem, 2024).

4 David Motadel, "Global Revolution," in *Revolutionary World: Global Upheaval in the Modern Age,* ed. David Motadel (Cambridge: Cambridge University Press, 2021), 1–37.

5 Rosa Luxemburg, "Zum 1. Mai: An die deutschen Arbeiter" (1910), in *Rosa Luxemburg: Gesammelte Werke,* vol. 2, eds. Annelies Laschitza and Günter Radczun (Berlin: Dietz, 2004), 342. On Rosa Luxemburg's thoughts and revolutionary practices, see Frank Jacob, *Rosa Luxemburg: Living and Thinking the Revolution* (Marburg: Büchner, 2021).

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In contrast to ancient, medieval or early modern rebellions, due to which people tried to change their respective position within an accepted order, revolutions are usually considered modern,[6] especially since those who revolt are not only interested in a higher position in an already *existent* order, but look for the establishment of something *new*, due to the discontinuum that is supposed to be created through the revolution.[7] The French and Russian revolutions are examples of the latter. Furthermore, revolutions seem to appear in waves, and determine certain time periods which are consequently considered or described as "revolutionary ages."[8]

In fact, "professional revolutionaries" such as Lenin or Sun Yat-sen were often surprised by the events, while they awaited the revolution in foreign countries, or they were unable, like Rosa Luxemburg or Emma Goldman in Germany and the United States respectively at the end of the First World War,[9] to actually motivate the working class to fulfil Marx's revolutionary predictions and to establish a "dictatorship of the proletariat."[10] Next to this dilemma, Marx and Engels, as well as other revolutionary intellectuals that tried to follow in their footsteps,

6 Karl Griewank, *Der neuzeitliche Revolutionsbegriff: Entstehung und Geschichte* (Frankfurt am Main: Suhrkamp, 1973).

7 Florian Grosser, *Theorien der Revolution: Zur Einführung*, 2nd ed.(Hamburg: Junius Verlag, 2018), 14–15; Hannah Arendt, *Die Freiheit, frei zu sein*, 3rd ed. (Munich: DTV, 2018), 38. There are nevertheless scholars who (falsely, FJ) apply the term revolution for other time periods as well, e.g. Jack A. Goldstone, *Revolutions: A Very Short Introduction* (Oxford/New York: Oxford University Press, 2014), 41–51.

8 Manfred Kossok and Walter Markov, "Zur Methodologie der vergleichenden Revolutionsgeschichte der Neuzeit," in *Studien zur Vergleichenden Revolutionsgeschichte 1500–1917*, ed. Manfred Kossok (Berlin: Akademie Verlag, 1974), 9; Manfred Kossok, "Zur Methodologie der vergleichenden Revolutionsgeschichte der *Neuzeit," in Sozialismus an der Peripherie: Späte Schriften*, ed. Jörn Schütrumpf (Berlin: Dietz, 2016), 103. Recently, similar points were made by David Motadel, "Global Revolution," 1–37. On the revolutionary age see, among others, Eric Hobsbawm, *The Age of Revolution: Europe: 1789–1848* (London: Weidenfeld & Nicolson, 1962).

9 Frank Jacob, "Anarchistische Imperialismuskritik und staatliche Repression: Emma Goldman, Alexander Berkman und die Kritik an der politischen Ökonomie des Ersten Weltkrieges in den USA, 1917–1919," *PROKLA: Zeitschrift für Kritische Sozialwissenschaft* 50, no. 201 (2020): 681–695.

10 Helen Rappaport, *Conspirator: Lenin in Exile* (New York: Basic Books, 2010); Alexander Solzhenitsyn, *Lenin in Zurich* (New York: Farrar, Strauss and Giroux, 1976). Dutch historian Marcel van der Linden, in Marcel van der Linden, "Workers and Revolutions: A Historical Paradox," in *Worlds of Labour Turned Upside Down: Revolutions and Labour Relations in Global Historical Perspective*, eds. Pepijn Brandon, Peyman Jafari and Stefan Müller (Leiden: Brill, 2020), 19–49 called the lack of workers' support for revolutionary movements a "historical paradox." On the concept of the "dicatorship of the proletariat," its genesis, terminology and problems caused by its vagueness, see Mike Schmeitzner, "Lenin und die Diktatur des Proletariats: Begriff, Konzeption, Ermöglichung," *Totalitarismus und Demokratie* 14, no. 1 (2017): 17–69.

struggled not only with a proper definition of a revolution, but especially with regard to its relation to and impact on time. While Marx himself had described revolutions as the "locomotives of history," which supposedly accelerated time and its speed.[11] Walter Benjamin would later argue that they rather act as emergency brakes within a historical process, which means that revolutions would rather interrupt time than to accelerate it.[12] And Leo Trotsky, out of a post-eventual necessity, announced the permanence of the revolutionary process as the latter obviously did not arrive at a certain point that had been predicted to have been achieved after some time.[13]

Regardless of its categorization as time enhancer or interruptor, a revolution usually causes a discontinuum of an existent historical, political, economic and/or social state – one could even speak of an end of the existent *zeitgeist* here – and tends to initiate a tremendous change within a relatively short time span – although the latter can still last decades.[14] In this regard, revolutions regularly mark the end or beginning of old or new time-periods, and are often used as a watershed between historical eras.[15] Next to the chronological meaning or position within concrete historical processes, the chronological character of revolutions has also been debated. American political scientist Chalmers Johnson has argued that revolutions can only be understood within the social system in which they are caused by human actions or interactions, which means that the evolving revolutionary process is determined by its chronological context.[16] Comparative studies of revolutions emphasize that such times are marked by a change in perception of what is considered acceptable. The *zeitgeist* in this regard changes, and actions by politically powerful elements of the social and political order are no longer accepted, although they are de facto not violating the existent legal norm. However, the times have changed quite literally, and similar actions are now per-

11 Karl Marx, "Die Klassenkämpfe in Frankreich 1848 bis 1850 (1850)," in Karl Marx and Friedrich Engels, *Werke*, vol. 7 (Berlin: Dietz, 1960), 85.

12 Walter Benjamin, *Über den Begriff der Geschichte*, ed. Gerard Raulet (Berlin: Suhrkamp, 2010): 153.

13 Leo Trotsky, Die permanente Revolution, (1929), Marxist Internet Archive), accessed November 30, 2023, https://www.marxists.org/deutsch/archiv/trotzki/1929/permrev/index.htm.

14 For a detailed discussion of the revolutionary discontinuum see Gunnar Hindrichs, *Philosophie der Revolution* (Berlin: Suhrkamp, 2017).

15 That such changes might also be understood as shifts in the existent world-system was recently emphasized in Frank Jacob, "Wallerstein's World-Systems Theory and the Role of Revolutions," in *Wallerstein 2.0: Thinking and Applying World-Systems Theory in the 21st Century*, ed. Frank Jacob (Bielefeld: Transcript, 2021), 121–154.

16 Johnson, *Revolutionstheorie,* 16 and 21.

ceived as a violation of right. These actions are no longer considered suitable; they do no longer match the *zeitgeist*. The latter's change as a precondition for the demand to establish a revolutionary discontinuum is therefore quite obvious. Regardless of these considerations, it remains hard to predict when revolutions actually occur, although we can determine some relevant aspects that increase the likeliness of revolutionary movements in particular times, e.g. in relation to crises, namely when the majority of a population suffers from extraordinary circumstances or strain and those in power seem either unwilling or incapable to help.[17]

Once revolutions eventually appear on the historical stage, they also change the perception of time through progressive acceleration, i.e. new ideas that are put into actual existence in a relatively short time span, as well as political and social transformations that would have been unthinkable before. According to Jacques Rancière, it is eventually the modern demand for political equality that causes revolutionary action,[18] while Arendt argued that freedom is the first and foremost driving force for the revolutionary.[19] Regardless of the actual aims, an immediate and mass based action is supposed to establish what revolutionaries themselves often refer to as a "new time."[20] If the revolution is – at least for a short time span – successful, the leading revolutionaries, who are powerful actors within the new order, also try to mark the beginning of something new. They often try to mark the novelty of the post-revolutionary time by claiming new ages to begin, something also marked by the introduction of new time systems or standards (calendars, festivities etc.) that are supposed to emphasize the "new beginning" and the discontinuation of whatever existed before the revolution had paved the way towards a supposedly better society.[21] If one takes these elements into account, there are several aspects that need to be discussed and that the this chapter, after an initial reflection about the relationship between time and revolution, intends to address:

1. the time for revolutions, i.e. the respective moments that mark the beginning for revolutionary upheaval and possible revolutionary change,
2. the revolutionary time, i.e. the supposedly accelerated historical process that is understood as the revolution, and

17 Frank Jacob, *Freiheit wagen! Ein Essay zur Revolution im 21. Jahrhundert* (Bielefeld: Transcript, 2021), 16–22; Frank Jacob, *#Revolution: Wer, warum, wann und wie viele?* (Marburg: Büchner, 2022), 57–69.

18 Jacques Rancière, *Das Unvernehmen: Politik und Philosophie*, 7th ed. (Berlin: Suhrkamp, 2018).

19 Hanna Arendt, *On Revolution* (London: Penguin, 1990 [1963]), 11.

20 Kurt Eisner, *Die neue Zeit* (Munich: G. Müller, 1919).

21 Arendt, *Revolution*, 29.

3. the post-revolutionary time and its construction, i.e. the achieved and expressed discontinuum and its construction within a newly created reality of time.

These three aspects will be taken into closer consideration, and this chapter, by analyzing the single chronological elements of revolutionary transformation processes, intends to provide answers with regard to the complex relation between revolution and time.

Time and Revolution

Everyone seems to understand time, yet we all seem to have different understandings when it comes to explaining what it is. Already "the words we use to describe it seem to presuppose a particular understanding of it,"[22] and there also tend to be cultural preconditions that make us apply certain interpretations of time and its passing, may it be considered linear, multi-linear, or in other ways. This dilemma was also described by Edmund Husserl, who stated the following about it:

> Of course, we all know what time is; she is the best known. But as soon as we try to account for our consciousness of time, to place objective time and subjective consciousness of time in the right relationship and to bring ourselves to understand how temporal objectivity, i.e. individual objectivity in general, can be constituted in the subjective consciousness of time, yet as soon as we make the attempt to analyze the purely subjective consciousness of time, the phenomenological content of the experiences of time, we get caught up in the strangest difficulties, contradictions, confusion.[23]

To overcome such a possible confusion, it is probably necessary to shortly discuss time as such, before we link it further to revolution. For a timerelated diagnosis one has to not only link normative and descriptive categories that have been used to describe the movement within different stream(s) of time, but one has to consider time as fluid, i.e. not only leaving the past behind to pass the present

22 Mary L. Dudziak, *War Time: An Idea, Its History, Its Consequences* (Oxford/New York: Oxford University Press, 2012), 17.

23 Edmund Husserl, *Vorlesungen zur Phänomenologie des inneren Zeitbewußtseins* (Halle: Niemeyer, 1928), 368.

and to reach the future.[24] Time encompasses all three of these spheres, and overreaches or combines these chronological realms, especially in revolutionary culmination points, at which past, present, and future seem to meet and to be negotiated about. Revolutions in this regard open a space that is timeless or not timebound yet, as the past needs to be surpassed in the present to actually reach a future that is not part of the previous stream of time, if we visualize the latter as such. German historian Jörn Rüsen emphasized this co-existence of the three time dimensions in one of his reflections as follows:

> Human life is stretched between past, present and future, and these three dimensions are always systematically intertwined. But this entanglement is not only factually the case, but also has to be done separately. Everyday life practice is determined in its temporal relationship by experiences and expectations. The past is in memory and the future is present in anticipation, and both are intertwined in the present life.[25]

Simply put, there can not be a present without the past, and no future without the present. As time is a "fundamental, common, and elemental dimension of human life"[26] that in a way determines all aspects of the living humans' experiences (beginning, change, duration, and end), it had to be interpreted by human consciousness as well. French sociologist Henri Lefebvre pointed out that time is nevertheless split with regard to the way we consider or perceive it: "we have the philosophy of time, of duration, itself broken up into partial considerations and emphases: historical time, social time, mental time, and so on."[27]

Furthermore, time does neither exist in a vacuum, nor is it thought or perceived as an independent category, but usually put into a contextualization with other elements that influence human lives, e.g. space or culture.[28] When it correlates with revolutionary change or a process to achieve the former, the perception of time is naturally transformed by the experiences of the people who live within that particular time context of the revolution. Especially the moment when the protesters turn into conscious revolutionaries will change the way in which the past, the present, and the future are perceived, because, as Rüsen em-

24 Peter Siller and Ole Meinefeld, "Zur Einführung: Was heißt 'Zeitdiagnose'? Anmerkungen zu einem nachgefragten Genre," in Heinrich-Böll-Stiftung, *Stichworte zur Zeit: Ein Glossar* (Bielefeld: Transcript, 2020), 13.

25 Jörn Rüsen, "Die Kultur der Zeit: Versuch einer Typologie temporaler Sinnbildungen," in *Zeit deuten: Perspektiven – Epochen – Paradigmen*, ed. Jörn Rüsen (Bielefeld: Transcript, 2015), 28.

26 Rüsen, "Kultur der Zeit," 24.

27 Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Malden, MA: Blackwell, 1991), 24.

28 Stuart Elden, *Understanding Henri Lefebvre: Theory and the Possible* (London: Bloomsbury, 2004), 170.

phasized, "[w]hatever people do . . ., it always happens in the present in the field of tension between memory and expectation," or to apply Reinhart Koselleck's historical categories here, between the space of experience (*Erfahrungsraum*) and the horizon of expectations (*Erwartungshorizont*).[29] While time passes, humans tend to construct their perception so that it makes sense or to help to fulfil the imagined order that time is supposed to provide for life. This process creates "collective realities"[30] that rely on time and space, among other aspects that order human life and interactions according to their respective relationships with each other. Taking these relationships into account, one has to be aware that time can be perceived in different ways depending on the space as well as the context the human individual experiences it in. The stream of time and its speed are always the same, but its perception is different especially during revolutionary transformation processes. In the context of the latter, there only seems to exist an acceleration of time, which is, however, solely based on the perception that many changes were achieved in a relatively short time span, especially when compared to a recent past with a long time span without similarly tremendous changes.

If one considers such perceptions or visualisations of time, it is usually taken for granted that time is linear, although there are also cyclical understandings of time.[31] History, understood as a continuation of time and its passing,[32] was also often considered a linear process of development. Still, very often (sentiments of) the *past*, represented by reactionary tendencies, romanticism or a part of society that is less advanced and future-oriented, the *present*, which all members of a society might perceive differently and in relation to their own spatial, social, and cultural context, and the *future* or at least the promises of and reflections or debates about the latter exist at the same time. This very "simultaneity of the non-simultaneous" (*Gleichzeitigkeit des Ungleichzeitigen*)[33] also exists in revolutionary moments of time. Antagonist forces are at work when radical revolutionaries fight for a better future through political and social change, while moderate revolutionaries advocate for slight adaptions of the present which in a better form will become the future, yet without too much risk, and anti- or counter-revolutionaries not only despise change, but want to

29 Reinhart Koselleck, "'Erfahrungsraum' und 'Erwartungshorizont': Zwei historische Kategorien," in *Vergangene Zukunft: Zur Semantik geschichtlicher Zeiten* (Frankfurt am Main: Suhrkamp, 2010), 349–375.

30 Émile Durkheim, *Les formes élémentaires de la vie religieuse: Le système totémique en Australie* (Paris: CNRS, 2014).

31 Dudziak, *War Time*, 18.

32 Andrew Abbott, *Zeit zählt: Grundzüge einer prozessualen Soziologie* (Hamburg: Hamburger Edition, 2020), 63, 70.

33 Falko Schmieder, "Gleichzeitigkeit des Ungleichzeitigen: Zur Kritik und Aktualität einer Denkfigur," *Zeitschrift Für Kritische Sozialtheorie Und Philosophie* 4, no. 1–2 (2017): 325–363.

revert the revolutionary transformation to return to a status quo ante. Regardless of this overlap of different chronological perceptions, because in reality, time continues to pass, even such multi-layered time experiences are determined by an end, as all time seems to be, especially since it reveals itself as the maturation of human existence itself.[34] To exist, means to exist in time, and be connected or contextualised within it.[35] However, the understanding and acceptance of one's own contextualisation seems to be one of the preconditions for perceiving time as something related to oneself. Therefore, revolutionary time can only be perceived as such by conscious revolutionaries or people conscious about the revolution. Times of protest would consequently not be the same as revolutionary times, because the stream of time would not be challenged by the wish for a discontinnum. Slight reforms of the present, yet not a total break with the past and the present, are demanded by the masses, who protest against the existent order, yet are not willing to totally destroy it as part of a conscious and revolutionary act. With regard to this statement, one would have to ask then, *when* do revolutions actually begin, and when is a time for revolution is actually reached. This consideration consequently demands a link between revolutionary transformative processes and time itself.

Time for Revolution

Generic models for the analysis of revolutionary processes have shown that protests turn into full fledged revolutions once they pass a "certain point of no return."[36] This tipping point is usually created when the ruling party has proved unwilling to meet the demand for reform. Antagonist forces are at work, as described above: The present, the ruling party consequently contend, shall remain unchanged, although some political forces intend to return to old days of glory at this moment as well. The critical mass of protesters, however, break with the existent order when they cross the point of no return and demand a discontinuum of the stream of time to begin a new time, the start of which is marked by the revolution and the change it achieves. If one (visually) applies Hegel's dialectics here,[37] neither the post-reform synthesis, nor the post-revolutionary change of the time level as such, serves to continue the linear stream untinterrupted, as the

34 Martin Heidegger, *Sein und Zeit*, 15th ed. (Tübingen: Niemeyer, 1975), 328–330.

35 Dirk Rustemeyer, "Zeit und Zeichen," in *Zeit deuten: Perspektiven – Epochen – Paradigmen*, ed. Jörn Rüsen (Bielefeld: Transcript, 2015), 54.

36 Jacob, *Freiheit wagen!;* Jacob, *#Revolution*.

37 G. W. F. Hegel, *Phenomenology of Spirit*, trans. A.V. Miller (Oxford: Oxford University Press, 1977).

Hegelian dialectic struggle between the two alternatives is fought out within the present time in which the further course of the revolutionary and/or reform process, and thereby the level of the time stream, as such, is decided upon. Instead of a time that would have linked pre-revolutionary past with revolutionary present and post-revolutionary future, the post-revolutionary stream rather begins a new time level that leads into an alternative future (Fig. 4.1). The original time stream has consequently been fractured, and the revolutionaries, if successful, achieve a discontinuum, a break with their own past which, in their opinion, should not be linked to their future. Whatever the main point of criticism against the old society has been, it is usually no longer part of the post-revolutionary order, especially since the latter is marked by the total break with the old and previously existent order. Hence the question remains, when do people decide to attempt for such a break, or in other words: *When is it time for a revolution?*

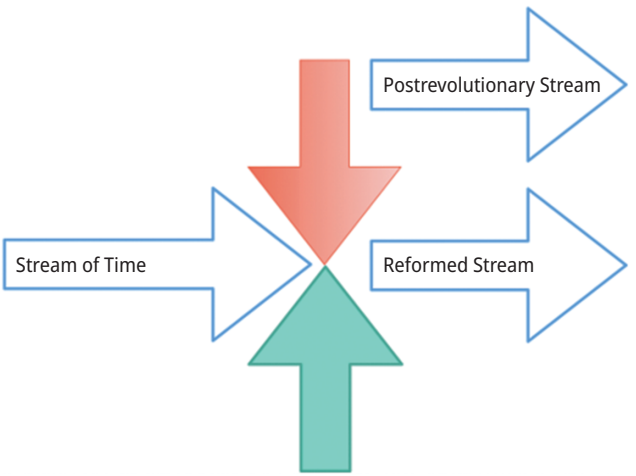

Fig. 4.1: Hegelian Dialectics and Different Time Streams.

We can hardly predict the future and therefore we also have to accept limitations with regard to the predictability of revolutions. That said, we can define elements or developments that could stimulate the increase of revolutionary potential and thus make such conscious transformative attempts more likely. Revolutionary processes usually begin with a violation of rights that can be a legal (*de jure*) or only a perceived one. If people consider an act of the ruling power to be illegal, or better illegitimate, there will be disagreement about such acts and its implications that might lead to disagreement and maybe even protest. As said, the act can even be legal according to existent law, but still be considered, in an emotional

sense, as illegitimate by the people. The latter perception of a violation of rights is very much related to one's own contextualisation within time and the existent political order. A king that rules is not immediately a reason for protest or revolution, but a ruling king whose acts are perceived as or felt to be injust will cause the people he rules to think critically about the acceptability of the status quo. Ideas like those related to the Enlightenment might have therefore also done their part in providing the context for a perceived violation of right, at a chronological moment we would consider modern. In this regard, violations of rights could also not have any real effect on the considerations of the people if the majority does not consider the violation of rights to be a problem or is simply willing to accept it. Whether an act by the ruling power will spark the revolutionary potential in a given moment therefore also depends on the context of time and space that determines its perception. If people are generally happy with their living conditions, they might ignore many violations of rights simply due to their own unwillingness to risk their current status in the existent system. There are nevertheless some developments or factors that could stimulate the evolvement of a revolutionary process and within the latter the activation of a revolutionary spirit or consciousness among a critical mass of people.

Hans Wassmund, a German political scientist, highlighted that revolutions are preceded by "disorientation, alienation . . . [and the] breakdown of social habits and a break in obedience to the state." At the same time, he emphasized that the carriers of revolutionary thought and thereby those responsible for the genesis of revolutions or the beginning of revolutionary processes tend to recruit from three main groups, namely the "mentally frustrated, economically impotent and socially declassed."[38] It is consequently not a surprise, that times of crises tend to be closely related to times of revolution, although not every crisis automatically provokes a revolution. Poverty or injustice alone are hardly enough to trigger revolutionary change. It is therefore hard to tell which moment eventually marks the point at which a majority is finally unwilling to take further revolutionary action. Nevertheless, we can say that the likelihood that the masses will begin moving from spontaneous protest to anti-systemic revolutionary struggle is increased by the experience of crisis.[39]

Revolutionaries have tried for more than two centuries to activate the masses to make this transition, and have hoped for spontaneous protest formation to be enough to bring about revolutionary change. However, the masses are hard to con-

38 Hans Wassmund, *Revolutionstheorien* (Munich: C.H. Beck, 1978), 41.

39 Frank Jacob, *Rosa Luxemburg: Living and Thinking the Revolution* (Marburg: Büchner, 2021); Siller and Meinefeld, "Zur Einführung," 12.

trol and often do not consider themselves to live in a time of revolution, as their perception of time differs quite a lot from the ones shared by the conscious revolutionaries, who are always longing for their own revolutionary moment, for which they even neglect their own existence.[40] A majority of people might even fear the revolution due to its historical tendency to end in tragedy. There was consequently also an understanding that the revolutionary process would only have limited access to, or influence on, the future. Rosa Luxemburg probably describes this dilemma best when she argues that "[t]he 'golden mean' cannot be maintained in any revolution, its natural law demands a quick decision: Either the locomotive will drive full steam ahead up the historical ascent to the extreme point, or it will roll back to the starting lowland through its own gravity and pull those who they wanted to stop halfway with their weak forces, hopelessly into the abyss."[41] Consequently, Luxemburg describes the revolutionary time stream as not being linear in nature, but rather as a pendulum that the revolutionaries have to secure before it swings back to a point before the start of the revolutionary process. They have to reach another time branch, as described above, with regard to a visualisation of Hegel's dialectic, before the process swings back to the time branch from where the revolutionary attempt started. Taking this into account, revolutions rather mark fractions within a linear time stream, allowing the leaving of the latter in order to begin a new one.[42] For this, however, a violent shuttering of, or detachment from, the current stream of time is necessary, but can often not be achieved peacefully, especially since the masses are not easily motivated to go along with such extreme changes to the status quo. The massive condensation of development within revolutionary periods, in addition to the described fractures with the past, eventually turn the revolution into a cataclysmic experience for those who can not easily digest the collapse of their individual and collective time-continuum and the overlap of different time spheres at one present and particular given moment in time. Time, therefore, becomes fully revolutionary.

40 Sergey Nechayev, *The Revolutionary Catechism* (1869), accessed November 30, 2023, https://www.marxists.org/subject/anarchism/nechayev/catechism.htm.

41 Rosa Luxemburg, Zur russischen Revolution (1918), in Rosa Luxemburg, *Gesammelte Werke*, vol. 4, eds. Annelies Laschitza and Günter Radczun, 6th ed. (Berlin: Dietz, 2000), 340.

42 Also see the contribution by Peter Øhrstrøm about branching time, chapter 2 in this volume.

Revolutionary Time

Whose privilege is it to define a period of time as revolutionary time – those promoting it, those experiencing it, or those looking back at it? Especially within a revolutionary time, the multiplicity of chronological levels, as experienced by the people bound to the moment of revolution and change, come together to create a fraction in the incoming stream of time, leaving it momentarily unclear where the process will lead after the revolution's end. Consequently, different perceptions of revolutionary times exist, namely by 1) those who *did* experience the revolution living in times when the latter's existence was not yet certain, but also by 2) those who *did not* experience the revolution as such, but lived in times where the revolution or a chance for it actually existed. This also means that different time layers or branches overlapped with regard to the perception of revolutions. While revolutionaries considered themselves to be living in revolutionary times, a majority of the masses in no way considered itself to be sharing this time experience. Augustine, the well-known philosopher of the 4th and 5th centuries, in this regard already argued that time has to be understood as a multiplicity of overlapping levels. He states, that

> Neither the future nor the past "is," and it cannot really be said that times "are" three: past, present and future; rather, strictly speaking, one should rather say: Times "are" three: a present of the past, a present of the present, a present of the future. Because these times are a kind of trinity in the soul, and I do not see them anywhere else; the presence of the past is namely memory; the presence of what is present, is namely inspection; and the presence of things to come, is namely expectation.[43]

Albert Einstein did not believe in such division, as "[f]or us believing physicists, the division between past, present and future has only the meaning of an illusion, albeit a stubborn one."[44] However, Einstein was thinking about time solely according to the laws of physics, and not according to the way it is perceived. Furthermore, the overlap of past, present, and future can only be possible through the human experience of a time before, a time now, and probably also the time to come. Therefore, revolutionary time is not a category of natural law, but one created through perception and experience, and in revolutions all of these different time branches can overlap, especially when one considers the people who experience the revolutionary process at different "speeds" and with a different consciousness, especially in the way they tie their own existence to the revolutionary

43 Augustinus, *Bekenntnisse,* trans. Joseph Bernhart (Berlin: Insel Verlag, 1987), 641–643.
44 Franz Bockrath, *Zeit, Dauer und Veränderung: Zur Kritik reiner Bewegungsvorstellungen* (Bielefeld: Transcript, 2014), 12.

possibilities that are offered in such a moment of time. Lefebvre emphasized this relation between time and perception as follows:

> Our knowledge of the material world is based on concepts defined in terms of the broadest generality and the greatest scientific (i.e. having a content) abstraction. Even if the links between these concepts and the physical realities to which they correspond are not always clearly established, we do know that such links exist, and that the concepts or theories they imply – energy, space, time – can be neither conflated nor separated from one another.[45]

When human beings reflect about time, they do not do so in a vacuum, but in a specific context that relates time to other elements of their respective lives and living conditions.[46] Consequently, revolutionary time only evolves within a larger context and only if a critical mass is sharing the same perception of this particular context as being revolutionary.

Certain periods of time, and spatialities alike, are linked by human perception and interpretation that channels the former into a larger context or process.[47] Lived time, i.e. perceived or actually experienced time, is consequently historically coordinated, and thereby also "solidified and fixed within the rationality immanent to space,"[48] but this already shows that time as it *is*, and time as we *perceive* it, are two different things, depending on the space we live in and the respective time of our existence in that particular space. A person in a colony in which a nation already exists, might consider time more revolutionary than someone who lived in this space a decade or a century before, yet without a nation. Although the elapsing time is always the same, what we perceive and later remember is a re-interpretation of it, and whether the time is ripe for a revolution or not, depends very much on human experience and perception of a certain time within a particular spatial context. In short, the personal space-time continuum can be revolutionary if it is perceived as such, but only if a critical mass of people shares this experience will a revolution turn into a reality, which, according to G.H. Mead,[49] can only exist in a present driven by the common consensus that change is actually necessary. Revolutionary time is consequently a sociopolitical construct that is adopted by a majority of the people who shared the events in the past and will commemorate them in the present in order to preserve the importance of the revolution for the future.

45 Lefebvre, *Production of Space*, 12.
46 Lefebvre, *Production of Space*, 12.
47 Bockrath, *Zeit, Dauer und Veränderung*, 16.
48 Lefebvre, *Production of Space*, 21.
49 George Herbert Mead, *The Philosophy of the Present* (Chicago, IL: Open Court, 1932), 1.

In other approaches to time, historical time was thought to be revolutionary time as such.[50] Marx's and Engels's view on the historical process as a permanent class struggle tried to re-identify time in a revolutionary sense. As the permanent conflict between the classes and the repetition of Hegelian dialectics could supposedly only be resolved by a revolution that would end the process. The latter would mark the beginning a totally new time branch, and thereby start a new historical period, one determined by uptopian considerations in relation to the existence of a classless society.[51] However, the historical process was in this regard also streamlined and brought into a unified shape. To cite Edmund Husserl again,

> [t]ime, as a form of given objectivity, is formed on the basis of the continuous stream of consciousness by synthesizing the duration of something. The flow itself is constituted as a continuum of shadows that cling to new impressions of the moment and branch out into diverse retentional and protentional references. The unity of the flow arises in the reflection of the change that constitutes it as a form of duration over the change of content. Unity presupposes the gapless continuity of the perceptual content, which, thanks to retentional references, enables the sameness of the objects and thus of the consciousness perceiving them.[52]

Revolutionary time is in this regard also marked by the interpretation of the people involved in the former. For revolutionaries, the transformative power within a relatively short time span allows people to dream of a future according to their own wishes and a rejection of what was.[53] Their struggles were successful and therefore the revolutionary change marks a new beginning which for the conscious and active revolutionaries naturally seems to be expressed through a new experience of time as well.

Individuals and their experiences are extremely important for the connection between the past and the present, and will therefore also impact on how the past is remembered in the future.[54] The image revolutions will have in the collective memory consequently rely on the ways in which the events of a past present will be remembered in a present future.[55] The future will then fall back on the past of revolutionary events, either positively or negatively, depending on the majority's experience in relation to the revolution and the time branch it took place in, it

50 Lefebvre, *Production of Space*, 21.

51 Karl Marx and Friedrich Engels, *Manifesto of the Communist* Party (1848), accessed November 30, 2023, https://www.marxists.org/archive/marx/works/1848/communist-manifesto/.

52 Husserl, *Texte zur Phänomenologie*, 244–245.

53 Birgitte Studer, *Reisende der Weltrevolution: Eine Globalgeschichte der Kommunistischen Internationale* (Berlin: Suhrkamp, 2020), 58–99.

54 Abbott, *Zeit zählt*, 65–66.

55 Martin Heidegger, *Begriff der Zeit*, 25–26.

interrupted, or it did not interrupt. Depending on the time branch that has or has not been achieved by the revolutionary process, the commemoration of the events will consequently be determined. That also means that a positive image of the revolution, as such, is also dependent on the transition of a majority of the people from the pre- to the post-revolutionary time stream. If this transition is not achieved, which means that only the revolutionaries consider themselves to be starting a new time branch on behalf of the majority, the positive revolutionary experience might actually not be perceived by a majority, and a switching of time streams remains only imagined by a selected group of idealist, i.e. utopian revolutionaries. The revolutionary experience of time as something different in this regard does even more, as it resembles a rebellion not only against the existent political and social order, but also against the time-related concepts in place.[56] As mentioned before, revolutionaries tend to long for a discontinuum of the existent, and this would naturally include time as well. To provide sense to the revolutionary achievements in abstraction to the past and the related time branch that had been interrupted by it, time is one category that needs to be reflected (in addition to space, symbols, social order etc.) by the human mind.[57] However, sense and time alike are often broken by historical events with a tremendous impact on everyone's life, no matter if one is directly or indirectly involved in them. While physical time continues uninterrupted, the perception of time is marked by a break, which in the presented and discussed case constitutes a revolutionary discontiuum.

Such events, may they be wars, revolutions, or natural catastrophes, mark "the beginning of one historical period, and the end of another."[58] While there is no rule stipulating how violent such transitions are, they are often not smooth processes either. They are often, as has been mentioned earlier, accompanied by crises and the wish to discontinue the existent time stream; to break with the *zeitgeist*, and to start a new branch of time. When we in hindsight historise such events, we work with periodisation and divide the past into certain kinds of time, e.g. wartime, or as discussed in the current chapter, revolutionary time.[59] Thus, these historical constructions eventually do not necessarily overlap with the revolutionary time as it was experienced by the people who lived through revolutionary changes as part of their present. A later labelling of a 'revolutionary time' can also rely on post-eventual categorizations, a newly constructed and revolution-

56 Rustemeyer, "Zeit und Zeichen," 65.

57 Dirk Rustemeyer, *Sinnformen: Konstellationen von Sinn, Subjekt, Zeit und Moral* (Hamburg: Meiner, 2001).

58 Dudziak, *War Time*, 3.

59 Dudziak, *War Time*, 3.

centered *zeitgeist*, so to speak, that often is contradictory to the individuals' memories. Consequently, and with Augustine's considerations in mind, we also have to understand revolutionary time as multi-time, although categorized in an almost classical threefold way:

1. Revolutionary past time, i.e. the time context of, or the interpretation of, the past by those who long for a revolution to break with the latter, although their wish might actually never become a reality. It could consequently be described as A) the presence of the past as memories of a pre-revolutionary time sought to be left behind. At the same time, revolutionary past time can also be B) the presence of the past as memory of a past where a revolution took place and which revolutionaries, conscious of the revolutionary events of the past, long for to mimic or reenact in their respective space-time continuum.
2. Revolutionary present time, i.e. the time context of those who live during times of revolutionary change and transition, regardless of whether they are proponents or opponents of the revolution. It can, however, also be post-revolutionary present in which the impact of the revolution is still felt and can be observed.
3. Revolutionary future time, i.e. the time context for those who have not lived or experienced the revolution and are in their present time context confronted with a future interpretation of the past – a post-revolutionary *zeitgeist* that can be positive or negative in its interpretation of the revolutionary events.

From the retrospective and by historical construction, revolutions are chronologically determined to have happened within a certain time frame, although this is often very artificial, especially when one takes the revolutionary past time and revolutionary future time into consideration. Revolutions also have an impact beyond their own national context and very often become an inspiration for many, although probably not a script for many beyond a small group of professional revolutionaries.[60] As Dudziak claimed for wartime, revolutions "function as an abstract historical actor, moving and changing society and creating particular conditions of governance."[61] In this regard, post-revolutionary construction of time is also the attempt to establish something new, and as mentioned before, serves as an expressed discontinuum, a clear break with the past. As a consequence of this function, a time construction process can be observed in the aftermath of initial revolutionary change to establish a new time regime, the post-

60 Keith Michael Baker and Dan Edelstein, eds., *Scripting Revolution: A History Approach to the Comparative Study of Revolutions* (Stanford, CA: Stanford University Press, 2015).
61 Dudziak, *War Time*, 3.

revolutionary time, which also attempts to establish what has been considered a revolutionary future time as a revolutionary present time.

Post-Revolutionary Time Construction

During revolutionary processes, the conscious revolutionaries often long to bring the future into the present and therefore intend to not only create a new *zeitgeist*, but also to reshape actual time or the understanding of it, as such. The Khmer Rouge regime in Cambodia, as part of its post-revolutionary deritualisation policy, therefore also began to recount time, as such, after the revolutionary changes in the Southeast Asian country (Delano & Knotternus, 2018).[62] And in France on 22 September 1793, a new Republican calendar was introduced for the purpose of manifesting a New Time Order following the changes implemented in the country follwing the outbreak of the revolution in 1789. Orchestrated and compiled by Charles-Gilbert Romme,[63] the calendar was supposed to mark "the epoch when the history of the French Revolution converged with nature itself, when natural equality and the power of human beings over their own history became one and the same." It was this new calendar that was supposed to transform "the Revolution's rupture with the past . . . into a wholly new experience of time, one made according to the joint dictates of nature and reason."[64] Absolutism, or tyranny according to the language of the revolution, was now something that was no longer part of the current time, and the way time was supposed to be counted and managed or organized in the future was supposed to showcase this as well. The French Republican calendar therefore "attempted to accomplish what had never been done before: make time express the intentions of history."[65] It would also separate the revolution from the previous era, creating a visible and palpable difference with, and discontinuation of, the previous time regime, which naturally also expressed the political order. Perovic describes this effect in some detail:

> Lifting the French Revolution from the existing historical time line, the calendar established 1792 as the beginning of Year I. Months were renamed after the seasons. Brumaire was rem-

62 Daisha Lee Delano and J. David Knottnerus, "The Khmer Rouge, Ritual and Control," *Asian Journal of Social Science* 46, no. 1–2 (2018): 79–110.

63 Romme (1750–1795) was a politician and mathematician, who also worked on the agricultural almanac that should accompany the new calendar.

64 Sanja Perovic, *The Calendar in Revolutionary France: Perceptions of Time in Literature, Culture, Politics* (New York: Cambridge University Press, 2012), 1.

65 Perovic, *The Calendar*, 1.

> iniscent of November fog; Germinal recalled the fecundity of an April spring; Thermidor, the heat of the July sun. Mirroring the recently devised metric division of space, the seven-day week was replaced by a new ten-day week called the décade. Gone was the memory of the Sabbath, when God himself took a rest. Time rejoined the secular world. Human time and its agents became the material through which a break with the religious and political structures of the past was to be accomplished.[66]

Hence the post-revolutionary time and its new form of organisation should do even more. To fully discontinue the past, one needed to establish a new collective memory that was strongly related to the revolution, and the calendar was the organisational tool that was supposed to provide the daily glue for this endeavour, uniting the masses and the conscious revolutionary leaders in a post-revolutionary time branch that could easily be identified as such. As Perovic emphasized, it "aimed to create a new collective memory based on the idea of a natural equality. It was only once the collective memories of the different social classes could be conceived as belonging to one and the same time – a universal time that had now become the time of the French Republican state – that the birth of a new society could be established."[67]

While the revolutionaries had reformed education and national governance to create a unified revolutionary state that was inhabited by people who felt themselves to be French, the calendar was supposed to unite them in one time continuum, namely one that was directly related to the revolution, which needed to be perceived as an important transformation, and as the basis for the post-revolutionary order. The new political order of the French Republic should have been not only expressed by laws and new freedoms, but by a new time as well. The revolution should turn into more than a short process within time, it should be perceived as something that shattered the past and paved the way to the future, yet on a new and totally different stream of time.

Although the calendar received a lot of criticism and did not remain in place for long, it was an important element of the revolutionaries' attempt to create something new. However, the majority of the people were not yet ready for a new discontinuum with the old, which means, that they had not yet left the pre-revolutionary time branch and could probably not be detached from it to follow the revolutionaries on their new time branch towards a new age. The "simultaneity of the non-simultaneous" was too strong and the revolutionary consciousness and interest of the masses too weak to make the full transition towards a new and future time.

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66 Perovic, *The Calendar*, 1.

67 Perovic, *The Calendar*, 2.

The Greek-French philosopher and psychoanalyst Cornelius Castoriadis emphasized this problem when he described the meaning of the transformative process revolutions present as follows: "Revolution does not mean blood is spilled, the Winter Palace is stormed, etc. Revolution means a radical transformation of society's institutions. . . . But such a revolution requires profound changes in the psychosocial organization of Western man, in his attitude towards life, in short: his imagination."[68] As a consequence of such far-reaching transformations, there is also an attempt to order the historical developments, and one possibility to do so is to establish a new time regime, which would mark the new beginning and the discontinuum with regard to the previous era and its respective time regime. However, this renegotiation or reconfiguration of the chronological order cannot be pursued without the support of the people, because

> [i]n order to live and cope with their own temporality, those concerned must interpret the temporal events of their own world and of themselves. They must give it a meaning with which to relate to itself. This is as elementary as the tripartite division of time into past, present and future. Meaning is the fourth dimension of time, without which the other three cannot be lived humanly. It does not grow out of any of the three dimensions, but represents a spiritual achievement through which and with which the arc of human life between past, present and future first of all acquires a concrete cultural form, the form of real life.[69]

It is in this regard also the mass experience shared or collectively remembered by the people that guide time into a new period or era, which can nevertheless not be reached only by a minority of conscious revolutionaries, but must instead be chosen by society as a whole. The older generations therefore also reach out from the past into the revolutionary present, where nothing can happen without a reflection of what had been experienced before.[70] It is the consciousness of time, i.e. the knowledge about the past and the present that allow the present now to become an "operative centre of time" due to which the operational levels of time, i.e. calendars, clocks, festivities etc. are determined.[71] The operational time in addition depends on certain interpretational preconditions, although it often simply leaves them behind as well, forcing the people to develop a new interpretation of time, especially in a chronological context that is considered to mark a new beginning of multiple sorts: a revolution.

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68 Cornelius Castoriadis, *Écologie et politique* (Paris: Éditions du Sandre, 2020), 194, cited in Alice Pechriggl, *Castoriadis: Denker der Revolution – Revolution des Denkens* (Bielefeld: Transcript 2022), 21.

69 Rüsen, "Die Kultur der Zeit," 25.

70 Abbott, *Zeit zählt*, 65.

71 Rustemeyer, "Zeit and Zeichen," 56.

Conclusion

The time we are living in is rarely obvious and often only becomes visible in the retrospective.[72] Similarly, revolutions often appear without most people knowing that a revolutionary process is evolving, and they end before all people have had time to consciously embrace the new, especially since not everyone welcomed the changes. A conflict between different times or different *zeitgeists*, past and future, evolves, and counter-revolutionaries fight against revolutionaries to decide which time should be more important in the present, and thereby in the future as well. It has been shown that revolutionary time is multi-time, meaning that different time levels overlap and create a "simultaneity of the non-simultaneous" within which different forces are at work that struggle over the fate of the revolutionary process, whose initial aim must have been the creation of a discontinuum of time, as such, and the creation of a new timeline, i.e. post-revolutionary time that would be determined by a revolution oriented *zeitgeist* as well.

This attempt, however, is often not successful because the revolution is very often driven by a small minority of revolutionary intellectuals who have an understanding for such a complicated and costly transformation process, yet often act without the full support of the masses, which usually only remain active within the revolutionary process for a limited time span, and are in addition not interested in far reaching changes that would fully transform their everyday life experiences, including that of time. The concepts of time and the preferred time branches of the two groups consequently mutually antagonistic, which causes conflicts within the revolutionary process and often leads to a violent radicalization of it on behalf of the representatives of a utopian time branch. A spontaneous protest-related eruption of the masses does not always consequently possess sufficient drive and power that would allow the leading revolutionaries to drive the locomotive beyond the barrier of a yet unknown future time. For many, it is important to have access to a locomotive at all; they do not want to risk blowing it up by going too fast. The perceived acceleration of time within revolutionary processes is therefore often the factor that prevents revolutionaries from achieving their goals, which can only be reached if a majority of the population helps to heat the locomotive's boiler.

It is the jump from one set of tracks, i.e. from the past and pre-revolutionary time to a new one, i.e. the future and post-revolutionary time. During this process, new time regimes and calendars, as it was for example represented in the French Republican calendar, as well as declarations about new times and new humans,

72 Siller and Meinefeld, *Zeitdiagnose*, 11.

e.g. during the Soviet period, were supposed to ease the transition. Very often the revolutionary process bogged down because of a lack of willingness to embrace the possibility of a future time promised by the revolutionary avant garde. As a consequence, revolutionary aims were not achieved, revolutionary processes morally corrupted, and revolutionary dreams destroyed.[73] And yet claims were made that modernity had been reached through revolution and that a new time had begun, although the original time stream or branch seems to have only been left for a short moment of actual and elapsing time, i.e. the revolutionary pendulum swing, which very often fell back into the original and pre-revolutionary time stream or branch again.

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5 Future Climate: Making Sense of the Long-Term to Ensure a Liveable Future

Introduction

Well into the Anthropocene,[1] the double threat of increasing greenhouse gases and deteriorating nature pose a fundamental new challenge in our history as a species. Humans are evolutionarily, psychologically, socially, and politically quite unprepared to face it, yet we will not escape confronting it. It is easy to answer *why* we need to act. Anthropogenic climate change is already taking its toll on the planet, and it is going to worsen for the foreseeable future.[2] *How* we should act is another matter, and there are numerous, partly contradictory answers to this. The twin crisis, climate change and loss of nature pose also major threats to ecosystems, global health, and societies at large, that reduces other issues to trifles.

If we are to have a meaningful existence here on Earth, we must be able to envisage a planet that offers both *Homo sapiens* and the five to ten million other species with whom we share the planet the potential to live full lives. But agreeing on how to do this – and on how pressing it is – is difficult. A fundamental and poorly understood reason for this difficulty concerns time. We all have different perspectives on what constitutes a relevant time horizon for our collective decisions. It is also a matter of balancing the needs and demands of present generations with the (hopefully) many to come, which is a deeply philosophical issue with very practical implications for all life on Earth.[3] Do the unborn have rights and how should they be considered in present-day choices? Can we morally justify the discounting of future lives? Perceptions about «the future» as something quite close in time, often less than one single generation, is common, and most people are primarily concerned about conditions on Earth during their own life-

1 Not formally approved by the International Commission of Stratigraphy as a new geologic epoch, but widely adopted as a term to denote the global-scale human impacts on Earth", cf. https://www.science.org/content/article/anthropocene-dead-long-live-anthropocene

2 IPCC, *Climate Change: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge/New York: Cambridge University Press, 2021).

3 Gro Harlem Brundtland, "Our Common Future," *Report of The World Commission on Environment and Development* (United Nations, 1987).

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times.[4] This does not necessarily imply that they do not care about the future, just that a thousand years ahead seems like oceans of time, and the state of the planet in 3020 is almost irrelevant. Others will think that the premise for a habitable planet must apply indefinitely.

In general, our dominant temporal horizons are short, reflecting that both economy and policy need fast returns.[5] Even the "longterm" climate projections typically have time spans of no more than a few decades ahead, typically with 2100 as an endpoint. To many, anything further into the future is thus distant and almost irrelevant. This lack of long-term perspective (1,000 to > 100,000 years) implies a *discounting of the future*. While many will agree this is a dilemma, a financial and capitalistic market focused on delivering fast investment returns, and the next quarterly report simply cannot, in a competitive system, prioritize the more distant future. This is clearly also the Achilles' heel of any democracy, where the desire for reelection puts constraints on the ability to make decisions which properly take into account the needs of future generations.

Since the most severe effects of climate change are well into the future for many parts of the world, the question is how relevant this "future" is to people, what we actually mean by the future, and what we eventually are willing to do today (and at what cost) for the benefit of the future life of humans as well as other species. Accepting the premise that the distant future also matters, and that we have moral obligations for those not yet born, the key challenge is how to overcome "the tyranny of the present" under a system that depends on fast returns, both politically and economically.

A New Climate Reality

The history of *Homo sapiens* goes some 300,000 years back in time, hence a future time perspective of another 300,000 years is clearly relevant. Human, or rather primate history dates way further back in time, and it is assumed that climate-driven environmental changes during the past 7 million years were responsible for: hominin speciation, the morphological shift to bipedality, increased mental capacities, cultural evolution and migrations, and notably the onset of agriculture

4 Bruce Tonn, Angela Hemrick, and Fred Conrad, "Cognitive Representations of the Future: Survey Results" *Futures* 38, no. 7 (2006): 810–829.

5 Victor Galaz, "Time and Politics in the Anthropocene: Too Fast, Too Slow," in *Anthropocene Encounters: New Directions in Green Political Thinking,* eds. Frank Biermann and Eva Lövbrand (Cambridge: Cambridge University Press, 2019), 109–127.

and the evolution of modern societies over the past 10,000 years.[6] These have all been promoted by favourable and stable climatic conditions.[7] Thus, human history and climate change has an intertwined history dating far into the past, and our future will be linked even more tightly to climate and nature degradation.[8] In fact, the entire history of human evolution and the major abrupt transitions manifested as mass extinctions, is closely connected to climatic events.[9] Hence the history of the human race and life in general should be seen in context with climate and distant time, both in the past and in the future.

For the past 800,000 years we have a quite good record of how the concentrations of atmospheric gases have varied. This is as far back as the oldest ice has been dated from ice-cores drilled in Antarctica. When ice is formed it captures the atmospheric signatures in tiny air bubbles, leaving a "fossil" record of the past atmosphere. From this we know that CO_2 levels over this vast time span, covering ice-ages and warm periods, has generally oscillated between 200 and 280 parts per million (ppm), while during the last 0,012% of this time span, we have geared CO_2 levels up to 420 ppm. The same trends apply for the greenhouse gases CH_4 (methane) and N_2O (nitrous oxide). This is truly an acceleration. We have already transformed our planet's atmosphere and biosphere to an alarming extent, and we are currently facing two major and interlinked global change trends: one of the rapidly rising levels of greenhouse gases (primarily CO_2, CH_4, and N_2O) causing global temperature rise and associated extreme events, and one of a rapid loss and degradation of nature and biodiversity.[10] In brief, it is since the industrial revolution that CO_2 concentration in the atmosphere has risen from around 280 parts per million (ppm), approaching 420 ppm today, with predictions for the year 2100 ranging from 425 to 800 ppm CO_2, corresponding to temperature increases of 1.5 to 4.5 °C.[11]

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6 David Graeber and David Wengrow, The Dawn of Everything: A New History of Humanity (London: Allen Lane, 2021).

7 Joan Feynman and Alexander Ruzmaikin. "Climate Stability and the Development of Agricultural Societies." *Climatic Change* 84, no. 3 (2007): 295–311.

8 Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (2009): 197–222.

9 Richard Potts, "Evolution and Climate Variability," *Science* 273, no. 5277 (1996): 922–923; Céline Bellard et al, "Impacts of Climate Change on the Future of Biodiversity," *Ecology Letters* 15, no. 4 (2012): 365–377.

10 IPBES, "Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services," ed. Eduardo S. Brondizio et al. (Bonn: IPBES secretariat, 2019); Mary H. Ruckelshaus et al., "The IPBES Global Assessment: Pathways to Action," *Trends in Ecology & Evolution* 35, no. 5 (2020): 407–414; IPCC, *Climate Change.*

11 See https://www.co2.earth/2100-projections, accessed December 8, 2023.

While the higher end of these estimates is unlikely, but not impossible,[12] a warming exceeding 2.5 °C by 2100 may be expected, even with the implementation of the Paris agreement abatements.[13] Along with the rise in CO_2 comes a corresponding rise in CH_4 from a stable, pre-industrial level below 750 ppb (parts per billion) to a current concentration exceeding 1,908 ppm, and currently with a steep increase.[14] Likewise, the level of N_2O (nitrous oxide) has increased from stable, pre-industrial levels of ca 270 ppb to current levels exceeding 330 ppb.

The sources of these three gases differ, but the steep and dangerous rises are undisputedly related to anthropogenic activities for all of them. From a time-horizon perspective, it is important to separate these three gases, not only because they have different sources and different specific warming potentials, but also because they have widely different atmospheric half-lives. One standard way of comparing these greenhouse gases (GHGs) is by use of their relative Global Warming Potential (GWP). This again depends on the time span, but using a time span of 100 years, and with CO_2 as the reference gas, the GWP of CO_2 is then 1 (the reference), CH_4 nearly 30 and N_2O has a GWP of ca 270. While CH_4 on average lasts only for a decade in the atmosphere (but absorbs much more heat than CO_2); the impact of CO_2 will last for centuries, and the same holds for N_2O, due to their persistence in the atmosphere.

The prospects for humanity, even by the most optimistic among these scenarios, are deeply worrying. This is evidenced by the harmful and costly effects already apparent from the current CO_2 levels and associated warming of only around 1.1 °C.[15] We are already facing increased incidence of weather extremes like heat waves, fires, droughts, and floods: extreme climate events that may induce domino impacts on a suite of factors that are critical for ecosystem and societal sustainability. In parallel, the equally pressing global crisis, in terms of loss and degradation of natural ecosystems, is developing.[16] The decline in wildlife populations since the onset of agriculture some 10,000 years ago is estimated at 83% for terrestrial mammals, and 80, 50, and 15% for marine mammals, plants, and fish respectively, and the estimated biomass ratio of terrestrial mammals is

12 Zeke Hausfather and Glen P. Peters, "Emissions: The 'Business as Usual' Story Is Misleading," *Nature* 577, no. 7792 (2020): 618–620.

13 IPCC, *Climate Change.*

14 See https://gml.noaa.gov/ccgg/trends_ch4/, accessed December 8, 2023.

15 IPCC, *Climate Change*; Kat Kramer and Joe Ware, "Counting the Cost 2020: A Year of Climate Breakdown," Christian Aid, December 27, 2018, accessed November 15, 2023. https://www.christianaid.org.uk/sites/default/files/2020-12/Counting%20the%20cost%202020.pdf.

16 Yinon M. Bar-On, Rob Phillips and Ron Milo, "The Biomass Distribution on Earth," *Proceedings of the Natural Academy of Sciences, USA* 115, no. 25 (2018): 6506–6511; IPBES, "Global Assessment Report."

36% humans, 60% domestic animals, and 4% wild mammals.[17] More broadly, the abundance of naturally occurring species (across all organismal groups) has declined by 23%, and natural ecosystems have declined by 47%; and, as a consequence, one million species are now under threat of extinction.[18]

Again, the time perspective is imperative here since the rate of warming is expected to outpace the rate of evolutionary adaptations, notably in multicellular and advanced species.[19,20,21] All species living today can trace their origin through a 3,5 billion years history. The dramatic changes that characterize the Anthropocene in terms of ecosystem degradation and population decline, now take place in a glimpse of time, and species loss is eternal. Another important aspect here is that climate change and nature degradation are mutually reinforcing, and the role of nature in providing a buffer against climate change is crucial in many contexts.[22] Currently, ecosystems processes on land and in oceans sequester more than 50% of anthropogenic CO_2-emissions, and this largest of all "ecosystem services" is instrumental in determining the current and future climate.

While the trends for nature are downward, other trends point upwards at a striking pace: Global trade has quadrupled since 1980, tourism has increased sixfold, resource use and waste have increased dramatically worldwide, and emissions of CO_2, CH_4 and N_2O continue to rise. Earth Overshoot Day, they day where we exceed the estimated global annual carrying capacity arrives earlier each year and arrived on 2. August in 2023. At a national level, wealthy societies already reach this date in early spring (mid-April in the case of Norway), while some poorer countries are actually (involuntarily) sustainable according to this index. This raises two fundamental ethical questions; one about more equal distribution of income, wealth and goods, the other relating to the transgenerational perspective. How can we secure a good life for future generations if we continue to discount the future value of life, and what do we actually mean by "the future" in this context? And above all, if we are geared towards fast returns in an evolutionary sense, and this also is a key principle if our current, market-driven societies, how can we overcome this?

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17 Bar-On, Phillips and Milo, "The Biomass Distribution on Earth."

18 IPBES, "Global Assessment Report."

19 Julie R. Etterson and Ruth G. Shaw, "Constraint to Adaptive Evolution in Response to Global Warming," *Science* 294, no. 5540 (2001): 151–154.

20 Marcel Visser, "Keeping Up with a Warming World: Assessing the Rate of Adaptation to Climate Change," *Proceedings of the Royal Society B* 275, no. 1635 (2008): 649–659.

21 Rachel Morgan et al., "Low Potential for Evolutionary Rescue from Climate Change in a Tropical Fish," *Proceedings of the National Academy of Sciences* 117, no. 52 (2020): 33365–33372.

22 Dag O. Hessen and Vigdis Vandvik, "Buffering Climate Change with Nature." *Weather, Climate and Society* 14, no. 2 (2022): 439–450.

The variation in current climate scenarios for the planet less than 80 years ahead is striking, ranging from a hothouse to a climatically stable Earth.[23] This results from three major levels of uncertainty; uncertainty as to how society (including politics, economy, technology, patterns of consumption and social norms) will respond, uncertainty with regards to how ecosystems (including biodiversity, ecosystem functioning, and resilience) will respond, and finally uncertainty about the role of biophysical feedbacks in the atmosphere, land surface, and oceans. Clearly, the climatic changes will not plateau by 2100, the endpoint of most scenarios, but will continue to develop over the following decades, centuries, and even millennia.[24] This development may also reach abrupt *tipping points* in climate systems, which could accelerate both climate change (e.g., by reduced uptake and increased release of greenhouse gases) and climate change effects (e.g., sea level rise).[25] The future of the climate system on Earth from the perspective of scientists does not call for optimism, the severity of the negative consequences of anthropogenic climate change will, however, depend on emissions yet to come. The planet is changing rapidly due to anthropogenic forcing, primarily through climate change and loss of nature. Still the change is hard to grasp because it happens slowly in a human-life timescale. Seasons still come and go, there is sunset and sunrise, and still birds around, hence no real silent spring. This sense of "everything being normal" reflect one aspect of time, our climate and shifting baselines, i.e. a gradual adaption even to worsening or harmful conditions.[26]

We will start here by framing the concept of the Anthropocene and its longer time perspective before moving on to natural science time conceptions, both deep past (geology/climate), biosphere and evolution and deep future. Then we present and discuss the concept of tipping points, again both past and future. Finally, we discuss how humans treat time, the social science insights about future thinking and decision making, and finally the implications of these insights, i.e. the moral challenges, intergenerational justice, long-term care, ways of developing long-term thinking (respons)abilities.

23 IPCC, *Climate Change.*

24 Christopher Lyon et al., "Climate Change Research and Action Must Look Beyond 2100," *Global Change Biology* 28, no. 2 (2022): 349–361.

25 Timothy M. Lenton, "Tipping Positive Change," *Philosophical Transactions of the Royal Society B* 375, no. 1794 (2020): http://dx.doi.org/10.1098/rstb.2019.0123; David I. Armstrong McKay et al., "Exceeding 1.5 C Global Warming Could Trigger Multiple Climate Tipping Points," *Science* 377, no. 6611, eabn7950 (2022): 1–10.

26 Masashi Soga, and Kevin J. Gaston, "Shifting Baseline Syndrome: Causes, Consequences, and Implications," *Frontiers in Ecology and the Environment* 16, no. 4 (2018): 222–230.

The Anthropocene in Deep Time

Geological processes, while existing on a different time scale than those used in society, are crucial when determining the true human footprint on Earth. The Anthropocene, while discussed in many disciplines, holds true roots in the geosciences. In early 2023, geologists were set to select the site that demonstrates most strongly how humans have changed the structure and composition of the Earth's surface. This site would be the "golden spike" which best signals a potential departure from the Holocene which started after the last glaciation, coinciding with the onset of agriculture 10–12,000 years ago, and the onset of the Anthropocene in the geological record. The Anthropocene Working Group, decided to decline the Anthropocene as an official new geological epoch, yet the concept is established. While human activities are obvious to us on a daily basis, geological processes are anchored to a much longer timescales measured in millions and billions of years, or "deep time." Human activity dramatically increased in the year 1950 with the takeoff of *the great acceleration*[27] from ca 1950 and on, and the cumulative impacts on the Earth surface, the atmosphere and the oceans are all heavily impacted by human activities. In our entire past there have been few humans in an endless nature, while this is reversed with a rapidly increasing human population, also with increased consumption per capita, in a shrinking nature. We realize that the old saying that "the solution to pollution is dilutions" is utterly wrong.

According to the criteria, the signal of a new geological event and major changes to the Earth System must be visible in the rock strata, which accumulate slowly and relate to time. The clashing timescales of human activity, which is fast and exponential, and geological time, which is slow, has proven a challenging challenge to the definition of this new era. However, in 2016 the Anthropocene Working Group agreed that the Anthropocene is geologically different from the Holocene. There are many signals that clearly indicate definite footprints of human activity, such as the presence of metal alloys in sediment, the first appearance of plutonium, and the extinction of megafauna before more widespread pollution, the change in atmospheric greenhouse gas concentrations and the drastic changes in ecosystems and the planetary surface. Among the contestants competing for the title of the physical Anthropocene signpost are corals from the Gulf of Mexico, lacustrine deposits in Canada and China, and marine sediments from the Baltic Sea. This official recognition of the human impact on not only the climate system and biosphere but also on our planet's geological processes offer an inter-

27 Will Steffen et al., "The Trajectory of the Anthropocene: The Great Acceleration," *The Anthropocene Review* 2, no. 1 (2015): 81–98.

esting opportunity to explore the variety of timescales that we utilize to understand the Earth system.[28]

The degree of variability in climate and ecosystems is also strictly depending on time scale. The history of modern humans (*Homo sapiens*) spans some 300,000 years, encompassing glacial, interglacial, and warm periods, but nothing that could be described as an extreme climatic event like the past, known five episodes of mass extinction. The rise of agriculture and societies over the past 10,000 years has taken place during a period of relatively cool temperatures, but very stable climate. Further back in "deep" time, the planet has experienced periods of truly extreme climatic variability. The Paleocene-Eocene Thermal Maximum (PETM) (in which it is estimated the average global temperature warmed by 5 to 8 °C) occurred some 55 million years ago, and may serve as one "recent" example, but over its history our planet has shifted from being almost completely frozen over ("snowball Earth," 650 million years ago) to boiling hot like PETM, but without becoming deadlocked in either of the extremes.[29] Although the concept of a "normal" climate does not exist over long periods of time, the Earth has successfully rebounded from extreme conditions, whether caused by volcanic eruptions, meteorites or other drivers. Despite the devastating ecological disasters and mass extinctions that occurred because of these climate events, with an estimated loss of up to 90% of species, life has persisted and become increasingly influential in shaping the global carbon cycle and, consequently, the overall climate of the planet.

If we want to really drive the point home and explain just how bad it can get if we "stay the course" for decades to come, we usually refer to PETM.[30] Although the causes then and now were different, the temperature effects and ocean acidification were the same as that toward which we are now veering. PETM is documented by the isotope ratios in $CaCO_3$ contained in deep ocean sediments. These show that CO_2 increased dramatically and that temperatures also increased "rapidly" (in geological terms) by five to ten degrees. After that it was some 200,000 years before the system recovered, but PETM marked the dramatic beginning of a troubled epoch that experi-

28 The proposal to include the Anthropocene Epoch in the geological time scale was not accepted due to various reasons, unrelated to the impact of human activities on Earth. The Anthropocene is already defined scientifically through the Anthropocene Event, which describes it in basic geological terms as a significant and continuous event comparable to major events in Earth's history like the Great Oxidation Event. Despite the rejection of formally recognising the Anthropocene Epoch, the concept remains valuable in sparking conversations and investigations into the ways in which human actions are altering the planet.

29 Laura. L. Haynes and Bärbel Hönisch, "The Seawater Carbon Inventory at the Paleocene–Eocene Thermal Maximum," *Proceedings of the National Academy of Sciences* 117, no. 39 (2020): 24088–24095.

30 Mark Pagani, Ken Caldeira, David Archer and James C. Zachos, "An Ancient Carbon Mystery," *Nature* 314, no. 5805 (2006): 1556–1557.

enced several abrupt warming episodes. These were not on a scale rivaling PETM, of course, but they still led to a three degree increase in average ocean temperatures, formidable ocean acidification, and to many species likely vanishing for good. It is also worth noticing that while the warming during PETM occurred at an apparently unprecedented pace, only a few thousand years, it still is way slower than current warming. It is estimated that the amount of carbon released during PETM was between 0,2–0,6 gigatons per year, while currently we add around 4 gigatons annually.[31]

For anyone anxious about the planet, it is naturally not comforting to know that such upheavals can occur, but still there is a certain consolation in the fact that even PETM did not prompt an irreversible, one-way process with extreme emissions of CO_2, CH_4, and temperatures barreling in the direction of Venus-like conditions. One difference between Venus and Earth, of course, is that Venus has lost all its water. Without water, there can be no weathering, and weathering is a key factor that determines the removal of CO_2 from the atmosphere. On Earth, at least, it seems that the thermostat has slowly but surely brought things back to working order.

On Earth, at least, it seems that the after such events there are mechanisms slowly but surely brought things back to working order. These normalizing drivers are both long-term, slow, geological feedbacks, and biospheric feedbacks that operates at a time that is relevant to us, and also most relevant to the current and future climate situation. Geological feedbacks and biological feedbacks both regulate climate, yet over vastly different timescales. We will look closer at the two different feedback systems and the time scale they operate within, before moving on to examine the more abrupt climate related changes of the past, and the potential tipping points ahead.

Paleoclimate, Geology, and Feedbacks

Earth holds enormous amounts of carbon sequestered in rocks (the lithosphere), sediments, deep oceans and fossil C (mainly coal), permafrost and soil as well as the biosphere, but quite low levels of C (as CO_2) in the atmosphere.[32] Rock weathering perpetually removes CO_2 from the atmosphere. A key process in the earth's

31 Philip D. Gingerich, "Temporal Scaling of Carbon Emission and Accumulation Rates: Modern Anthropogenic Emissions Compared to Estimates of PETM Onset Accumulation," *Paleoceanography and Paleoclimatology* 34, no. 3 (2019): 329–335. Also see https://2ea.co.uk/paleoceneeocene-thermal-maximum-doesnt-compare-to-the-21st-century-understanding-our-effect-on-the-climate/.

32 David Archer, *The Global Carbon Cycle* (Princeton: Princeton University Press, 2010); Dag O. Hessen, *The Many Lives of Carbon* (London: Reaktion Books, 2017).

long or "deep time" C cycle is the binding of CO_2 during weathering in reaction with $CaSiO_3$ (or equivalent compounds), thereby producing Ca^{2+} and HCO_3^- which eventually enters rivers and subsequently to sea. Here some will enter the biological cycle, though most will precipitate as $CaCO_3$, sink to the bottom, and thereby be taken out of circulation.

The same fate also meets carbon that ends up in the calcium shells of algae or marine animals, and which joins the eternal rain of particles to the ocean floor. Much ocean-sediment C will be locked away in rocks for extended periods, but when lifted above the seafloor by tectonic activity, even erected as mountains, and exposed to water and erosion, they experience perpetual wear, and erosion, by which CO_2 is trapped and also stream of minuscule particles is constantly being fed into rivers, thereby contributing to mountains again being converted to ocean sediment. Some of the lithospheric C ends up in geologically active areas where the earth's plates either collide or separate and where volcanoes exhale CO_2 from the earth's depths. The earth's surface movement and plate tectonics are a central factor in the slow-working thermostat that support those claiming "it will all take care of itself," whether the topic be global warming or ocean acidification. This is of little comfort over timescales relevant to human societies, however. We are talking about a "healing" period in the order of magnitude of tens to hundreds of thousand years, and we must realize that, in the meantime, most of the globe's species inventory will have been caught in the undertow. In the worst case, ourselves as well, yet it is important to state that it highly unlikely that humanity will face extinction, even under the worst-case scenarios Our ambitions should go beyond the bare survival, however. In terms of the big picture, 100,000 years is not all that much—the globe, after all, is 4.5 billion years old—but for us this is no consolation. We need something that can twist the thermostat a little more emphatically, and it is here that biology comes to our aid, at least until we ratchet up the heat so much that the thermostat simply takes a pass.

Real-Time Regulations of Climate by the Biosphere

In the slow physical-chemical regulation over geological timescales, land upheaval and the movement of continental plates also play a role by forming mountain chains and other steep terrain where erosion and wash-out occur at a quicker rate. Photosynthesis implied perhaps the largest of all transitions in Earth's history, yet it slowly unfolded its impact over billions of years, but with increasing pace over time. When plants conquered the land during the Silurian period (443 to 416 million years ago), plant roots helped accelerate the erosion

rate.[33] This probably helped cool down the planet; plants, in any case, represented a new adjustment button on the thermostat. Photosynthesis over hundreds of millions of years has affected the planetary climate in multiple ways. The massive forests in the carboniferous era starting 300 million years ago sequestered massive amounts of carbon, turning CO_2 into plant biomass. Eventually, over long periods and under high pressure, this carbon turned into coal, and as we all know, the fast return of this C back to CO_2 by burning is the major cause of global warming. The other major sources of fossil CO_2 are oil and gas, which are remains of plants, yet in this case tiny unicellular phytoplankton. Over millions of years, they were transporting C fixed by photosynthesis in the upper layers of the oceans to deep layers at the seafloor by sinking or as droppings or corpses of zooplankton after being consumed (the biological C pump). With time and pressure also, these formed the hydrocarbons that our civilization depends on as an energy source, thereby providing a fast return back to atmospheric CO_2.

Photosynthesis is however also currently and continuously drawing down CO_2 from the atmosphere, and while ecosystems are also major conduits of CO_2 due to cellular respiration, there is a large, net uptake of CO_2 by ecosystems. In fact, marine and terrestrial ecosystems not only sequester more than 50 % of current anthropogenic CO_2 emissions, mostly by photosynthesis, but also provide long-term storage of carbon. This is by far the largest of all the ecosystem services, and a major reason why healthy forests and oceans are essential to climate as well. While these two feedback systems operate on a different time scale, neither of them has a fixed time scale. For example, the biotic carbon cycle spans from milliseconds at the cellular level to hundreds of years in natural forest turnover to thousands of years for peatlands. Sometimes, however, feedbacks may shift from being stabilizing to destabilizing, and such *positive feedback loops* can turn slow and gradual situations into sudden and abrupt transitions.

Speeding Up: Critical Transitions and Tipping Points

As warming is progressing, some Earth systems display positive (i.e. self-reinforcing) dynamics that strengthen the warming effects. Examples of such positive, large scale feedbacks in the climate systems include:

33 David Beerling, *The Emerald Planet: How Plants Changed Earth's History* (Oxford: Oxford University Press, 2007).

- Permafrost thaw caused by warming, that triggers decomposition of soil organic matter, releasing CO_2 and methane (CH_4), which speeds up warming.[34]
- Climate change results in warmer and potentially drier soils, especially in the boreal domain, mineralizing more soil organic carbon to CO_2, which again leads to increasing temperatures.[35]
- Less ice and snow due to warming results in reduced albedo (reduced reflectance of light), which again increases heat absorption on land and in oceans, resulting in further global warming.
- Drier forests increase the incidence of fires, thus releasing carbon bound in forests and soils into the atmosphere, leading to increased warming.[36]
- Increased concentrations of CO_2 in seawater, causes marine acidification. A more acid (and warmer) ocean may sequester less C, reducing the ocean drawdown of CO_2 from the atmosphere.[37]

In a worst-case scenario, such positive feedback may lead to *tipping points*. A tipping point is where key properties of a system experience large, non-linear change, and often fast changes in response to a relatively small additional forcing or change.[38] Tipping points exist in the climate system and are often irreversible on human timescales.[39] Once the element in the climate system reaches a tipping point, the original state cannot be recovered.[40] In the Amazon rainforest, for example, fragmented, heath-stressed and drying forest may in itself disrupt the in-

34 Joeri Rogelj et al., "Paris Agreement Climate Proposals Need a Boost to Keep Warming Well below 2 °C," *Nature* 534, no. 7609 (2016): 631–639.

35 Sebastian Doetterl et al., "Soil Carbon Storage Controlled by Interactions between Geochemistry and Climate," *Nature Geoscience* 8 (2015); 780–783.

36 Xanthe J. Walker et al., "Increasing Wildfires Threaten Historic Carbon Sink of Boreal Forest Soils," *Nature* 572, no. 7770 (2019): 520–523.

37 Scott C. Doney, Victoria Fabry, Richard A. Felly, and Joan A. Kleypas, "Ocean Acidification: The Other CO_2-Problem," *Annual Review of Marine Sciences* 1 (2009): 169–192.

38 Timothy M. Lenton et al., "Tipping Elements in the Earth's Climate System," *Proceedings of the National Academy of Sciences* 105, no. 6 (2008): 1786–1793; Timothy M. Lenton, "Environmental Tipping Points," *Annual Review of Environment and Resources* 38, no. 1 (2013): 1–29.

39 Vasisis Dakos, Marten Scheffer, Egbert H. van Nes, E.H., Victor Brovkin, Vladimir Petoukhov and Herman Held, "Slowing Down as an Early Warning Signal for Abrupt Climate Change," *Proceedings of the National Academy of Sciences* 105, no. 38 (2008): 14308–14312; Peter D. Ditlevsen and Sigfus J. Johnsen, "Tipping Points: Early Warning and Wishful Thinking," *Geophysical Research Letters* 37, no. 9 (2010): https://doi.org/10.1029/2010GL044486.

40 Timothy M. Lenton, "Early Warning of Climate Tipping Points," *Nature Climate Change* 1 (2011): 201–209; Marten Scheffer et al., "Early-Warning Signals for Critical Transitions," *Nature* 461, no. 7260 (2009): 53–59.

ternal hydrological cycle, which could potentially push the forest across a tipping point towards a savannah-like system.[41]

The concept of tipping points has been used for various phenomena in the natural and social sciences, including ecosystems, but since about 2005 it has been used as a label for shifts in large components of the Earth system, especially in relation to climate change.[42] Tipping points are notoriously difficult to predict, but major thresholds could be reached at relatively low levels of global warming, such as 2.0 °C or even 1.5 °C above the pre-industrial temperatures.[43] The critical temperature threshold for reaching potential tipping points differ, and so does their duration as tentatively indicated (Fig. 5.1) by six of the identified potential tipping points that will have large scale consequences.[44] The onset of accelerating permafrost and the irreversible meltdown of the Greenland ice-sheet may not lie

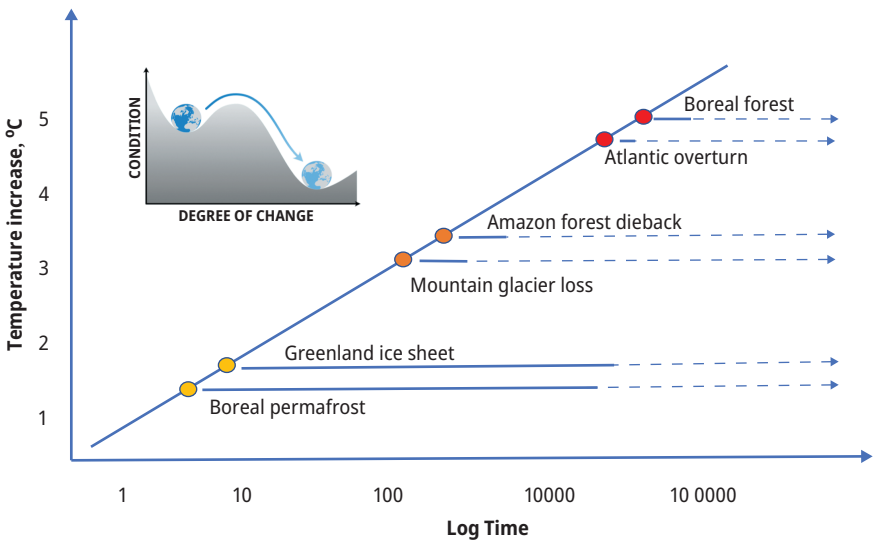

Fig. 5.1: Examples of tentative temperature tipping tresholds for major systems (based on Mc Kay et al 2022), with tentative response times as solid lines and effect duration in dotted lines. Inserted above the principle of a tipping point, i.e. a non-linear threshold response where sudden changes towards a different stable state happens.

41 Thomas E. Lovejoy and Carlos Nobre, "Amazon Tipping Point," *Science Advances* 4, no. 2 (2018): eaat2340.

42 Marten Scheffer, *Critical Transitions in Nature and Society* (Princeton: Princeton University Press, 2009).

43 Armstrong McKay et al., "Exceeding 1.5 C Global Warming."

44 Armstrong McKay et al., "Exceeding 1.5 C Global Warming."

far ahead in time, yet the actual response time is quite slow and gradual. An eventual complete disappearance of the Greenland ice will take hundreds, if not thousands of years, and also the permafrost thaw will be a slow process. However, the effects will be gradual, e.g. while the complete disappearance of the Greenland ice would imply a 7-metre rise in sea levels, these will be gradual over the entire period of melt. In contrast, tipping points such as the death of the Amazon rainforest or complete loss of alpine glaciers lies further ahead but can happen in decades. The halting or massive weakening of the Atlantic overturn is even more distant (and unlikely), but if the critical threshold is reached, it could happen disturbingly fast. The impacts of all these tipping points, if they are allowed to occur, will however be truly long-lasting, and it is hard to know if they will at all revert to their pre-industrial conditions.

The geological and paleontological records testify to abrupt changes in the deep past as well, these generally being linked to major climatic changes; yet the causes for these may differ. The most recognized and dramatic of these past shifts are the five well-documented mass extinctions. The latest of these, and the one most relevant to the current situation, was the Palaeocene-Eocene Thermal Maximum (PETM) that occurred 55 million years ago. Again: if we really want to drive the point home and explain just how bad it can get if we stick to "business as usual" for decades to come, we usually refer to PETM. Although the causes then and now were different, the temperature effects and ocean acidification were the same as that toward which we are now veering. Also, at the start of the dinosaur era, on the Permian and Triassic boundary, a dramatic warming of near-PETM dimensions occurred. The cause was probably CH_4 and CO_2 vented from huge, chimney-like volcanic structures in Eastern Siberia. The Earth's temperature increased by an estimated 6 °C on average, the oceans became acidic and substantially oxygen-free. This was one of the most dramatic mass extinctions in our planet's history, and it proved especially devastating because the oceans became more acidic at the same time as deep ocean oxygen content was reduced. At that point, it also took a magnitude of 200,000 years before temperatures normalized, though the oceans needed half a million years to recover. Forests evidently struggled over a longer time span, this manifesting itself as a period of almost ten million years in the early Triassic with no coal deposits ("the coal gap").

These, and other mass extinction events, provide a reminder that mix of slow and fast timescales have come into play in the past. They also flag up a warning that tipping points should be avoided, irrespective of whether they may lead to the species-extinguishing extremes of PETM-like conditions.

Climate Change beyond 2100

A long-term perspective is imperative when it comes to thinking about the climate, but very few climate change scenarios currently modeled go beyond 2100.[45] Scientists often explicitly constrain their analysis to what is considered ethically or policy relevant time horizons, e.g., Lenton et al. in their seminal paper on climate tipping points.[46] However, almost any climate impact, even if emissions were terminated today, would have long-lasting impacts into the next centuries. Moreover, as emissions of GHGs continue, so will their atmospheric concentrations, eventually also catalyzed by feedback processes from ecosystems, the experience of reduced CO_2-sequestration and/or increased emissions of GHGs, the impacts of which could be intensified into the distant future.

In a recent analysis, climate change and impacts to 2500 were modelled under a range of emission scenarios, emphasizing impacts on two essential parameters for human life: food production and heat stress. Both of these are critical determinants of the habitable human niche.[47] Global mean temperature will continue to rise after 2100 according to all IPCC-scenarios, except the very low and optimistic RCP2.6 scenarios. With the moderate-high RCP6.0 scenario, temperature would continue to rise to 3,6 °C by 2200 and further to 4,6 °C by 2500.[48] This would cause dramatic changes in the world's ecosystems, e.g., a major (yet not necessarily complete) loss of the Amazon rainforest by 2500, but also with a gradual disappearance before. On the other hand, the American Midwest could become more vegetated. For human well-being, the areas with periodic exceedance of habitable temperatures will increase dramatically and encompass large areas at low latitudes by 2500, and different crop harvests will also be altered dramatically, yet also to the benefit of some regions and some crops. But this in turn will have geopolitical implications.

The loss of glaciers in densely populated areas, combined with rising sea levels and more extreme instances of flooding, drought, fires and heat waves will result in a massive increase in migration, the impact of which, combined with a multitude of other effects, could peak as late as 2500, but with an ongoing impact

45 Lyon et al., "Climate Change Research and Action."

46 Lenton, Timothy M., Hermann Held, Elmar Kriegler, Jim W. Hall, Wolfgang Lucht, Stefan Rahmstorf and Hans Joachim Schellnhuber, "Tipping Elements in the Earth's Climate System," *Proceedings of the National Academy of Sciences* 105, no. 6 (2008): 1786–1793.

47 Chi Xu et al., "Future of the Human Climate Niche," *Proceedings of the National Academy of Sciences* 117, no. 21 (2020): 11350–11355; Timothy M. Lenton et al., "Quantifying the Human Cost of Global Warming," *Nature Sustainability* 6 (2023): 1237–1247.

48 Xu et al., "Future of the Human Climate Niche."

into the distant future. The recovery of large systems like permafrost peatlands, rainforests and glaciers may require several thousands of years to come to pass. All this calls for making the distant future more relevant, which is also a moral imperative related directly to the future wellbeing of the human race itself, as well as to that of some 5–8 million of other species.

The Human Approach to Time (Temporality)

The term "future" encompasses everything from tomorrow to eternity. In the context of responding to the nature and climate crises, the question is how humans perceive of or think about the future – what part of the future is relevant? Even more importantly, what are our self-interested or moral obligations for acting now for the benefit of the future of the planet? The challenges of future-oriented thinking and intertemporal decision making has been subject of well-established research programmes in psychology, economics, political science, and philosophy.

Several studies demonstrate that our future thinking only looks forward some 15–20 years. After that, the future 'goes dark'.[49] For a limited set of decisions, e.g., retirement savings, property investment, or family legacy, we might consider our own or our children's life span – maybe 50–100 years. These are relatively short time horizons within the context of climate change – insufficient to muster a response that is fit for the problem. Not only are our time horizons limited, there is also evidence that we actively resist thinking and talking about the future when it comes to threatening information related to climate change. Psychological distancing – the tendency to perceive climate risks as further away in time and space and as more uncertain than they are – can reduce concern and action.[50] Sociologist Kari Norgaard found that people's psychological and emotional reluctance to engage with climate change, their desire to "protect themselves a little bit" from uncomfortable realities, also shapes our daily interactions with each other; it is "socially organized."[51]

49 Bruce Tonn, Angela Hemrick and Fred Conrad, "Cognitive Representations of the Future: Survey Results," *Futures* 38, no. 7 (2006): 810–829.

50 Alexa Spence, Wouter Poortinga and Nick Pidgeon, "The Psychological Distance of Climate Change," *Risk Analysis* 32, no. 6 (2012): 957–972; Bojana Većkalov et al., "A Matter of Time . . . : Consideration of Future Consequences and Temporal Distance Contribute to the Ideology Gap in Climate Change Ccepticism," *Journal of Environmental Psychology* 78 (2021): 1–12. https://doi.org/10.1016/j.jenvp.2021.101703.

51 Kari Marie Norgaard, "'People Want to Protect Themselves a Little Bit': Emotions, Denial, and Social Movement Nonparticipation," *Sociological Inquiry* 76, no. 3 (2006): 372–396; Kari Marie Nor-

Further, future thinking is affected by uncertainty, i.e., the fact that decisions and actions have unpredictable outcomes. Uncertainty can raise anxiety and invite the use of a number of heuristics – mental shortcuts – that tend to favour short-term preferences. People rely more on their own memory and experience than on uncertain scientific information.[52] Memory and experience are poor guides to a long-term future that might look radically different than the past or present. Additional cognitive patterns that affect long-term thinking and decision-making include; linear thinking, i.e. not considering the possibility of abrupt and fundamental changes; unwarranted optimism about future solutions, especially technological optimism; and a more general avoidance or absence of future imagination.[53]

Key insights from behavioural economics and psychology indicate that humans discount future wellbeing in favour of present benefits, both in individual and collective decision making.[54] Discount rates play an important and contested role in climate models and policy making, especially with regard to low-probability but high-risk occurrences ('fat-tail events').[55] And they are one of many institutionalized patterns of devaluing future life in modern societies.

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gaard, *Living in Denial: Climate Change, Emotions, and Everyday Life* (Cambridge, MA: MIT Press, 2011).

52 Sabine M. Marx and Elke U. Weber. "Decision Making under Climate Uncertainty: The Power of Understanding Judgment and Decision Processes," in *Climate change in the Great Lakes Region: Navigating an Uncertain Future*, eds. Thomas Dietz and David Bidwell (East Lansing, MI: Michigan State University Press, 2012), 13–59.

53 Manjana Milkoreit, *Mindmade Politics: The Cognitive Roots of International Climate Governance* (Cambridge, MA: MIT Press, 2017).

54 George Loewenstein, Daniel Read, and Roy F. Baumeister. *Time and Decision: Economic and Psychological Perspectives of Intertemporal Choice* (New York: Russell Sage Foundation, 2003); Christopher F. Chabris, David I. Laibson, and Jonathon P. Schuldt, "Intertemporal Choice," in *Behavioural and Experimental Economics*, eds. Steven N. Durlauf and Lawrence E. Blume (London: Palgrave Macmillan, 2010), 168–177; Michael Javobs, "High Pressure for Low Emissions: How Civil Society Created the Paris Climate Agreement," *IPPR Progressive Review* 22, no. 4 (2016): 314–323; Thomas C. Schelling, "Intergenerational and International Discounting," *Risk Analysis* 20, no. 6 (2000): 833–838.

55 Partha Dasgupta, "Discounting Climate Change," *Journal of Risk and Uncertainty* 37 (2008): 141–169. Christian Gollier and Martin L. Weitzman, "How Should the Distant Future be Discounted when Discount Rates Are Uncertain?" *Economics Letters* 107 (2010): 350–353; John E. Roemer, "The Ethics of Intertemporal Distribution in a Warming Planet," *Environmental and Resource Economics* 48 (2011): 363–390; William D. Nordhaus, "Economic Policy in the Face of Severe Tail Events," *Journal of Public Economic Theory* 14, no. 2 (2012): 197–219; Martin L. Weitzman, "On Modeling and Interpreting the Economics of Catastrophic Climate Change," *The Review of Economics and Statistics* 91, no. 1 (2009): 1–19.

More generally, our dominant economic and political institutions have short time horizons, e.g., quarterly or annual reporting, multi-year election cycles, or five-yearly updates of Nationally Determined Contributions (NDCs) under the Paris Agreement. Planners of large infrastructure projects, managers of extractive energy investments, insurance schemes, and pension funds tend to display the strongest capacity to think long-term, taking a multi-decadal perspective. There are a few exceptional cases of long-term thinking that spans a whole century. For example, in the state of Arizona (USA), new land developments must demonstrate availability of water for 100 years. In 2023, the Governor of Arizona banned new construction in the city of Phoenix that relied on groundwater, because a 100-year supply can no longer be guaranteed there.

Philosophical debates have questioned the moral foundations of our short-term thinking and decision-making, exploring principles of intergenerational justice,[56] atmospheric[57] or Earth system justice,[58] precaution,[59] stewardship,[60] and long-term care,[61] as well as indigenous approaches, such as the seven-generations principle.[62] While these all point towards the ethical imperative to lengthen our time horizons, they have so far done little to change our patterns.

In sum, human thinking and decision-making operates on time horizons that span seconds to decades, and in rare cases a century. Many of our psychological, sociological, political, economic, and political-institutional patterns actively devalue or disregard the future – the more distant in time, the less we care. Considering this seemingly intractable challenge of extending our temporal horizon of care to help us rise to challenge of present climate action, it is not surprising that young people around the world feel increasingly worried about their future and experience climate anxiety. Several recent international and country-specific (e.g., UK, Canada) surveys have provided evidence for increasingly gloomy per-

56 Brian Barry, "Sustainability and Intergenerational Justice," *Theoria* 89 (1997): 43–64, Stephen M. Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change* (Oxford: Oxford University Press, 2011); Lukas H. Meyer, ed. *Intergenerational Justice* (London: Routledge, 2017).

57 Steve Vanderheiden, *Atmospheric Justice: A Political Theory of Climate Change* (New York: Oxford University Press, 2008).

58 Joyeeta Gupta, Diana Liverman, Klaudia Prodani et al., "Earth System Justice Needed to Identify and Live within Earth System Boundaries," *Nature Sustainability* 6 (2023): 1–9.

59 David Kriebel et al., "The Precautionary Principle in Environmental Science," *Environmental Health Perspectives* 109, no. 9 (2001): 871–876.

60 F. Stuart Chapin III et al., "Earth Stewardship: Science for Action to Sustain the Human-Earth System," *Ecosphere* 2, no. 8 (2011): 1–20.

61 Adam and Groves, "Futures Tended."

62 Jillian Fish et al., "For the Next Seven Generations: An Indigenous Strengths-Based Developmental Science," *PsyArXiv Preprints* (2023): 1–40. https://doi.org/10.31234/osf.io/hr28s.

spectives among young people, and a growing disappointment with governments doing too little to address the climate crisis.[63] Negative emotions, including sadness, fear and powerlessness are on the rise. At the same time, youth activism and political engagement within and outside the existing political norms and institutions are growing, channeling discontent into protests and the search for alternatives.

Despite the growing public discontent with current responses to climate change, it is far from clear whether and how the short-term orientation created by interlocking patterns between the human mind, political institutions and economic logics can be remedied to improve intertemporal decision-making from the individual to the global level. Institutional innovations in the public sphere, e.g., the new role of the Commissioner for Future Generations in Wales[64] or the use of public climate assemblies with representations of future generations, point in interesting new directions, but also reveal how challenging it is to unchain a decision-making process from the many challenges we have outlined above, and to allocate not just symbolic but real power to the interests of the future.

Conclusion

A major challenge of the Anthropocene, in fact a major *cause* of it is short-term thinking and decision-making. Many of the choices we make today are driven by immediate concerns and priorities, rather than taking into account their long-term implications and consequences. This is particularly evident in the way we approach climate change, where short-term economic interests often take precedence over the need to protect the planet for future generations. Given the short social time horizons compared to the those of the Earth systems, and the challenge of making long term decisions to the benefit of the future both in economy and democracy, it could be argued that humans are simply not well equipped to handle intertemporal challenges like climate change, where short-term decisions have long-term consequences. Evolution is a process that operates on the basis of adaptation to current and past environments, with no inherent purpose or planning for the future. Traits that are beneficial in the present are selected for, as they increase an organism's

63 Tosin Thompson, "Young People's Climate Anxiety Revealed in Landmark Survey," *Nature* 597, no. 7878 (2021): 605.

64 Anna Pigott, "Imagining Socioecological Transformation: An Analysis of the Welsh Government's Policy Innovations and Orientations to the Future," *Elementa: Science of the Anthropocene* 6, no. 1 (2018): 60.

chances of leaving behind a maximum number of offspring. This imperative drive organisms to maximize their use and intake of resources, as well as their reproductive output, in order to outcompete others within and between species. Those that fail to do so are less likely to survive and pass on their genes to future generations. This same drive for short-term gains can be seen in many aspects of human society, particularly in the realm of business and capital flow. The need for fast returns often leads to a focus on maximizing profits in the present, even if this strategy has negative implications for the future. This is exemplified by the tragedy of the commons dilemma,[65] in which individuals or groups exploit shared resources without regulating their total harvesting. This can result in the depletion of resources and the accumulation of waste and greenhouse gases, with negative consequences for the future. Can we learn to adhere more to the long-term "thinking slow" strategy rather than the "thinking fast" impulses.[66]

Humans are presumably the only species that has an awareness of the distant past, and dream about the future. We are in fact also capable of planning for the future, even the distant future, as witnessed be religious doomsday movements and their planning of infrastructure as well as churches and pyramids. Still, for everyday policy and decisions that affect the planetary future, short-term thinking prevails, either driven by evolutionary constraints or the short-term horizons manifest in politics, institutions, and economics. To overcome this and balance the need of current generations versus those unborn, we a change from the short-term maximizing of returns towards long-term holistic perspectives, more akin to the Iriquois seven-generations principle.[67] Easy to say of course, equally hard to achieve.

The concept of the future is complex, with important differences across societies, cultural groups and time. While our ability to plan and strategize has allowed us to survive and thrive in the face of many challenges, it could be argued that our evolutionary heritage has left us ill-equipped to handle the task of intertemporal decision-making related to climate change and the Anthropocene. Despite these challenges, it is crucial that we continue to strive towards a more sustainable and equitable future, one that takes into account the needs of both present and future generations. This will require us to adopt a more long-term perspective, one that prioritizes the health of the planet and the well-being of all its inhabitants over short-term gains. It also means taking a more proactive approach

65 Garett Hardin, "The Tragedy of the Commons: The Population Problem Has no Technical Solution; It Requires a Fundamental Extension in Morality," *Science* 162, no. 3859 (1968): 1243–1248.
66 Daniel Kahneman, *Thinking Fast and Slow* (New York: Farrar, Straus, and Giroux, 2011).
67 Roman Krznaric, *The Good Ancestor: How to Think Long Term in a Short-Term World* (London: WH Allen 2020).

to planning and decision-making, rather than simply reacting to immediate challenges as they arise. Again, this is easy to claim, but hard to achieve. Since economic and material growth has served us well for generations, it is difficult to dismiss as a societal goal. But we need to revisit the fundamental values that drive and orient our collective decisions.

One increasingly prominent approach for extending our collective time horizons forward and identifying shared values is future visioning. Collective imagination of climate futures in democracies should be facilitated by governments, ensuring inclusive, scientifically informed, and creative participatory processes that involve representatives from all segments of society. Once developed, long-term visions should actively guide and inform political decision-making, supporting changing trajectories towards sustainable societies. Finally, we should all take a step back and ask ourselves how meaning in life can be sustained without a long-term perspective that includes the moral obligations for those not yet born.

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Part II: **Time as Social Expectancy: Regulating and Mastering Time**

Astrid Marie Holand and Tanja Ellingsen

6 Never Time to Meet? Time as a Constraint in Cross-Sectoral Co-Creation (Experiences from an Explorative Study of Co-Creation)

Introduction

Accomplishing the ambitious targets of the UN's 2030 Agenda calls for global partnership, bringing together governments, civil society, businesses, and organisations to mobilise all available resources at international, national, and local level. For municipalities in Norway to do their share, *co-creation* is a recommended working method. While challenges increase, public sector resources are seemingly declining and thus co-creation is also seen as a method "to get more out of less". *But how can someone co-create successfully if they don't have time to meet, or don't feel 'allowed' to spend time on the co-creation?*

This chapter investigates local cross-sectoral collaboration aimed at solving shared and mutual challenges, also called *co-creation*, and its constraints. *The aspect of time* seems particularly important in a double sense, when action is urgent but at the same time time-consuming. The recommended method – co-creation – is hard work, and its success relies on several prerequisites, one of which is time.

The backdrop is the call from the United Nations General Assembly in September 2015, where countries around the world signed up to the 2030 Agenda for Sustainable Development.[1] Out of the 17 Sustainable Development Goals (SDGs), goal N° 17, *Partnership to achieve the Goals*, is seen as the most important one. Global society has become complex to an extent that hierarchical governance, democratic or not, falls way short of safeguarding conditions for sustainable development.[2] All hands are needed on deck; the public, private and civil sectors must cooperate in balance.[3] As a result, co-creation has

1 UN, *Transforming our World: The 2030 Agenda for Sustainable Development* (New York: United Nations, 2015).

2 Christopher Ansell and Jacob Torfing, eds. *Handbook on Theories of Governance* (Cheltenham: Edward Elgar Publishing, 2022); Kelly Levin et al., "Overcoming the Tragedy of Super Wicked Problems: Constraining our Future Selves to Ameliorate Global Climate Change," *Policy Sciences* 45 (2012): 123–152.

3 Henry Mintzberg, "Time for the Plural Sector," *Stanford Social Innovation Review* 13, no. 3 (2015): 28–33.

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become a buzzword and a recommended working method of our time.[4] But does it work effectually?

Through their "National expectations for regional and municipal planning," the Norwegian Government has emphasised that the UN SDGs shall form the basis for local authorities' land-use and welfare planning.[5] Despite that, and despite a widespread opinion that action is urgent, many regional and municipal representatives have found SDG work challenging; expectations are perceived to be blurry, the co-creation process seems difficult by itself, as it takes time to figure out how the work is best to be done.[6] When even finding sufficient time to consolidate co-creative work is a challenge, some paradoxical time-issues arise, which are addressed here. We will delve into challenges specifically related to time being a scarce resource. This implies exploring what time as an organising tool means in workplaces in the public, private and voluntary sector respectively, and in society at large. So, then we ask: *How and when do organisations and institutions prioritise time for co-creative SDG work, and what are the factors that might restrain such prioritising?*

We explore this through experiences from three interlinked co-creation-projects; between a Norwegian municipality, a sports club, and an NGO, with a common goal to promote social inclusion of youths through various new activities. In other words: co-creation for young public health and *social sustainability*. Strengthening social sustainability is about promoting well-being, trust, security, inclusion and belonging, keywords that could simultaneously describe successful co-creation.

As addressed by Hessen, Milkoreit and Nadeau (chapter 5), action for environmental sustainability is pressing, and is associated with a considerable time pressure to act before it is too late to maintain the more optimistic scenarios. It is fair to say that the same goes for social sustainability, of which public health is a central part. Social sustainability means *ensuring that everybody live under acceptable so-*

4 Asbjørn Røiseland and Christian Lo, "Samskaping – nyttig begrep for norske forskere og praktikere?" *Norsk statsvitenskapelig tidsskrift* 35, no. 1 (2019): 51–58.

5 KMD (Ministry of Local Government and Modernisation), *Meld. St. 30. (2019–2020): En innovativ offentlig sektor – Kultur, ledelse og kompetanse* (Oslo: Kommunal- og moderniseringsdepartementet, 2019).

6 Mathias B. Reinar, Kyrre Groven and Aase Kristine Lundberg, "Mye styr, lite styring? Implementering av FNs bærekraftsmål i samfunns- og arealplanlegging," in *Bærekraft: Fjordantologien 2022*, eds. Heidi Hogset, Johanne Alteren, Bjørn Jæger and Solveig Straume (Oslo: Universitetsforlaget, 2022), 298–317.

cial conditions.[7] Social sustainability is thus at risk when social inequality is rising, which it has been for the recent decades, in Norway and on a global basis.[8] Norway makes an interesting case in these matters, as the country is known for its traditions for both co-creation and social egalitarianism. Historian Jan Eivind Myhre argues that social equality was more widespread in Norway than in other European countries during the 19th century. This facilitated economic growth, democratic governance, and the development of consolidating institutions, which in turn supported the progress of the Nordic model in the following century.[9] Today, Norwegian municipalities have a public health mission, embedding expectations of strengthening health, well-being, and dignity, and reducing social health inequality among inhabitants. With a recently updated Public Health Act, public health work has been reinforced.[10] However, in the consultation round of the governmental report *Norway towards 2025*, the Norwegian Health Association pointed to the problem of growing social inequality, warning that this threatens both the individual's and society's robustness.[11]

In the following sections we first discuss the sociology of time, regarding aspects of time in modern societies and working life in general, and more particularly how this affects working conditions in the voluntary and public sectors. This provides some insight into the contextual backdrop to these cases. Of particular interest are management reforms, dominant economic thinking, and processes like digitalisation and automation. These are said to have influenced how we collectively see time, potentially influencing readiness for co-creation. Next, we further define co-creation, what it needs to be successful, and take a glance at Norwegian historical traditions for co-creative work. Then we move on to our research design, data, and analysis of our findings, before presenting our conclu-

7 Heidi Hogset, Johanne Alteren, Bjørn Jæger, and Solveig Straume, eds, *Bærekraft: Fjordantologien 2022* (Oslo: Universitetsforlaget, 2022).

8 "Inequality Across The World And Over Time," World Inequality Database, accessed June 16, 2023, https://www.core-econ.org/the-economy/book/text/19.html#191-inequality-across-the-world-and-over-time.

9 Jan Eivind Myhre, "The Cradle of Norwegian Equality and Egalitarianism: Norway in the Nineteenth Century," in *Egalitarianism in Scandinavia: Historical and Contemporary Perspectives*, eds. Synnøve Bendixen, Mary B. Bringslid and Halvard Vike (London/New York: Palgrave Macmillan, 2018), 65–85.

10 Riksrevisjonen 2015; Hege Hofstad and Arild Schou, "Har samhandlingsreformen ført til mer oppmerksomhet på folkehelse i kommunene?," *Tidsskrift for velferdsforskning* 20, no. 1 (2017): 81–88.

11 NHA (Norwegian Health Association), *Høringssvar NOU 2021:4 Norge mot 2025* (Oslo: Ministry of Finance, 2021), 2, accessed June 16, 2023, https://www.regjeringen.no/no/dokumenter/utvalget-norge-mot-2025-horingsbrev/id2841475/?expand=horingssvar&lastvisited=undefined.

sion and suggestions for understanding time issues, given the challenges that our global society is currently facing.

Aspects of Time in Modern Society; Implications for the Volunteer and Public Sectors

When historians, social scientists and sociologists occupy themselves with aspects of time, they often discuss the increased time pressure associated with capitalism, industrialism, and modernism in the recent centuries. Time is, for instance, central in various subdisciplines within sociology, like historical sociology, sociology of work, and sociology of technology.[12] With increasing globalisation, automation and digitalisation from the 1990s and early 2000s onwards, attention towards speed and acceleration has grown.[13] Some have more specifically addressed the relationship between time and technology, digitalisation, and automation.[14] More recent influential theories of speed-up, particularly that of *social acceleration*, draw on elements from both classical and late modern literature. Hartmut Rosa refers to the mutually reinforcing processes of technological acceleration, acceler-

12 Respectively, Charles Tilly, "Reflections on the History of European Statemaking," in *The Formation of National States in Western Europe*, ed. Charles Tilly (Princeton, NJ: Princeton Univ. Press, 1975), 3–83; Arlie R. Hochschild, *The Time Bind: When Work Becomes Home and Home Becomes Work* (New York: Metropolitan Books, 1997); Leslie A. Perlow, "The Time Famine: Toward a Sociology of Work Time," *Administrative Science Quarterly* 44, no. 1 (1999): 57–81; Judy Wajcman, *Technofeminism* (Oxford: Polity Press, 2004); Wiebke Bijker and John Law, *Shaping Technology/Building Society: Studies in Sociotechnical Change* (Cambridge, MA: The MIT Press, 1992).

13 Zygmunt Bauman, *Liquid Modernity* (Hoboken, NJ: Wiley, 2000); Manuel Castells, *Rise of the Network Society* (Hoboken, NJ: Wiley, 2009); Manuel Castells, *Communication Power* (Oxford: Oxford University Press, 2009); Judy Wajcman, *Pressed for Time: The Acceleration of Life in Digital Capitalism* (Chicago, IL: The University of Chicago Press, 2015).

14 Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2013); Judy Wajcman and Nigel Dodd, *The Sociology of Speed: Digital, Organizational, and Social Temporalities* (Oxford: Oxford University Press, 2017); Leslie Perlow, *Sleeping with Your Smartphone: How to Break the 24/7 Habit and Change the Way You Work* (Brighton, MA: Harvard Business Review Press, 2012); Jens Beckert, *Imagined Futures: Fictional Expectations and Capitalist Dynamics* (Cambridge, MA: Harvard University Press, 2016); Jonathan Martineau, *Time, Capitalism and Alienation: A Socio-Historical Inquiry into the Making of Modern Time* (Leiden: Brill, 2015); Filip Vostal, *Accelerating Academia: The Changing Structure of Academic Time* (London/New York: Palgrave Macmillan, 2016).

ation in the pace of social transformations, and in the pace of everyday life.[15] The arrival of the world wide web during the 1980s, digitalisation of media, online publishing without the traditional deadlines, the emergence of social media, and a perceived need to be constantly available online have further contributed to the perception of accelerating time.[16] Numerous books and articles focus on the increasing *time pressure* and *digital over-exposure* in modern societies, and this body of literature is growing. Some titles have received high publicity.[17] Evidently it has become a folk narrative that everybody has less and less time at their autonomous disposal. The 'time squeeze' seems to be an important feature of life in modern societies.[18] These issues are relevant for working conditions in a series of different workplaces across sectors.

Work-life studies across countries conducted during the 2020–2021 covid pandemic lock-down find that extensive online working, when those who could took their work home, has blurred work-life boundaries even further, resulting in more time pressure and stress.[19] Overall, the massive demands for online availability has had several negative consequences.[20] This is true for a range of different workplaces across countries, including Norway, which is extensively digitalised.[21]

Regarding the voluntary sector, the many online activities potentially compete for people's time to the detriment of voluntary work. NGOs saw a drop in volun-

15 Hartmut Rosa, *Alienation and Acceleration: Towards a Critical Theory of Late-Modern Temporality* (Copenhagen: NSU Press, 2010); Rosa, *Social Acceleration*; Hartmut Rosa, *Resonance: A Sociology of Our Relationship to the World* (Cambridge/Medford: Polity Press, 2019).

16 Ana-Maria Cazan, "The Digitization of Working Life: Challenges and Opportunities," *Psihologie Resurselor Umane* 18, no. 1 (2020): 3–6; Wajcman, *Pressed for Time*; Trine Syvertsen and Gunn Enli, "Digital Detox: Media Resistance and the Promise of Authenticity," *Convergence* 26, no. 5–6 (2019): 1269–1283.

17 E.g. Juliet Schor, *The Overworked American: The Unexpected Decline of Leisure* (New York: Basic Books, 1992); Johann Hari, *Stolen Focus: Why You Can't Pay Attention* (London: Bloomsbury, 2022). See chapter 1 for further examples.

18 Dale Southerton and Mark Tomlinson, "'Pressed for Time': The Differential Impacts of a 'Time Squeeze'," *The Sociological Review* 53, no. 2 (2005): 215–239; Wajcman and Dodd, *Sociology of Speed*; Wajcman, *Pressed for Time*; Kristine Warhuus Smeby, *Likestilling i det tredje skiftet? Heltidsarbeidende småbarnsforeldres praktisering av familieansvar etter 10 uker med fedrekvote* (Trondheim: NTNU, 2017).

19 Xi Wen Chan et al., "Work, Life and COVID-19: A Rapid Review and Practical Recommendations for the Post-Pandemic Workplace," *Asia Pacific Journal of Human Resources* 61, no. 2 (2023): 257–276.

20 Hari, *Stolen Focus*.

21 "Norwegian Media Barometer," *Statistics Norway*, accessed November 17, 2022, https://www.ssb.no/kultur-og-fritid/tids-og-mediebruk/artikler/norsk-mediebarometer-2021.

teering during Covid-19, somewhat recovering during 2021 and 2022.[22] The lock-down was of course an extraordinary situation, so how about conditions for voluntary work in general, and before the pandemic? Norway, alongside the other Scandinavian countries, has rich traditions for this. Voluntary humanitarian organisations with roots in the 19th century are founding forces for institutionalised welfare in Norway, pushing the state to take on a greater social responsibility.[23] However, a crucial issue now is whether volunteers are still ready to spend their spare time on humanitarian work, supporting NGOs, unions, sports clubs and/or cultural events. Statistics show that the economic value of volunteering has increased over the past 15 years, mostly due to a growing need for voluntary health, social and environment-related work.[24] The responsibility for volunteers to safeguard social and environmental sustainability is thus increasing. Simultaneously, recruiting volunteers tends to have become more challenging, often explained by a greater need for autonomous spare time among citizens. The last decade has seen a rise in non-membership volunteering, more issue-specific engagement, and more cash donations.[25] As a consequence, even though a majority of NGO workers are still volunteers, organisations tend to employ a growing share of people, shown in Fig. 6.1.[26] In conclusion, *volunteer time* is a needed but limited resource. It is also the foundation of the voluntary sector.

22 "Participation in Voluntary Work," Frivillighet Norge, accessed June 6, 2023, https://www.frivillighetnorge.no/rapport/frivillighetsbarometeret/frivillighetsbarometer-2022/type-deltakelse-i-frivillige-organisasjoner. In general, Norwegians invest more time than money in volunteer work; 59 percent reported to have taken part in organised volunteer work during the past 12 months (2021 and 2022). This was an increase, after a drop from 66 to 55 percent during the Covid pandemic.

23 Øyvind Bjørnson and Inger Elisabeth Haavet, *Langsomt ble landet et velferdssamfunn: Trygdenes historie, 1894–1994* (Oslo: Ad Notam Gyldendal, 1994).

24 "SSB: 08538: Produksjon, bruttoprodukt og lønnskostnader inklusive ulønnet arbeid, etter hovedstørrelse, aktivitet (ICNPO), statistikkvariabel og år"; "SSB: 08520: Årsverk, etter aktivitet (ICNPO), statistikkvariabel og år." It is worth noting that households are the main source of funding, contributing 40 percent of the voluntary sector's financial support, according to "SSB: 10702: Finansiering, etter finansieringskilder og aktivitet (ICNPO) 2011 – 2018," Statistics Norway, accessed June 6, 2023, https://www.ssb.no/statbank/table/10702.

25 Ivar Eimhjellen et al., "Changing Patterns of Volunteering and Participation," in *Scandinavian Civil Society and Social Transformation: The Case of Norway*, eds. Bernard Enjolras and Kristin Strømsnes (New York: Springer, 2018), 25–65.

26 "SSB: 08520: Årsverk, etter statistikkvariabel, årsverk, aktivitet (ICNPO) og år," *Statistics Norway*, accessed June 6, 2023, https://www.ssb.no/statbank/table/08520/tableViewLayout1/.

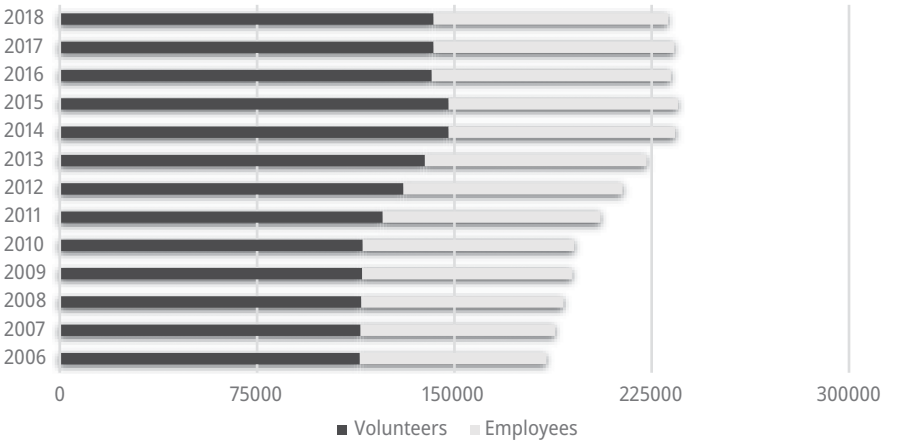

Fig. 6.1: Workers in the Norwegian voluntary sector. Full-time equivalents, 2006–2018 (ssb.no).

Turning to workplaces in the public sector, the growing dominance of the managerial regime called *New Public Management* (NPM) is of particular importance.[27] As described in chapter 1, this coincided with *the neoliberal shift*, signified by a market-oriented economic thinking with emphasis on competitiveness and efficiency – also regarding time.[28] Part of the historical background for the NPM reforms was concerns about decreasing public trust in large parts of the Western world; in OECD and EU countries, as well as in Australia, New Zealand and Canada. This criticism seems to have been translated into perceived discontent with allegedly inefficient and poorly accessible public services.[29] In both the US, EU and OECD, reports supporting customer-oriented reforms were published. The assumption was straightforward: Delivering better public services would presumably lead to increased public trust. The outline of these reforms turned citizens into customers and the state into

27 Christopher Hood, "A Public Management for All Seasons?," *Public Administration* 69, no. 1 (1991): 3–19.

28 Einar Lie, *Norsk økonomisk politikk etter 1905* (Oslo: Universitetsforlaget, 2012); AAD, *NOU 2004:5 Arbeidslivslovutvalget – Et arbeidsliv for trygghet, inkludering og vekst* (Oslo: Arbeids- og administrasjonsdepartementet, 2004); Astrid Marie Holand, "Re-Establishing Trust: Cases from a Norwegian Health Enterprise," in *Revisiting New Public Management and its Effects. Experiences from a Norwegian Context*, eds. Abbas Strømmen-Bakhtiar and Konstantin Timoshenko (Münster/New York: Waxmann Verlag, 2021), 19–40.

29 Steven van de Walle, "New Public Management: Restoring the Public Trust through Creating Distrust?," in *The Ashgate Research Companion to New Public Management*, eds Tom Christensen and Per Lægreid (Aldershot: Ashgate, 2010): 309–320; Geert Bouckaert, "Trust and Public Administration," *Administration* 60, no. 1 (2012), 91–115.

a "supermarket state."[30] Also, it made public employees more personally responsible for fulfilling the demands on the sector.[31] NPM's economic and quantitative results-based orientation has become increasingly criticised for weakening public values, such as local democracy and community participation, and for demotivating public employees.[32] So, when the Norwegian government has called upon local and regional municipalities to co-create better solutions for the future in order to fulfil the UN SDGs, how well-equipped are municipalities and local actors for meeting this call after NPM? Before examining this further, a deeper understanding of co-creation and its prerequisites is required. As mentioned, Norway has long traditions for co-creative work, so perhaps there is something to learn from that as well? First, we will thus provide some theoretical and historical background.

Collaborative Traditions, Co-creation, and Fundamentals for Its Success

The concept *co-creation* has become well established in political and scientific debates in recent years, apparently as a continuum of understandings and practices rather than a specific method. However, a common definition of co-creation within the public sector is simply that *public and private and/or civil actors work together by sharing knowledge and resources with each other*.[33] This is a collaborative relationship, different from outsourcing where the public sector entrusts a task to others. Neither is co-creation synonymous with procedures where citizens can express their opinion on a matter, nor is it about the public sector withdrawing, leaving a community to its own fate. Rather, co-creation assumes that people across sectors are included as active participants in processes where they create shared value.

30 Johan P. Olsen, "Administrative Reform and Theories of Organization," in *Organizing Governance: Governing Organizations*, eds. Colin Campbell and B. Guy Peters (Pittsburgh: University of Pittsburgh Press, 1988), 233–254.

31 Halvard Vike et al., *Maktens samvittighet: Om politikk, styring og dilemmaer i velferdsstaten. Makt- og demokratiutredningen 1998–2003* (Oslo: Gyldendal, 2002); AAD, *NOU 2004:5*, 23, 63, 273–276.

32 Christopher Hood and Ruth Dixon, "A Model of Cost-cutting in Government? The Great Management Revolution in UK Central Government Reconsidered," *Public Administration* 91, no. 1 (2013): 114–134.

33 Jakob Torfing, Eva Sørensen and Asbjørn Røiseland, "Transforming the Public Sector Into an Arena for Co-Creation: Barriers, Drivers, Benefits, and Ways Forward," *Administration & Society* 51, no. 5 (2019): 795–825.

Although co-creation as a concept is relatively new, collaboration across sectors is not. Historically speaking, cooperation between the voluntary, public, and private sectors is probably more typical of Norway than other comparable countries.[34] The purpose was usually to create something new that had lasting value for the participants and for society, like new infrastructure or new welfare institutions. The collaborative tradition of *dugnad*, from the Old Norse *Dugnaðr* (help, support), denotes joint voluntary ventures carried out to solve mutual tasks. It dates back to harvesting seasons in agricultural society and has since then been called upon in various settings. Norwegians have been socially adapted to this tradition over so many generations that it has become an integral part of cultural norms and values. Dugnad is a setting for learning collaborative and prosocial behaviour, which some argue has contributed to well-being in this country.[35] The essence of *dugnad* is to invest time and unpaid effort, instead of money, to get things done and/or to overcome challenges. The aforementioned voluntary humanitarian organisations, dating back to the 19th century, are founded on dugnad-like cooperation. Emergency cooperation between voluntary organisations and municipalities has equally long traditions. Strengths of these cooperative traditions are the local responsibility, shared local knowledge, and a recognition that people need to rely on each other's help in facing threats and challenges.[36] Mutuality and reciprocity is central.[37] The aforementioned definition of co-creation embraces these older forms of cross-sector collaboration, namely that "both the public sector and civil society and/or private actors are included as active participants in a process where value is created."[38]

One should not think that co-creation would be a difficult method to implement in present-day Norway, given these historical traditions. However, accelerated time and the mentioned changes in working conditions does not seem to have promoted cross-sectoral co-creation, and it is symptomatic that this working method must be officially asked for.[39] Neither has the series of NPM reforms been able to meet the growing social inequality problems. Since the 1980s, welfare states' challenges related to social integration have increased, in Norway as in many other European

34 Ole Johan Andersen and Asbjørn Røiseland eds, *Partnerskap, problemløsning og politikk* (Bergen: Fagbokforlaget, 2008).

35 Carsta Simon and Hilde Mobekk, "Dugnad: A Fact and a Narrative of Norwegian Prosocial Behavior," *Cultural and Behavioral Systems Science* 42, no. 4 (2019): 815–834.

36 Tora Aasland and Geir S. Braut, "Lokale frivillige: Mer nyttig enn sentrale profesjonelle? Frivillige organisasjoners samvirke i lokalt beredskapsarbeid," *Heimen* 57, no. 4 (2020): 317–332.

37 Roar Amdam, "Strukturelle vilkår for medverking i kommunal planlegging og politikk under tre ulike styringssystem," *Kart og plan* 112, no. 4 (2019): 282–298.

38 Røiseland and Lo, "Samskaping."

39 Stig Bang-Andersen, Erik Plathe, and May Britt Hernes, *Prioriterte mål i kommunalt og fylkeskommunalt planarbeid* (Bergen: KS/Asplan Viak, 2019).

countries. Correspondingly, authorities have looked with increasing interest for civil/voluntary contributions in areas where public solutions prove inadequate.[40] Apart from the UN SDG work, the rationale behind the call for co-creation within the public sector is thus a dire one, as demands from citizens and businesses grow while resources to solve complex challenges are limited.[41] The *co-creative municipality* is actively promoted as a *method where employees, politicians, residents and businesses together find out how to solve a need or a challenge*.[42] Co-creation is thus apparently portrayed as a "magical solution" to problems which the public sector is facing.[43] The expectation is that co-creation will lead to smarter ways of using (saving) time and resources in solving problems.[44] Potential co-creation partners are often sought within the voluntary sector. But, as mentioned, while this sector's significance for sustainability work grows, there are signs that organisations struggle to have enough hands and working hours to take care of all tasks.

Besides, co-creation comes with no guarantee. A successful result depends on several prerequisites.[45] Furthermore, co-creation is a working process, where each phase has its needs. To begin with, co-creation requires collaboration between people who have never worked together before.[46] They often come from different workplaces with different cultures, ideas, and routines regarding how time is spent and accounted for. Central to the initial phase, is *involving* participants and enabling them to co-create. An enabling environment offers sufficient *time, permission, space,* and *tools*.[47] Previous studies state that 'time' means *having time to spend* on co-creation, but also feeling that the time usage is *justified*. Justifying the time spent concerns "a balance between the felt importance of your

40 Håkon Lorentzen and Marianne Skinner, "Frivillige i omsorgssektoren – muligheter og barrierer," *Tidsskrift for velferdsforskning* 22, no. 1 (2019): 4–24.

41 Jacob Torfing and Peter Triantafillou, "Introduction to Interactive Policy Making, Metagovernance and Democracy," in *Interactive Policy Making, Metagovernance and Democracy*, eds. Jacob Torfing and Peter Triantafillou (Colchester: ECPR Press, 2011): 1–25.

42 Bang-Andersen et al., *Prioriterte mål.*

43 William H. Voorberg, Viktor Bekkers and Lars G. Tummers, "A Systematic Review of Co-Creation and Co-Production: Embarking on the Social Innovation Journey," *Public Management Review* 17, no. 9 (2015): 1333–1357.

44 Bang-Andersen et al., *Prioriterte mål*; KMD, *Meld. St. 30. (2019–2020);* Lars Kobro, *La oss gjøre det sammen: Håndbok i lokal, samskapende sosial innovasjon* (Oslo: KS, 2018).

45 Jacob Torfing, Eva Sørensen and Asbjørn Røiseland, "Samskapelse er bedre og billigere," *Stat & Styring* 30, no. 4 (2020): 31–35.

46 Flurina Schneider et al., "No-Tillage Farming: Co-Creation of Innovation through Network Building," *Land Degradation & Development* 23, no. 3 (2012): 242–255.

47 Mervi Hasu, Eveliina Saari and Tuuli Mattelmäki, "Bringing the Employee Back In: Integrating User-driven and Employee-driven Innovation in the Public Sector," in *User-Based Innovation in Services*, eds. Jon Sundbo and Marja Toivonen (Oxon: Edward Elgar, 2011), 251–278.

own work vs. perceived importance of your presence in the co-creation project."[48] When justified, permission is given to spend time on co-creation as *part* of your work, rather than co-creation being something *other* than, or separated from, 'your original work'. Having a place to meet, and tools to enhance co-creation is also important for its success. These are the basics.

Felt ownership lends further importance to the co-creative work, hence strengthening its justification. Conversely, managers' passivity is described as a barrier.[49] Both decision makers, employees, and stakeholders need to be 'onboarded'. This is referred to as 'anchoring'.[50] Ownership gives a feeling of responsibility, facilitates anchoring and *engagement*.[51] Conversely, if management, politicians, or the public at large see little use of spending time on a co-creative project, it is likely to fail.

Further, it is argued that a team's efficiency depends on its level of cohesion. Characteristically, efficient teams have clear goals, ownership of those goals, positive interdependence, common understanding, and two-way communication.[52] These factors help the co-creative team pull in the same direction, spending less time and frustration on misunderstandings. Good collaboration oftentimes develops over time; it is a way to facilitate relatedness, and ownership to the goals, both of which are central to a partaker's *internal motivation*.[53] In truly efficient teams, members feel like they are working on something that is personally important to them, and that their work will have an impact.[54] In order for co-creation to be truly successful, according to Mogstad, three levels of participation are needed; *involvement, engagement* and *internal motivation* (Fig. 6.2). These sum up the fundamentals described above. On the third level, participants are personally motivated to work on the project, and experience that the co-creation is meaningful to them.[55]

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48 Simon Bowen et al., "How Was It for You? Experiences of Participatory Design in the UK Health Service," *CoDesign* 9, no. 4 (2013): 230–246.

49 Etty R. Nilsen et al., "Exploring Resistance to Implementation of Welfare Technology in Municipal Healthcare Services: A Longitudinal Case Study," *BMC Health Services Research* 16 (2016): 1–14.

50 Astrid Mogstad, *Co-creation in Public Service Innovation: A Review of How to Encourage Employee Engagement in Co-creation* (Trondheim: NTNU 2017).

51 Mogstad, *Co-creation*; Jon L. Pierce, Tatiana Kostova and Kurt T. Dirks, "Toward a Theory of Psychological Ownership in Organizations," *The Academy of Management Review* 26, no. 2 (2001): 298–310.

52 David W. Johnson and Frank P. Johnson, *Joining Together: Group Theory and Group Skills* (Harlow: Pearson, 2014).

53 Richard M. Ryan and Edward L. Deci, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," *Contemporary Educational Psychology* 25, no. 1 (2000): 54–67.

54 Johnson and Johnson, *Joining Together*.

55 Mogstad, *Co-creation in Public Service Innovation*.

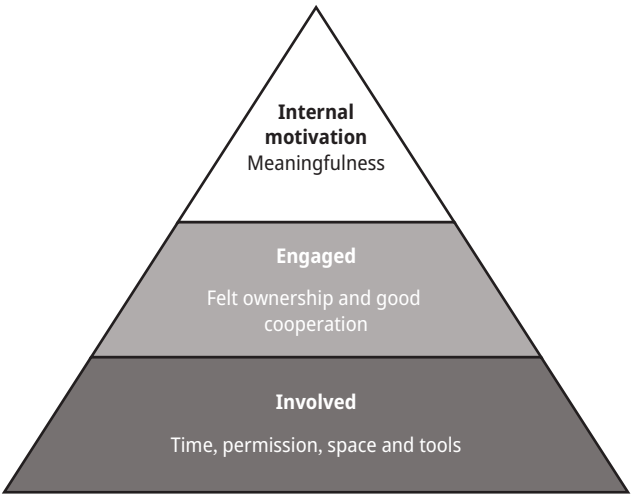

Fig. 6.2: Mogstad's levels of participation in co-creation (2017:10).

Although all three levels of participation are important, the top levels are highly dependent on the solidity of ground level. Particularly in its initial phases, co-creation demands a lot of time. Thus, out of the basic factors, *time* seems particularly important. Other prerequisites (sense of ownership, good relations, good collaboration, clear and common goals, and experienced meaningfulness) require time to develop and nurture.[56] On the other hand, participants who feel inner motivation are probably more likely to find time and argue to get permission for the time spent. Inner motivation regarding *how to spend time* is thus crucial.

Data Material and Methodological Approach

This chapter is based on a case study of three new and inter-connected co-creation initiatives within a local community in Norway, where the municipality (public sector), a sports club (private sector), and an NGO (voluntary sector) are involved. Their common goal is to strengthen local social sustainability. Each of them started new activities for youths, with a social inclusion perspective. The

56 Schneider et al., "No-tillage Farming"; Andreas H. Krogh, Eva Sørensen and Jakob Torfing, "Samskabelse af innovative offentlige løsninger," in *Samskaping: Sosial innovasjon for helse og velferd*, eds. Elisabeth Willumsen and Atle Ødegård (Oslo: Universitetsforlaget, 2020), 45, 53.

three initiatives are thus of different origin, illustrated in Fig. 6.3. The voluntary organisation started a new Youth centre, the sports club started a new Youth café, and the municipality itself planned to initiate several activities in existing facilities, such as schools. They all sought to use cross-sectoral co-creation as a method, based on a consideration that this would be necessary to access the needed resources. The respective initiatives know of each other, and representatives from each regularly meet to mutually exchange experiences. These co-creation initiatives thus serve as living laboratories, joined in a *learning network* (Fig. 6.3). We followed them over the years 2021–2023, registering which challenges and constraints they experienced. A main interest was to investigate whether workplace environments and time regimes were more favourable for co-creation in one sector than the other, and which solutions might have potential transfer value.

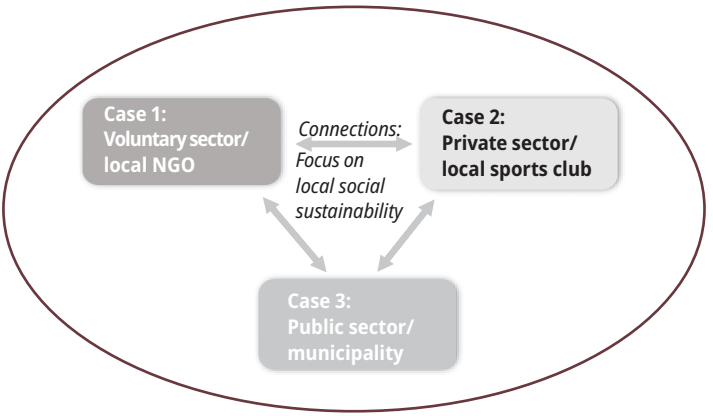

Fig. 6.3: Our case study: A learning network of living labs.

Our methodological approach is exploratory, where everything experienced in, between and around the cases can be considered findings, like *naturally occurring data*.[57] Observation is a suitable method, where the goal is to build up intimate knowledge and trust in the researched field.[58] In late 2022/early 2023, when the initiatives had been running for a while, we interviewed two or three of the most central actors in each of the cases. All interviewees are paid employees, engaged in working for the respective initiatives. Additionally, throughout 2022 and

57 David Silverman, *A Very Short, Fairly Interesting and Reasonably Cheap Book about Qualitative Research* (London: Sage, 2007); David Silverman, *Doing Qualitative Research* (London: Sage, 2010).

58 Kathrine Fangen, *Deltakende observasjon* (Oslo: Fagbokforlaget, 2010).

2023 we facilitated short monthly dialogue meetings where the central actors from each of the cases met online for half an hour to share experiences with each other and with us. Topics varied from practical questions regarding case activities, to conditions for co-creative work more generally.

Throughout the observation period, we regularly participated in physical and digital meetings and activities concerning the cases, where the initiators themselves have participated, as well as a varying number of their permanent and potential collaboration partners. We have had an ongoing dialogue with the initiators throughout the observation period, also between the actual events. The initiators, our main informants, have had ample opportunity to share their experiences with us, in structured or more spontaneous settings. This method has allowed us as researchers to experience what the case participants found useful and challenging. We got to see, hear and feel what happened and could gain a far greater understanding of the situation from the inside, compared to what we could get to through interviews only.[59] The challenge in being an active participant observer is that researchers risk becoming part of the culture they study, where the researcher and the researched influence each other.[60] To some extent, we ended up exploring new horizons together with our informants, but that was not least due to outer circumstances previously unseen by all of us.

The years covered in our study turned out to encompass turbulent times, in several ways. The first year, 2021, coincided with the Covid-19 lockdown period, a most unusual and unfamiliar situation for workplaces worldwide. This immensely influenced both their core activities and their conditions for co-creation, as physical meetings were restricted, and online work activity was already extensive. As a result, work on the case activities was delayed for all parties. During Covid-19, the municipality had a lot of extraordinary work to handle concerning public health and safety issues. The local NGO also had extraordinary humanitarian tasks to fulfil. The same was the case in 2022, when the municipality, the local NGO and even the sports club all got involved in caring for Ukrainian refugees. On the positive side, the local sports club experienced unprecedented success, and spent a lot more time on sports activities than was planned at the start of the project. So, there was extra *dugnad* activity going on, whether it was to cope with Covid-19 and lockdown, the refugee situation, or the extra sports events. However, late 2022 and early 2023 turned out to be less turbulent, and activities played out more as planned.

59 Fangen, *Deltakende observasjon*; Silverman, *Qualitative Research*; Colleen McGrath and Debbie Laliberte Rudman, "Using Participant Observation to Enable Critical Understandings of Disability in Later Life: An Illustration Conducted With Older Adults With Low Vision," *International Journal of Qualitative Methods* 18 (2019): 1–11. https://doi.org/10.1177/1609406919891292.
60 Fangen, *Deltakende observasjon*.

In the following, we will emphasise data from observations and interviews where *time* was specifically addressed regarding topics like time pressure, lack of opportunities to meet up with potential collaborators, the need to justify how time was spent, and potentially how internal motivation helped to find time.

Analysis: Tracing the Time Paradoxes

So, how has *time* affected our cases? First of all, handling the extraordinary situations – Covid-19 and the Russian-Ukrainian War – on top of ordinary tasks consumed all available time for the parties involved. Co-creative work for solving more "slow-burning" problems had to wait and was put on hold. Secondly, a key learning element in the project is that co-creation requires extensive time and space in order to meet, exchange ideas and experiences, and be creative together – especially in the start-up phase, and that meeting face to face was regarded as of higher value than meeting online.

In a situation characterised by tight budgets and/or timeframes, although co-creation is argued to be the cure for this, there was little time available to spend on co-creation. When co-creation was not integrated into participants' core activities, co-creating itself was perceived as an additional requirement (separated from 'your own work'), which they only sporadically had time to handle. This was directly addressed by our interviewees, and repeatedly observed in preparations for and evaluations after meetings and workshops. It goes straight to the kernel of both finding time and justifying the time spent. As the interviewees at the sports club emphasised: "Our main job is [sports], and since we were doing quite well, ending up [in the top league], we had to postpone all activities related to the co-creation initiative." Among things that had to wait in this case was the co-creation and start-up of a new Youth café.[61]

Brainstorming and planning workshops demand time, and during this project we have observed, time and again, that the participants struggled to find time to meet at all or had to reduce the number of hours spent (i.e., could only come for half a day). This was again because they all had 'their own job' waiting back at their respective workplaces. Finding the same day open in everyone's calendars seemed really challenging. It never happened that everyone invited was able to show up, despite their good intentions. Participants from both the sports club and the municipality emphasised the need for an output of the workshops: "It is not enough to just meet and talk, it must result in something more concrete." An NGO

61 Bowen et al., "How Was It for You?," 230–246.

representative observed the same, from a slightly different angle: "It is important that those who participate feel that they get something in return for the time they have spent at a network meeting; that it feels productive." These reflections support the observation that linking the perception of importance of 'your own work' and of the co-creation is vital.[62]

We observed two main approaches used to address this. Municipality representatives emphasised that partakers could contribute work they would be doing anyway, thus aligning their 'own work' and the co-creative work. This way, participants could choose to at least get involved. In this case, the aim was to initiate new evening activities for youths in regular school buildings.

The other approach was to advocate for the impact of the project itself. "Selling in" a goal for a co-creative project takes time, and requires that potential collaborators can set time aside to get to know the initiative and the people behind it. Here, the common discourse regarding what counts as important societal challenges at the time being can serve to enhance motivation. Additionally, engagement is transmittable. An NGO representative stated: "There is currently a lot of focus on the needs of young people, and also I like to think that the fact that I myself have a large and clear commitment to the cause is contagious." His aim was to get collaborators engaged, preferably with inner motivation too, to actively support the new Youth centre with both time, money, and other material resources.

All participants experienced that their core activities through 2021–22 became more demanding and time consuming than expected. The situation was extraordinary, but that only serves to highlight that co-creative work targeting slow-burning problems might be a surplus phenomenon. With less slack resources at hand, there was less to spend on this co-creation. Hence here is a potential paradox; if spending time on co-creation requires surplus time, co-creative projects aimed at dealing with slow-burning problems risk continuously being deprioritised when pressure on time is at its most pronounced. If we now return to Mogstad's levels of participation (Fig. 6.2), we can observe that when discussing time as a constraint, we are on the basic level of co-creation, where collaborators – possibly – get involved. Without these fundamentals, no co-creation can take place. So, suggesting a surplus-dependent solution to solve an imminent scarcity problem is a rather optimistic approach. This clearly implies that using co-creation to target slow-burning problems needs to be initiated and established in calmer times, in order to get priority at all.

Simultaneously, in face of an extraordinary situation, one needs collaborative frameworks to already be up and running. We wish to underpin that established

62 Bowen et al., "How Was It for You?," 230–246.

networks are vital resources, both during crises and in more normal times. We observed how all case actors drew on established – personal and corporate – networks to support their work, and to spread the word of their work. For instance, the sports club shared offices with some sports council members, who eventually became very central in running the Youth café. "This was practical, we didn't have to set up meetings, we'd just meet by the coffee machine anyway," a sports club representative stated. The NGO had its national network with extensive experience regarding how to set up the Youth centre. "It saves us a lot of time when we don't have to make all the mistakes by ourselves," an NGO representative said. In both cases, informants reported that established connections spared them valuable time.

A second learning element is that to be effective and lasting over time in a normal day-to-day-situation, co-creation needed active coordination. However, getting institutionally-approved time to do this job had to be argued for, which also took time. As a municipality representative put it: "Project experience shows that someone must have set aside time to do the coordinating, [and] anchoring processes [to get this justified] are also time-consuming."[63] This again reflects that permission – related to justification of time spent – is a crucial factor.[64] Anchoring among decision makers is referred to as prerequisite,[65] but this work is a process that needs to ripen, which requires continuous following-up, consideration, and takes time. Finding time to facilitate continuity in co-creation processes is thus a key task. This is a real challenge in light of the fact that perceived resource scarcity is an important motivating factor for inviting co-creation. Co-use of resources is thus a key motive.[66] Municipality representatives openly addressed that a main goal for implementing co-creation as a working method was to do more with less resources, and at the same time they hoped to generate engagement and motivation for doing this job together:

> We need small steps towards a general change in attitude; towards the individual inhabitants taking on more responsibility for their own welfare, but where this is done in interaction with others so that everyone gets to experience being a resource for someone else – this is co-creation. At the same time, it is absolutely necessary: the municipal health care department must save money, while public needs increase. How to communicate outwardly that taking matters into your own hands is activating and even liberating?[67]

63 Notes from dialogue meeting, June 8, 2022.

64 Nilsen et al., "Exploring Resistance."

65 Mogstad, *Co-creation in Public Service Innovation*.

66 Mette Sønderskov and Siv F. Magnussen, "Hybride muligheter og utfordringer," *Stat & Styring* 31, no. 3 (2021): 24–27.

67 Notes from workshop, September 22, 2021.

If the main intention of co-creation is the collaborative use of resources – including time – to lighten the workload for all parties, this potentially creates a time and resource paradox on a fundamental level, since all parties involved expressed that they experienced how there really wasn't time or space for co-creation in everyday life when it came *on top of* core tasks.

Nevertheless, we observed that participants who already were engaged and motivated were more likely to find time to participate in co-creative processes. *Autonomy* is an important factor determining whether people feel internally motivated. This is partly facilitated by experienced meaningfulness and experienced impact of work.[68] *Time autonomy* is a practical question; how freely does the workplace allow employees to organise their working hours? A third key finding, regarding working conditions, was that the NGO and sports club employees experienced a degree of time autonomy significantly different from that in public administration. The combination of traditionally vertical reporting arrangements in the public sector, and the massive audit accompanying NPM, appears to make a difficult environment for co-creation.[69] Our interviewees from the public sector reported that it was hard to find the sufficient support, and this observation is confirmed in other studies.[70] In contrast, the management of the sports club and NGO respectively had already given permission, the onboarding process was done, so there was no need to spend more time on ownership anchoring there. It is also notable that while both enjoyed a considerable pool of volunteers, they assigned the continuity of the co-creative project to dedicated employees. This supports the tendency illustrated in Fig. 6.1, that a growing share of workers in the voluntary sector are employed. The sports club is in a hybrid position in this regard; partly private and partly voluntary, with representatives who were hired to do corporate social responsibility (CSR) work involving volunteers, and the Youth café was on their to-do list. One NGO representative was hired specifically to administer and coordinate the Youth centre initiative, a job he happily spent around 60 hours a week on in the startup period. "I'm allergic to bureaucracy, so I didn't wish to write hours. [. . .] It gives me energy and joy to work as much as I do, because I am inspired by seeing progress, to see that it materialises physically," he stated. In the NGO case, time autonomy actually paid off in the way that the employee voluntarily invested extra hours in the project in a critical phase.

68 Mogstad, *Co-creation in Public Service Innovation*.

69 Astrid Marie Holand and Tanja Ellingsen, "Samskaping og styringslogikk(er) på kollisjonskurs? En studie av lokalt arbeid for sosial bærekraft," in *Samskapt bærekraft i norsk arbeidsliv*, eds. Anne Kamilla Lund, Maja Nilssen and Anne Tjønndal (Oslo: Universitetsforlaget, 2023), 104–125.

70 Sønderskov and Magnussen, "Hybride Muligheter"; Reinar et al., "Mye styr."

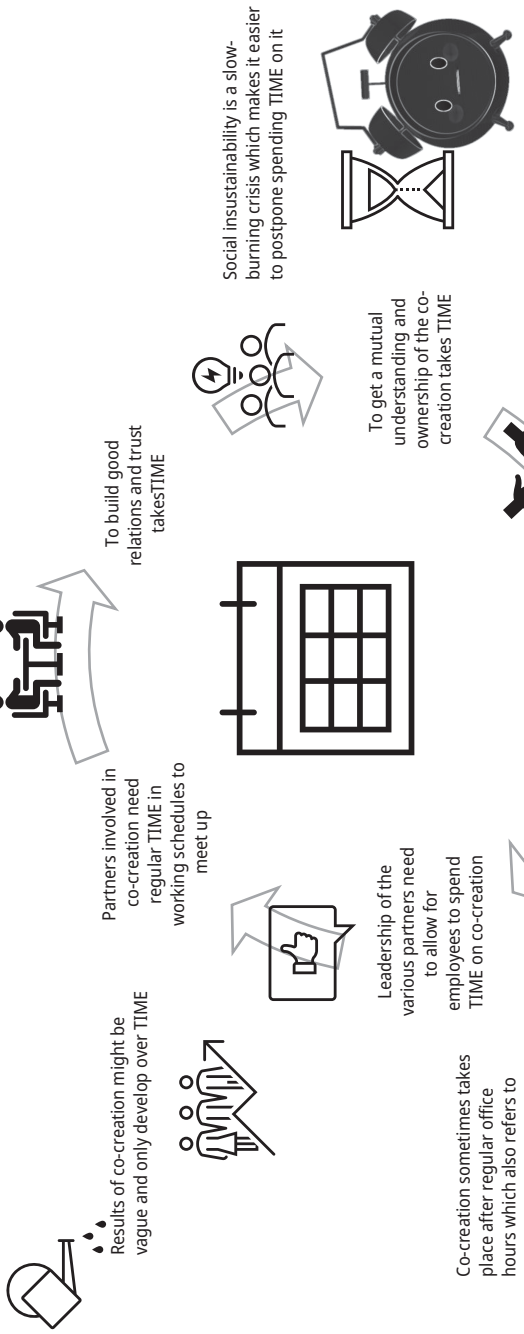

Fig. 6.4: Aspects of time in co-creation, positive loop, and risk factors.

Based on our findings, and on Mogstad's levels of participation (Fig. 6.2) we observe that the development of co-creation is a dynamic process which can enter a positive loop, illustrated in Fig. 6.4. Given that the fundamentals – including time – are initially present to a sufficient extent in the start-up phase, co-creation can take place. Self-evidently, to initially meet up, exchange ideas and experiences, be creative together, find a mutual goal, and decide to go for it, is a process that requires time. Thus, it is prerequisite that the various partners are allowed to spend time on co-creation. This is not the individual's responsibility, but rather conditions which the workplaces of everyone involved must allow for. However, while sufficient time is needed to initiate co-creation, this does not guarantee heartfelt involvement. If this happens, real involvement can take place. Next, if the co-creation is effectful, properly facilitated, and yields results, which also requires time, engagement and motivation among participants will grow. This in turn makes it more likely for them to feel happy to find time and thus continue with the co-creation process. Among noteworthy aspects outside the loop, we remarked that co-creation sometimes takes place after regular office hours which also refers to time and prioritising. It is a challenge that results of co-creation might be vague and only develop over time, while there seems to be a critical limit to how much time one is willing to invest before results must appear, making participants more likely to continue investing time in the co-creation. And, most alarming: social insustainability is a slow-burning crisis which makes it easier to postpone spending time on it, hence also postponing potential outcomes of co-creative work.

Conclusion

Findings suggest that the time initially invested in establishing co-creation, and later in maintaining it, is substantial for its success and for meeting the various observed time-related challenges. Thus, partners involved in co-creation need regular time in their schedules to meet up and nurture the co-creative process; but as observed, this cannot be taken for granted. Furthermore, we observed that if spending time on co-creation requires surplus time, co-creative projects aiming to solve slow-burning problems risk continuously being deprioritised in times of increasing time pressure. These findings are summarised in Fig. 6.4. Time seems to be decisive when determining whether the loop will be positive or negative. If participants feel that others do *not* prioritise spending time on the co-creation, this could lead to reduced engagement and motivation in the network, leading to

other participants also finding it harder to find time or get permission to partake in the future. Also, those who have already invested time in the project must not end up feeling that it was in vain. They would thus lose a sense of involvement and the co-creation will wither.

Our study of local co-creation projects for social sustainability thus reveals that time pressure is a major constraint for the potential success of such work. Established networks are vital resources, but these take time to establish. A main takeaway is that when actors spend time on co-creative work, they consider it an investment, which they expect to pay off, and several respondents expressed impatience with this. So, there seems to be a critical limit to how much time one is willing to invest before concrete results must appear, making participants more likely to continue investing time in the co-creation. All respondents reported they did not have enough time to engage fully in the co-creation initiative, as their regular workload demanded attention, which in many instances led to delays and absence from meetings and workshops. Several informants also felt that they had to justify the time invested.

Partnership for the UN sustainable goals has been sought and implemented in Norwegian municipalities, along with co-creation as a more inclusive working method. An expected lack of resources at present and in the future are central motivators for attempting to get more out of less. But since co-creation is time consuming and time is a scarce resource, this is a rather paradoxical way of addressing the lack of resources. We clearly witnessed a time scarcity problem in the cases studied here, where finding time to co-create was a real challenge. We even found that established structures, routines, and commitments can get in the way of interaction on a practical level, despite good intentions. The second learning element was that to be effective and lasting over time, in a normal day-to-day-situation, co-creation needed active coordination, and a certain amount of time autonomy for the persons responsible. The third key finding was that working conditions for the NGO and sports club employees were better in this regard than for the people in public administration. A lack of *institutional* time specifically prioritised for this kind of work was identified as being a hinderance. On the other hand, engaged individuals in all cases prioritised the work and on occasion offered their own *free* time in order to reach some desired results. All in all, this makes the work appear utterly dependent on individual engagement; also concerning time available to get the work done.

In the larger picture, it remains a puzzle how co-creation for common sustainability can be so hard to implement in a country like Norway, with such long traditions for collaborative problem-solving. It is tempting to conclude that the NPM reforms represent a dead-end in this regard, making this working method

harder than it needed be, by weakening public values, such as local democracy and community participation, and by demotivating public employees.[71] The challenge is to find a good balance between providing room for manoeuvre, and incentives for co-creation, and setting requirements for deliveries, results and reporting, which should be further investigated.

For co-creation to become real, prerequisites of both material and intangible nature are needed – and time is especially essential. We observed that co-creation is a dynamic process which can enter a positive loop, illustrated in Fig. 6.4. If the necessary resources and involvement are not present, the co-creation is instead likely to enter a negative loop. The amount of time initially invested, and later in maintenance, seems decisive for whether the loop will be positive or negative.

Of particular interest are how management reforms, dominant economic thinking, digitalisation and automation have influenced how we see time, and how this in turn impacts on the readiness of individuals to commit to voluntary work or co-creation. Undoubtedly, all these mentioned factors have influenced the perception of time as something scarce, fast-moving, and measurable in monetary terms, with the overall result that we are becoming less generous with time. This would explain a reluctance to invest time in anything that is not guaranteed to 'pay off'.

On the other hand, co-creative processes are explorative, and have their own life. If the public sector is to solve complex, "wicked" and cross-cutting tasks for citizens, it requires mutual trust and openness as well as a common understanding of the problem and how tasks and services are interrelated (common and clear goals). This is not done overnight but takes time to establish and maintain. Finding and building inner motivation, through experienced meaningfulness, will for most people (apart from a few particularly engaged proponents) also take time. However, when it comes to solving some of the pressing troubles of our time – unsustainability, inequality etc, *time* as a scarce resource has two meanings: we may have little time left to act – but we also seem to have little time to spend. The fact that this happens at a time in history when co-creation probably is needed more than ever, clearly shows that we are currently witnessing some time-issue paradoxes that need to be addressed for the SDGs to be rooted in reality. So far, organisations and institutions seem to prioritise time for co-creative SDG work when they have the surplus of time and a feeling of immediate "payoff." Some of the answer to this might also be found in the nature of the problem in itself: social insustainability as a "slow-burning" or "creeping crisis" – in a time

71 Hood and Dixon, "A Model of Cost-Cutting."

in history where time and life itself is squeezed and accelerated, and thus anything but slow.[72]

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72 See Leonard Seabrooke and Eleni Tsingou, "Europe's Fast- and Slow-Burning Crises," *Journal of European Public Policy* 26, no. 3 (2019): 468–481; Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2013).

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7 "A System on Steroids": University Lecturers' Experiences with Time Budgets

The Morning Always Awaits: An Introduction

> A Monday in January, 01.53 AM. The dark and wintery town of Bodø is sleeping. The snow falls silently, and occasional cars are all that is heard. Still, in some windows the lights are yet to be turned off. In a terraced house by the sea, the sound of the PCs' email notification pulls an associated professor out of the Power Point presentation she is refining for next days' lecture. The associated professor is awake, awaiting the antipyretic medicine she has given her three-year-old and fever sick daughter, to kick in. The child is sound asleep, which creates a vacant half an hour to catch up on some work – in a house that is pleasantly quiet, for once. The email is from a colleague and editor, commenting on the text you are reading right now.
>
> In a white house in the neighbouring street, the lights in a bedroom are still on. An iphone on the nightstand table sends out the same email notification. A doctoral student, finally ready for bed, hesitates to open the mail, as the day so far has been full of teaching responsibilities, academic pondering, childcare and housework.
>
> Nights are not always nights, but the morning always awaits. Monday 09.00 AM the authors behind this book have scheduled a meeting to discuss the draft – so the emails form part of a last preparational stage, carried out at night, as none of these academics really has time set aside in their time budgets to write a book about time. In fact, they all feel quite time pressured. Yet, they burn the midnight oil for the book. So as the clock turns 02.00, snow keeps falling, and email notifications keep ringing on.

This story is a personal anecdote. Nevertheless, it is highly representative of a more universal experience in modern academia. This chapter deals with how university lecturers, at a time when time itself is a scarce and controlled resource, experience the manner in which time budgeting systems affect and shape their work and role. Several scholars have pointed to what is referred to as the *accelerating academia*.[1] The term suggests a capitalistic "time is money" worldview within the professional life of academics, where more work is required in less time. More work in less time is seemingly the refrain of itself. Yet, in the academic

1 Thomas Docherty, *For the University* (London: Bloomsbury, 2011); Simon Marginson and Mark Considine, *The Enterprise University: Power, Governance and Reinvention in Australia* (Cambridge: Cambridge University Press, 2000); Filip Vostal, *Accelerating Academia: The Changing Structure of Academic Time* (London/New York: Palgrave Macmillan, 2016).

https://doi.org/10.1515/9783111428970-007

knowledge sector, with its ideals linked to free, long-term thinking and self-regulation of time and work, the challenges become particularly tangible.

Today, higher education is operating in a managerialist paradigm characterized by a focus on efficiency, effectiveness and predictability. This performance based and efficiency-oriented style of management has been linked to an increase in the workload placed on academics and an increase in the intensity of that work. This in turn contributes to more time-pressure, stress, and a progressive erosion of autonomy, as the introduction of more measures of performance serves to coerce academics to produce certain results.[2] Using the term "Dark Academia," Peter Fleming claims that these bureaucratic and neoliberal structures of academia have turned universities into toxic workplaces.[3] Academics today are expected to deliver high quality teaching and research outputs, cope with the practicalities of rising student numbers and increasing administrative duties, and at the same time adhere to requirements for efficiency, profitability and the production of publications. Such working conditions potentially takes academics away from the core purpose of education: teaching, research and a commitment to students.[4] Along this line, Robinson and Aronica argue that education has become an impersonal linear process, like factory production, moving away from its original role of contextualizing human development.[5] Time is indeed a valuable and scarce resource within the accelerating academia, and in order to quantify, manage and control academic labour, time budgets are common management tools.[6]

Much research has been done that looks at the academic role of a researcher in general and more widely at the challenge faced by universities with regards to the issue of time management.[7] Less work has been done on the situation facing

2 Sheena J. Johnson, Sara M. Willis and Jack Evans, "An Examination of Stressors, Strain, and Resilience in Academic and Non-Academic U.K. University Job Roles," *International Journal of Stress Management* 26, no. 2 (2019): 162–172; Gail Kinman and Sheena Johnson, "Special Section on Well-Being in Academic Employees," *International Journal of Stress Management* 26, no. 2 (2019): 159–161; Oili-Helena Ylijoki, "Boundary-Work between Work and Life in the High-Speed uUniversity," *Studies in Higher Education* 38, no. 2 (2013): 242–255.

3 Peter Fleming, *Dark Academia: How Universities Die* (London: Pluto Press, 2021).

4 Pat O'Brien and Barry Down, "What Are Teachers Saying about New Managerialism?" *Journal of Educational Enquiry* 3, no. 1 (2002): 111–133.

5 Ken Robinson and Lou Aronica, *The Element: How Finding your Passion Changes Everything* (New York: Penguin Books, 2009).

6 John Kenny and Andrew E. Fluck, "Towards a Methodology to Determine Standard Time Allocations for Academic Work," *Journal of Higher Education Policy and Management* 39, no. 5 (2017): 503–523; Angelika Papadopoulos, "The Mismeasure of Academic Labour," *Higher Education Research & Development* 36, no. 3 (2017): 511–525.

7 See e.g. Filip Vostal, "Academic Life in the Fast Lane: The Experience of Time and Speed in British Academia," *Time & Society* 24, no. 1 (2015): 71–75; Ylijoki, "Boundary-Work"; Sue Clegg,

lecturers and the way in which time budgets have impacted on their job. This text aims to fill this gap, scrutinizing the question of *how time budgets affect the lecturing role and professional understanding of experienced professors and associated professors in Norway*.

For the past 20 years, higher education in Norway have been characterized by an increase in managerial and market-oriented reforms within the NPM approach.[8] Our data is gathered from in-depth interviews conducted with nineteen experienced Norwegian scholars, and our aim is a clarification of experience structures linked to the intersection between lecturing and time management. We will do this by highlighting the inherent tension between the scholars' understandings of what is important in everyday work, and how the time budget system frames this work.

In the next section, we will present former research on academic professional life in general, and time budgeting more specifically. Following on from that, we will provide an overview of our theoretical standpoint, and the methodology behind this research. We then move on to present findings and analysis, which is done in three sections: First, we discuss how the symbolic value of time is perceived by the nineteen lecturers. Then, we examine the tensions created by differing expectations (management versus academics) as to which things should be prioritized during a working day and thirdly, we analyze the emotional cost connected to time budgeting. This leads to a more overarching discussion, followed by a conclusion.

The Case of Norway: Good, but not so Good

As already mentioned, changes of the past twenty years suggest that Norwegian higher education is moving towards market adaptation, economic thinking, performance management, centralization and standardization.[9]

In recent years, attempts have been made to raise the status, quality and importance of teaching in the Norwegian university sector, through various reforms

"Time Future: The Dominant Discourse of Higher Education," *Time and Society* 19, no. 2 (2010): 345–364.

8 Ivar Bleiklie and Nicoline Frølich, "Styring, organisering og ledelse i høyere utdanningspolitikk," in *Kvalitet, kapasitet og relevans. Utviklingstrekk i norsk høyere utdanning,* eds. Nicoline Frølich, Elisabeth Hovdhaugen, and Lars Inge Terum (Oslo: Cappelen Damm Akademisk, 2014), 40–57; Aksel Tjora, ed. *Universitetskamp* (Oslo: Scandinavian Academic Press, 2019).

9 Tjora, *Universitetskamp*.

and guidelines from the state.[10] The reforms emphasise that an active and comitted lecturer is central for the individual student's learning outcome, motivation and performance, and the engaged teacher is highlighted as a prerequisite for increasing the quality of teaching in Norwegian higher education.[11]

The move toward universities that are more "corporate" and "commercial" in nature has progressed further in countries such as Denmark, England and the United States. The universities in Norway are still largely state-funded, and university employees are public employees, which grants them certain legal rights like minimum wages, regulated working hours and a high level of job security. In Norway, academic employees also have a particularly independent and autonomous position, protected by the Universities and University Colleges Act.[12] This grants Norwegian academics both significant independence and at the same time secure working conditions when compared to academics in the above-metioned countries.[13]

Hence, traditional academic values such as independence, autonomy, impartiality, and organized scepticism have a relatively strong position in Norway. In 2023, the Ministry of Knowledge presented new guidelines which indicate that less emphasis should be placed on counting publications when determining funding for universities. The stated aim is that academics should spend more resources on research and education, and less on administration and reporting. NPM-thinking and bureaucracy are to be replaced by a more trust-based system. This policy is still very new, and it is unclear how it will be carried out. The purpose seems primarily to be a simplification of financing models, and the mooted reforms have received criticism from academics for being implemented in too much of a top-down manner. Further, it is pointed out that the reform is very goal- and result-driven, and therefore will be insufficient to alleviate the workload in academia.[14] One aim of this essay is to highlight how time budgeting should be a central part of the discussion about de-bureaucratization and the dismantling of NPM thinking.

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10 KUF (Ministry of Church, Education and Research), *Meld.St. 27 (2000–2001): Gjør din plikt – krev din rett: Kvalitetsreform av høyere utdanning* (Oslo: Kirke, utdannings- og forskningsdepartementet, 2001); KD (Ministry of Knowledge), *Meld.St. 16 (2016–2017): Kultur for kvalitet i høyere utdanning* (Oslo: Kunnskapsdepartementet, 2017).

11 KD, *Meld.St. 16 (2016–2017).*

12 KD (Department of Higher Education), *Lov om universiteter og høyskoler* (Oslo: Kunnskapsdepartementet, 2005). https://lovdata.no/dokument/NL/lov/2005-04-01-15, accessed March 1, 2023.

13 Tjora, *Universitetskamp*.

14 Martin Bergesen, "Tiden er ute," forskerforbundet.no, accessed November 15, 2023, https://kampanje.forskerforbundet.no/.

Although the current and forecasted working conditions for Norwegian academics seem in many ways better to those in comparable countries, developments over the last couple of decades have pointed to another pattern. The performance-based funding model that was introduced in 2003 has resulted in a significant part of the university budgets being determined by a credits system.[15] Through reforms instituted with a view to encouraging the creation of more effective university courses, academics have been given more responsibility for ensuring that they deliver active and supportive teaching, thus in turn ensuring that students pass their exams and get decent jobs.[16] The State Employee Survey for 2021 highlights that employees who work in the field of research and teaching report the least satisfying balance between work and leisure, and between working hours and workload.[17] Several articles published in the Norwegian newspaper for higher education and research, *Khrono*, have documented that during 2022 and 2023, academics have experienced an increasing sense that they are being overworked, so much so that they begin to doubt whether they have chosen the career that is right for them. The average academic works approximately 10 hours of unpaid overtime per week, which adds up to 470 hours, or approximately 12 working weeks, a year.[18] Indeed, such unremunerated work amounts to the annual equivalent to two billion NOK. The Norwegian researchers' association's member survey from autumn 2021 showed that one in three permanent employees said that they have considered leaving academia.[19] At the same time, academics are the state funded group with the highest score when it comes to feeling able to use their own competence at work.[20]

The question seems to be how strong the tension between time frames and professional judgments can become; if mere passion is enough in the long run. The special status of Norwegian universities makes it particularly interesting to research the working conditions here. If a "last stronghold" in the academic world is about to fall, it will bring certain insights to academia in general.

15 KUF, *Meld.St. 27 (2000–2001).*

16 KD, *Meld.St. 16 (2016–2017).*

17 DFØ-rapport (2022:1). *Statsansatteundersøkelsen*, accessed September 9, 2023. https://dfo.no/sites/default/files/2022-03/DFO-rapport-2022-1-Statsansatteundersokelsen-2021-temahefte-1-Staten-som-arbeidsplass.pdf.

18 Kaja Wendt, Hebe Gunnes, Mona Nedberg Østby, and Lone Wanderås Fossum, *Når timene telles: Tidsbruksundersøkelsen 2021. En kartlegging av tidsbruk blant vitenskapelig og faglig tilsatte ved norske universiteter og høgskoler* (Oslo: NIFU, 2021).

19 Forskerforbundet (2021). Forskerforbundets undersøkelse av arbeidssituasjonen i UH-sektoren under koronapandemien, accessed August 2, 2023. https://www.forskerforbundet.no/dokumenter/skriftserien/2021-1_Arbeidssituasjon_korona.pdf.

20 DFØ-rapport (2022:1).

Acceleration in Academia

Some commentators argue that the growing orientation towards the market and managerialism within contemporary academia is transforming the university into an "assembly line"[21] of "managed professionals,[22] and undermines traditional academic principles such as autonomy, academic freedom and collegiality.[23] The increasing bureaucratization and standardization of higher education has left academia as a workplace characterized by a stronger degree of formalization, increasing management and control, and an increasing requirement to follow specific procedures.[24] Combined with the market discourses related to academic performance, innovation and excellence, this no doubt challenges core principles of academic work, including its pace and rhythm.[25] Dominant temporal tensions within the world of academic work can be summed up as amounting to an increasing shortage of time in which to do things, and decreasing autonomy in relation to how that available time is spent.[26] On the one hand, the rhetoric of hurriedness, "short determinism" and a need for "immediate impact" are identified as sociocultural temporal patterns, highly visible in contemporary academia.[27] The result of this is an accelerating pace of work and lack of time. On the other hand, surveillance, quantification and measurement of academic output has led to a deteriorating capability to self-determine subjective time in academia, leading to what Vostal calls "oppressive acceleration."[28] Referring to Rosa, Vostal defines oppressive acceleration as the "involuntary increase of episodes of action and/or experience per unit of time as a result of a scarcity of time resources."[29]

21 Jim Barry, John Chandler, and Heather Clark, "Between the Ivory Tower and the Academic Assembly Line," *Journal of Management Studies* 38, no. 1 (2001): 87–101.

22 Gary Rhoades, *Managed Professionals: Unionized Faculty and Restructuring Academic Labour* (Albany, NY: State University of New York Press, 1998).

23 Knut H. Sørensen, "Universitetsreformer i vitenskapsformaterte samfunn – fra ekspansjon til effektivitet?" *Vardøger* 32 (2010): 43–70.

24 Vidar Gynnild, "Kvalitetssystemet i praksis: Ressurser på avveie?" *Uniped* 37, no. 3 (2014), 4–22.

25 John Holmwood, "Sociology's Misfortune: Disciplines, Interdisciplinarity and the Impact of Audit Culture," *British Journal of Sociology* 61, no. 4 (2010): 639–658; Ylijoki, "Boundary-Work."

26 Vostal, "Academic Life in the Fast Lane."

27 Philip Moriarty, "Science as a Public Good," in *A Manifesto for the Public University*, ed. John Holmwood (London: Bloomsbury, 2011), 56–73.

28 Vostal, "Academic Life in the Fast Lane."

29 Vostal, "Academic Life in the Fast Lane."

Time and Time Budgeting

Constructions of time shapes individuals' experiences in organizations in a profound way. Temporal orders and structures within the organization belong to the cultural stock of knowledge which members use to construct their experiences and act in the world of everyday life.[30] This socially constructed form of time may provide individuals with resources to orient themselves and thereby facilitate an organized life. But it might also work as an external constraint to which individuals have to submit themselves.[31] Vostal argues that a focus on the structural and experiential shift in academic time is particularly relevant when assessing how the mentioned changes reshape academic cultures.[32]

Ylijoki has identified several time-related concepts that relate to how academics experience their work, among them *scheduled time* and *timeless time.*[33] Scheduled time refers to the accelerating pace of work and relates to time being regulated according to timetables that are controlled and imposed from above. This type of time is experienced as being externally imposed and as constantly increasing in pace, resulting in a feeling of living under constant time pressure. Timeless time on the other hand is the internally motivated use of time in which clock time loses its significance and the person becomes entirely immersed in the task at hand. This is the opposite of externally imposed time and allows academics to structure their own temporal rhythm according to "their own enthusiasm, fascination and immersion in their work."[34] This phenomenon is also referred to as *flow*: see, for example, chapter 11 in this book. Further, the temporal order associated with university management and *management time* is uniform in nature, and in many ways incompatible with the diverse and often chaotic realities of academic work.[35] In management time, time is mainly treated as an independently measurable entity which is related to productivity, and can be measured, counted and divided into units.[36]

30 Alfred Schutz, *On Phenomenology and Social Relations* (Chicago, IL: University of Chicago Press, 1970).

31 Ylijoki, "Boundary-Work."

32 Vostal, "Academic Life in the Fast Lane."

33 Ylijoki, "Boundary-Work."

34 Ylijoki, "Boundary-Work," 62.

35 Joseph E. McGrath, "Introduction. The Place of Time in Social Psychology," In *The Social Psychology of Time: New Perspectives*, ed. Joseph E. McGrath (Newbury Park: Sage, 1988), 255–267.

36 Barbara Adam, Richard Whipp and Ida Sabelis, "Choreographing Time and Management: Traditions, Developments, and Opportunities," in *Making Time: Time and Management in Modern Organizations,* eds. Richard Whipp, Barbara Adam and Ida Sabelis (New York: Oxford University Press, 2002), 1–28.

For academics this means that their everyday work is transformed into quantifiable measures irrespective of, and often in conflict with, the internal rhythms of the work itself.[37] In order to manage time, and to plan and distribute tasks and duties, it is common for universities to operate with workload models for the individual employees.[38] A key concern this chapter is to emphasise that a workload model is *a time-based approach to allocate academic work*. We use the term *time budget* to highlight that it is the timely aspects we are discussing, and in doing so we are using a term that is close to the interviewees' everyday language. At the heart of these models is the quantification of various dimensions of academic work. The guidelines for designing time budgets, however, vary at both university and faculty level. A time budget clarifies what the employees are to use their working time for, and how much time is to be allocated to research, administration and teaching.[39] Time budgets can thus be considered a form of micromanagement, where external actors or systems dictate how much time various tasks require.[40] Still, the employee has some flexibility in terms of when the tasks are to be carried out Through signalling priorities and performance requirements, as well as instantiating norms of academic practice, time budgets shape the role of the lecturer.[41]

Academics have mixed perceptions of workload models.[42] Some see them as tools for management control, leading to feelings of distrust and non-involvement.

37 Ylijoki, "Boundary-Work."

38 Leanne Boyd, "Exploring the Utility of Workload Models in Academe: A Pilot Study," *Journal of Higher Education Policy and Management* 36, no. 3 (2014): 315–326.

39 Kristine H. Korsnes, Bjørn-Petter Finstad and Trine Fossland, *Timeregnskapet og studentaktive læringsformer – i spennet mellom forventning, ledelse og samarbeidskultur* (Tromsø: UIT Norges arktiske universitet, 2020); Papadopoulos, "The Mismeasure."

40 Richard D. White, "The Micromanagement Disease: Symptoms, Diagnosis, and Cure," *Public Personnel Management* 39, no. 1 (2010): 71–76.

41 Stephen Ball, "Performativity, Commodification and Commitment: An I-Spy Guide to the Neoliberal University," *British Journal of Educational Studies* 60, no. 1 (2012): 17–28; Papadopoulos, "The Mismeasure."

42 See e.g. Michael Lyons and Louise Ingersoll, "Regulated Autonomy or Autonomous Regulation? Collective Bargaining and Academic Workloads in Australian Universities," *Journal of Higher Education Policy and Management* 32, no. 2 (2010): 137–148; Papadopoulos, "The Mismeasure"; Stein E. Lid, Lars F. Pedersen, and Marie-Louise Damen, *Underviserundersøkelsen 2017: Hovedtendenser*. NOKUT-rapport 2/2018 (Oslo: NOKUT, 2018); John Kenny and Andrew E. Fluck, "Research Workloads in Australian Universities," *Australian Universities' Review* 60, no. 2 (2018): 25–37; John Kenny and Andrew E. Fluck, "Academic Administration and Service Workloads in Australian Universities," *Australian Universities' Review* 61, no. 2 (2019): 21–30; Julia Miller, "Where Does the Time Go? An Academic Workload Case Study at an Australian University," *Journal of Higher Education policy and management* 41, no. 6 (2019): 633–645.

Others find them useful for balancing role expectations and identifying burnout risks. To ensure the effectiveness of workload models, it is crucial to involve academic staff, allocate realistic time, be transparent, and allocate adequate resources while protecting key aspects of academic work.[43]

Theoretical Point of Departure

Theoretically, our approach is hermeneutical-phenomenological, and the analysis draws Schutz' concepts of how meaning is constructed, as well as Rosa's concept of *acceleration* and *resonance*.[44] While Schutz provides us with a foundation for understanding how meaning is a diverse matter, connected to both time and space, Rosa gives us the tools to link this to contemporary – yet fundamental – challenges. To frame the discussion about time budgeting, we will also draw on Ball's thoughts on *proper time.*[45] We will here give an account of key terms that the three theorists equip us with.

A central point in Schutz' work is that he points us toward certain aspects of the world, namely those that are relevant to our way of life or exist as procedural rules for how we should think – for example at work. This is how we sort the world into different layers of greater or lesser importance. Since reality is both diverse, fluid and intersubjective, different *provinces of meaning* will arise.[46] A prov-

43 John Kenny and Andrew E. Fluck, "The Effectiveness of Academic Workload Models in an Institution: A Staff Perspective," *Journal of Higher Education Policy and Management* 36, no. 6 (2014): 585–602; Don Houston, Luanna H. Meyer, and Shelley Paewai, "Academic Staff Workloads and Job Satisfaction: Expectations and Values in Academe," *Journal of Higher Education Policy and Management* 28, no. 1 (2006): 17–30; Iris Vardi, "The Impacts of Different Types of Workload Allocation Models on Academic Satisfaction and Working Life," *Higher Education* 57, no. 4 (2009): 499–508.; John Kenny, Andrew E. Fluck, and Tim Jetson, "Placing a Value on Academic Work," *Australian Universities' Review* 54, no. 2 (2012): 50–60; John Kenny, "Efficiency and Effectiveness in Higher Education: Who is Accountable for What?" *Australian Universities Review* 50, no. 1 (2008): 11–20; Ann Lazarsfeld Jensen and Kylie Morgan, "The Vanishing Idea of a Scholarly Life," *Australian Universities' Review* 51, no. 2 (2009): 62–69; Thomas F. Burgess, Harry A. Lewis, and Tessa Mobbs, "Academic Workload Planning Revisited," *Higher Education* 46, no. 2 (2003): 215–233.

44 Alfred Schutz, *Hverdagslivets Sociologi* (København: Hans Reitzels Forlag, 2005); Hartmut Rosa, *Alienation and Acceleration: Towards a Critical Theory of Late-Modern Temporality* (Copenhagen: NSU Press, 2010); Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2015); Hartmut Rosa, *Resonance: A Sociology of Our Relationship to the World* (Cambridge: Polity Press, 2019).

45 Benjamin Ball, "Multimedia, Slow Journalism as Process, and the Possibility of Proper Time," *Digital Journalism* 4, no. 4 (2016): 432–444.

46 Schutz, *Hverdagslivets Sociologi*.

ince of meaning is defined by Schutz as a specific set of experiences, a specific cognitive style.[47] In our context, it is natural to assume that there are common features that frame the university sector as a professional province of meaning. Within such a province, there will exist different and intersubjective opinions on how to spend time and effort. These hierarchizations of knowledge, activity and priorities within a province of meaning, Schutz calls *systems of relevance*.[48] In our case, one can, for example, think that researchers have a certain relevance system, that the management has another, the administration a third, and that teaching is hierarchized as a relevance system of its own. Schutz' terms can be useful in the analysis of what lecturers find meaningful and relevant to spend time on, and how they experience external demands and expectations with regards to lecturing.

Rosa believes that the main characteristic of today's society is so-called *dynamic stabilization*.[49] The term contains an understanding of modern society maintaining and stabilizing itself through constant change. Rosa further points out that the constant and external demand for adaptation and change leads to alienation in work and life, as accelerating demands from the society make it more difficult to carry out meaningful projects. The possibility to resonate with the world is delimited by the modern-day struggle to secure access to resources (money, time, material goods, power etc.). It becomes challenging to prioritize what one, based on e.g. professional view or personal values, consider as important and meaningful. We see similarities between Rosa's critique and the critique of NPM. As an answer to the criticism of acceleration, Rosa highlights *resonance*, stating that a meaningful life depends on a heartfelt and non-instrumental connection with your lived reality. Resonance cannot be planned, and it presupposes a certain risk, or lifeblood, so to speak. The resonance theory is formulated as a critique of the accelerated pace of modern society. Rosa states that the question of a good life has been privatized, and by that it becomes a taboo in the public discourse.[50] The resonance theory can thus be understood as a normative answer to what should be emphasized and strived for in terms of further social development. In an educational frame, Rosa points to the importance of resonating with the *object* of one's work, implying that one should stick to what is experienced as professionally meaningful, and conduct oneself accordingly.

Similarly, Biesta uses the term "weakness of education" in the sense that if education is predictable, controlled and goal-driven, this will represent a positiv-

47 Schutz, *Hverdagslivets Sociologi*, 62.
48 Schutz, *Hverdagslivets Sociologi, 62*.
49 Rosa, *Alienation*; Rosa, *Social Acceleration;* Rosa, *Resonance*.
50 Rosa, *Resonance*, 13.

ist approach where learning becomes a matter of mechanics and not pedagogy.[51] Such a mechanical approach may stifle engagement, feeling and curiosity, and the most important goal of pedagogy will disappear: to educate thinking, self-aware and responsible people – which is considered important 21st century skills (see chapter 1).

In line with this, and within a professional framework, *proper time* is a media-sociological term coined by Benjamin Ball, inspired by Silverstone, and used further by Olsen.[52] In short, it is a term that approaches time spent on professional tasks as "not a question of perfect duration, pace, tempo, or length, but – instead – it is about reflexive consideration."[53] When applied to our case, the core question is hence, how can common understandings can be achieved in and through higher education? We chose to apply the term to our context, because in relation to sociological matters it can prove useful in facilitating nuanced discussions about the categorization of time.

Methods and Findings

The data is derived from in-depth interviews with scholars from three of Norway's oldest universities, which are known for their rich academic traditions, making them suitable for this study. In 2022, 26 interviews were conducted as part of a PhD project focusing on the role of lecturers in higher education amid significant sectoral changes. This article's empirical data comprises 19 interviews with individuals who had experience with time budgets in their daily work.[54] The interviewees were chosen to represent diverse disciplinary traditions, though all relevant interviewees for this article came from the humanities and social sciences. Potential interviewees were contacted via email, provided with study information, and invited to participate. All respondents, except one, possessed substantial teaching experience (ranging from 7 to 30 years), enabling them to reflect on evolving working

51 Gert J.J. Biesta, *Utdanningens vidunderlige risiko* (Bergen: Fagbokforlaget, 2014).

52 Ball, "Multimedia, Slow Journalism"; Roger Silverstone, "Proper Distance: Toward an Ethics for Cyberspace," in *New Media Revisited: Theoretical and Conceptual Innovation in Digital Domains*, eds. Gunnar Liestøl, Andrew Morrison and Terje Rasmussen (Cambridge/London: The MIT Press, 2003); Roger Silverstone, *Media Morality: On the Rise of the Mediapolis* (Cambridge: Polity Press, 2007); Karianne S. Olsen, *Tradisjonsforankrede og digitaldreide lokaljournalister. En hverdagssosiologisk studie av norsk lokaljournalistikk i en brytningstid* (Bodø: Nord Universitet, 2018).

53 Ball, "Multimedia, Slow Journalism," 433.

54 The informants are (pseudonyms): Allan, Anne, Bill, Catherine, Eric, Ellen, Eva, George, Jenny, Joe, Lisa, Karen, Ken, Margareth, Peter, Robert, Simon, Susan, Thomas.

conditions in academia and how these changes impacted their roles. They all balanced teaching and scientific research, with some having experience in academic leadership roles that rotated among staff members. For anonymity, pseudonyms were assigned, and details like age, experience, discipline, and institutional affiliation are not disclosed in this text. The analysis employed a hermeneutical-phenomenological approach[55] and was informed by the previously presented theories in an abductive matter.

Finally, a few words about our own positioning in the field. We are both employees at a university, with positions combining research and teaching. We therefore share professional horizons of understanding, professional jargon and many experiences with the interviewees. This has made it important to constantly stick closely to empirical evidence, and also to ask ourselves along the way whether it is our own stories that we are reproducing.[56] Nevertheless, we do not think we should not presume to know everything there is to know about the everyday realities associated with the working lives of the interviewees. The strange can just as easily appear in the neighborhood as at the end of the world.[57]

We now move on to our findings. We will present and discuss our findings as part of a three-step process: First, we look at how time and time budgets are symbolically perceived and constructed by the interviewees. Through doing this, we shed light on some profound differences and underlying tensions between everyday teaching and teaching in a managerial time budget frame. Secondly, we dig deeper into how these tensions create struggles between two different relevance systems. Thirdly, we look at the consequences experienced by interviewees when

55 See. e.g. Tim Rapley, "Some Pragmatics of Qualitative Data Analysis," in *Qualitative Research: Issues of Theory, Method and Practice,* ed. David Silverman (London: Sage, 2011), 273–290; Jonathan Smith, Paul Flowers and Michael Larkin, *Interpretative Phenomenological Analysis: Theory, Method and Research* (London: Sage Publications, 2009); Jonathan A. Smith and Mike Osborn, "Interpretative Phenomenological Analysis," in *Qualitative Psychology: A Practical Guide to Methods*, ed. Jonathan A. Smith (London: Sage, 2008), 53–80; Schutz, *Hverdagslivets Sociologi*; Marlene Z. Cohen, David L. Kahn, and Richard H. Steeves, *Hermeneutic Phenomenological Research: A Practical Guide for Nurse Researchers* (London: Sage Publications, 2000); Max van Manen, *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy* (Ontario: The Althouse Press, 1997); Christer Bjurwill, *Fenomenologi* (Lund: Studentlitteratur, 1995).

56 Birte Simonsen, "Er det egentlig ikke det du mener? Farer som truer den etnografiske forskeren," in *Å forske blant sine egne – Universitet og region – nærhet og uavhengighet,* eds. Hans C. Garmann Johnsen, Anne Halvorsen, and Pål Repstad (Kristiansand: Høgskoleforlaget, 2009), 208–214.

57 James Clifford, *The Predicament of Culture – Twentieth-Century Ethnography, Literature, and Art* (Cambridge, MA: Harvard University Press, 1988).

taking into consideration two different ways of understanding time, and applying these to their own lives.

Time in the Time of Time Budgets: The Symbolic Value of Time and Time Budgets

This subsection deals with how the interviewees perceive the concept of time in a teaching context, and how this has changed over the years. One of the interviewees, Ken, talks about the start of his career, and how every bachelor's degree concluded with an oral examination. He underlines how this examination was a good way of securing a qualitatively good dialogue with the student and explains: "We just sat there talking with the student, for about half an hour." Through such a dialogue, a fair judgement of the thesis was secured. Later, the oral examination was eventually withdrawn due to financial considerations." Another interviewee, Elisabeth, elaborates: "Today you cannot choose the best exam forms, the most educational exam forms, you must choose something that you can do within the time given to you." A third interviewee, Ellen, talks about the need for time to arrange relevant movie nights for the students, or giving them research specific tasks to solve. A fourth interviewee, Bill, misses the time when it was possible to follow up ideas and initiatives from both colleagues and students:

> when students just could knock on a professor's door and ask her to arrange a German Kafka reading colloquium, and the professor would find time for it. (. . .) Today, there is no time for such things, and the lack of time creates a distance.

Karen states that good teaching is dependent on the existence of sufficient time to think coherently and develop plans that will allow the job to be done well, and points out that teaching suffers from the lack of provision for this in the current system of time budgeting:

> We have this strategy called 'coherent time for research' and that's fine. But I wonder: Where is the coherent time for teaching? The management never talks about this, teaching time is never protected in the same way.

This quote underlines how teaching and research are at different status levels when they are allocated time, as well as a need for less fragmentation of time when it comes to planning and carrying out lectures. The fragmentation of time also impacts on the possibility to interact with colleagues. Interviewee Bill states that there is little time left for discussion, brainstorming or merely engaging socially with peers. He states: "There really isn't time to make space to meet, you

know." This coincides with Holand and Ellingsen's findings in chapter 6. Actual time to meet is not a problem limited to the academic world, but it is seemingly a general problem in the accelerating society.

In Norwegian, the expression "god tid" (*direct translation: good time*) incorporates both the idea of having enough time for something, and a sense of positivity related to the overall quality of that unit of time. The various anecdotes offered up by experienced academics highlight how the quantity of time is symbolically linked to the quality of teaching and learning. How coherent the time is, is in the same way linked to the notion of "god tid." The interviewees talk a lot of "god tid" – or, more precisely: The lack of "god tid." "God tid" in a teaching context is hence given a symbolic value which centres upon the following:

a) Sufficient time to secure quality in their teaching programmes – including time to be creative and innovative, and to keep a continuity in the dialogue with students.
b) Coherent time.
c) Enough time to interact professionally and socially with colleagues.

The system of time budgets is, on the other hand, perceived as:

> a monster that we are fighting on a daily basis. It is very disturbing. It was meant as a planning tool – and of course you have to plan and distribute the teaching tasks between teachers, right, but today it is a tool of steering and control. It started out softly, but the control has hardened over the years. It is becoming more and more detailed (Bill).

The interviewee uses the term "management monstrum" and refers to the time budgeting system as a "system on steroids (. . .) disciplining us and instructing us what to do" – implying that the mechanism of time budgeting is growing out of proportion and control. The chosen metaphors have strong and harsh symbolic connotations. The interviewees are concerned about how their academic freedom is disrupted through the fragmentation of work time. Bill describes it as a control regime where the teachers are ". . . subject to an instrumentalization that has become somewhat dehumanizing." The interviewees express an everyday dilemma of being: "Caught between an order to provide good and researched-based teaching, and an informal pressure to spend as little time as possible on teaching." (Sue). The time budgeting system is hence experienced as:

a) A system that is growing out of proportion and control, and must be resisted.
b) A system that fragments time and disrupts possibilities for coherent time.
c) A system that does not accommodate the complexity and depth of university teaching.

When adopting a time-budget mindset, 'good time' equals 'just enough time' to get things done, according to the interviewees. The most prominent symbolic connotation derived from the concept of a time budget is that time is a commodity which can be measured in terms of money. For the interviewees, time is not necessarily measurable this way. The perceived symbolic value of time and time budgets point to a clear tension.

For the teachers, time is more a question of space to carry out the in-depth thinking that is required to enhance the quality of teaching, and of space to interact in a professional community. For them, this is "god tid"; something that creates resonance.[58] Time symbolically means something fundamentally different from the entity that is determined by time budgets. The interviewees feel that time in the system of time budgeting symbolizes time as a commodity that has an economic value, and which is linked to accelerating demands of efficiency. In other words, we see two different systems of relevance linked to the time budgeting system and the teaching role, with each pointing to a different answer when it comes to deciding what is important.[59] We will now look in more detail at how this conflicting impacts negatively on the working lives of the interviewees.

Experienced Time and Expected Time: Two Different Systems of Relevance

All the interviewees are deeply involved in teaching and research, and several describe their work as a vocation. This is in line with the results from a national survey ("Underviserundersøkelsen"), which reveals that academic staff spend a lot of time on teaching tasks and place a high value on good quality of teaching.[60] The term vocation contains an emotional and passionate connection to work, which affects and/or intensifies central values (e.g. duty), and an orientation or responsibility towards something bigger than the self.[61] A sense of vocation typically produces a sense of purpose, meaning and satisfaction; a 'passionate attachment' to work. But also central to the concept is a sense of social mission and a

58 Rosa, *Resonance*.

59 Schutz, *Hverdagslivets Sociologi*.

60 Lid et al, *Underviserundersøkelsen 2017*; Gerhard Y. Amundsen, Hilde Karlsen, and Stein E. Lid, *Underviserundersøkelsen 2021* (Oslo: NOKUT, 2021).

61 Ryan D. Duffy and Bryan J. Dik, "Research on Calling: What Have We Learned and Where Are We Going?" *Journal of Vocational Behavior* 83, no. 3 (2013): 428–436.

desire to serve others, evoking feelings of duty, commitment, faith and hope.[62] The interviewees thus experience a sense of heartfelt meaning with regards to teaching, specifically, and with regards to their academic career in general. Bill says: "teaching is a central part of who I am, and what gives meaning to my existence." Peter elaborates:

> Teaching is very important to me, really the most meaningful thing about my job. To interact with, and to contribute to, young people, to create professional personal development and maturity in a young person, that is very meaningful. It is through meeting new generations of students I get inspiration and renew myself.

The interviewees' expressions are in line with Rosas' notion of resonance.[63] We suggest that their description of vocation regarding teaching frames what can be described as a "relevance system of resonance" among lecturers. However, the interviewees also feel that their vocation is undermined by the administrative system of relevance that time budgeting represents. This threatens their sense of meaning and experience of resonance. The relevance system of time budgeting challenges the relevance system of resonance in several ways.

Firstly, and as previously mentioned, the teachers are concerned with using "the time that is needed" to secure profound and pedagogic lectures and seminars. But spending too much time on teaching tasks is sanctioned through negative feedback from the administration and is communicated as a bad use of time: "The management demands that we spend fewer hours preparing, to have fewer seminars, to spend less time on exams" (Ellen). Several of the interviewees describe such demands, both explicitly and implicitly communicated, and link them to an overreaching academic relevance system that values research:

> Teaching is constantly under pressure and undervalued, while research pays off. There's always rumours going around the corridors about who's a good lecturer or not, but it is research that gives you a pay rise and ensures that you are invited here and there (Elisabeth).

This quote underlines the concerns of several interviewees: that teaching in Norway does not remotely the same status as research, despite attempts by the government to change this situation through the introduction of political reforms.[64] The reforms also require that teachers provide more individual guidance for students, and the interviewees experience a greater need for professional support among students. Nevertheless, this is not reflected in the time budgets. Peter elaborates:

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62 David T. Hansen, "Teaching and the Sense of Vocation," *Educational Theory* 44, no. 3 (1994): 259–275.

63 Schutz, *Hverdagslivets Sociologi*.

64 KUF, *Meld.St. 27 (2000–2001)*; KD, *Meld.St. 16 (2016–2017)*.

> I always supervise significantly more than the hours allocated for it. If I were to only spend those hours . . . well, on a master's thesis, then, that's 15 hours per semester – that's nothing! In real terms, 15 hours is two short working days. And with a master thesis, you have to read and talk and read and talk several times, right, it takes a lot more time than two days in total.

The teachers put the lack of time in the context of how the relevance system of time budgeting works: that working hours are the easiest thing to cut back on when money has to be saved, and that making up for the difference between budgets and reality becomes the teachers' problem alone. This sense of being left alone to deal with this responsibility is in line with what Holand found when she investigated the working conditions of health personnel in an NPM regime.[65]

According to the interviewees, they are subjected to an administrative logic where everything can be measured and quantified, and thus also recalculated or cut back. One of the interviewees, Jenny, describes it as if her vocation is instrumentalized, and says that:

> In our profession, where we should be largely driven by commitment, and where trust is our fuel, all the measurements and all the numbers are almost exclusively negative. This externally controlled measurement is actually killing.

The quote indicates how time budgeting represents something that is far removed from the relevance system of resonance. Time has become a commodity, not a resource. The logic entails a specific language, which apparently has rubbed off on the interviewees. They mention "not having surplus in the accounts," "deficit figures," "budget items" and that they "blow the budget" when talking about everyday working life. The quantification and economization of time has entered the language of academia.

The terms also point to what the interviewees largely experience as the main problem with the budgeting relevance system: a consistent under-budgeting from an administrative point of view, in combination with the fact that the budgets do not have room for the unforeseen or for the complexity associated with a teacher's everyday life. The interviewees talk a lot about administrative tasks not taken into consideration in the budget, and that the logic of budgeting is unable to accommodate the needs of the students. Ellen elaborates: "Students can request seminars, and I just have to apologize, I am not allowed to have seminars on this course. There is no time allocated for that." Other interviewees spend their nights and

65 Astrid Marie Holand, "Re-Establishing Trust: Cases from a Norwegian Health Enterprise," in *Revisiting New Public Management and its Effects Experiences from a Norwegian Context*, eds. Abbas Strømmen Bakhtiar and Konstantin Timoshenko (Münster/New York: Waxmann, 2021), 19–40.

weekends preparing for education. Peter's experience exemplifies this: "Work has become a leisure activity as well. You end up pushing everything, you know, because of working hours and regulations, regulations, regulations." The quote coincides with the aforementioned articles published in Khrono which document the way in which Norwegian academics feel that they are overloaded with work, even to the extent that they begin to doubt if they have made the correct career choice.[66] Our interviewees agree that in practice a lot of their unpaid free time has to be put towards doing what is required to be a successful academic. Moreover, much of this time has also got to be used for teaching. Bill states:

> I notice that the students have learned, I see that the lectures have been useful, the feedback on the mid-term evaluation and subject evaluation is good, and all that . . . still, it is completely crazy in relation to the management regime, in relation to time accounting, because I have worked probably 130 percent throughout the semester.

There is a consensus among the interviewees that "no one works 37 hours a week" (Thomas). Nevertheless, it is interesting that it is neither the tasks nor the unpaid overtime itself that cause resentment; many of the interviewees would probably have worked for free anyway, based on the relevance system of the resonance. The resentment is caused by the experience that the time regime does not recognize either the time it takes to create qualitatively good teaching plans, nor the factual effort put into this work.

> More hours in the budget would have helped, but there is something about the lack of recognition you feel, both from our own management and from the faculty management. For example, when you are not heard when you say that it takes at least 40 hours to be in charge of a specific course, not just the 7.5 you are allocated. It's absolutely crazy! (Thomas)

The interviewees simply do not feel recognized, respected and understood when being subjected to a relevance system that does not sit in harmony with their professional aspirations to do something that has a sense of meaning. The teachers consider that a budget based solely on the delivery of certain measurable results, does not leave room for pursuing what is perceived to be most academically important, and several activities connected with teaching fall outside the relevance

66 See e.g. Espen Halvorsen Bjørgan, "Følte seg som gissel for det han brydde seg om," *Khrono*, February 5, 2023, accessed September 19, 2023, https://khrono.no/folte-seg-holdt-som-gissel-for-det-han-brydde-seg-om/757110; Jørgen Svarstad, "Ni grunner til at forskere vil forlate akademia," *Khrono*, November 29, 2022, accessed October 10, 2023, https://khrono.no/ni-grunner-til-at-forskere-vil-forlate-akademia/737645; Solveig Mikkelsen, "Mener mål- og resultatstyring i akademia er for rigid," *Khrono*, March 10, 2023, accessed June 7, 2023, https://khrono.no/mener-mal-og-resultat-styring-i-akademia-er-for-rigid/765979.

system of time budgeting. According to the interviewees, this is a consequence of the time budgets being aimed at standardizing what cannot be standardized. We have seen examples relating to professional assessments such as forms of examinations and guidance practices. The teachers say that for their part they work based on the goal of achieving the best possible learning outcomes, while the goal embedded in the relevance system of time budgets is centred firmly on the idea of garnering the most teaching hours for the least possible money. The interviewees say that they feel forced to adapt to this relevance system, and that the administrative tools are detached from academic traditions, practices and teacher commitments. Joe elaborates:

> They say that if the format of the exam is such and such, well, then you are allowed to teach 14 double hours. If it is such and such format of the exam then it is 10 double hours and you must spice it up with seminars and individual activities, and we end up with far too little teaching time in relation to what should have been if we were to cover the subject in a good way.

In this section, we have seen two different relevance systems that strongly contrast with each other. The relevance system of time budgeting exerts pressure on the relevance system of resonance, according to the interviewees. The discrepancy apparent in all this makes the lecturers feel removed from their academic ideals. In the next section, we will go into the emotional costs of this.

Controlling Time or Controlled Time: The Emotional Costs of Time Budgeting

We have so far seen how the logic of time budgeting transforms what was intended as a planning tool into a management tool that creates conflicting demands and kills initiative. This affects the interviewees emotionally. In this section, we discuss some of the emotional costs that time pressure creates and discuss the consequences of this.

The lecturers experience alienation and lack of autonomy, which is explained by how the narrowness of the time budget framework serves to create competing demands in everyday work, which in turn restricts the freedom to design the teaching in the best professional way. Several of the interviewees want to put together more creative teaching plans, and they want to respond to student input and initiatives to a greater extent, but feel that the time budgets prevent them from doing this. In the interviewees' experience, the time regime works against

political guidelines for academic teaching.[67] Furthermore, the interviewees state that the administration manipulates time through the time budgets. Ellen says:

> Hours are suddenly cut from the budget. And all of a sudden, we're assigned the responsibility of providing more courses than before. It's both a stress and a pressure and leaves us less time to everything. It's frustrating!

The interviewees refer to the management's adjustments of the time budget as cynical, and some also express a concern of this cynicism spreading to the lecturers, whether to protect their own working time or just to be able to cope with the workload. Bill elaborates:

> Well, what dominates the everyday conversation around here, is the enormous time squeeze everyone is experiencing. And when you're time squeezed, the rational thing to do is cut corners, or to recirculate rather than refine your lecturing.

The collective time squeeze is considered a problem of the working environment, according to Bill:

> The tension we see here now is so extensive within our institute that it has become a problem for the working environment. Basically, we're a committed staff, no one would have chosen to become a [social scientist] if we didn't have that inner flame. But that flame is not nurtured, our commitment is not supported, except in ceremonial speeches and that occasional document. In everyday life, no one in charge cares.

The quotes point to the individual employee becoming the forge of his/her own success, and that the sense of academic community and academic collegiality is lost somewhere along the line. Several of the interviewees also describe experiencing an increasing feeling of alienation in the system, in line with Barcans' research.[68] Peter says that the university used to be:

> an institution where we all belonged, and felt part of a joint project. Of course, we argued just as much back then, but we nevertheless had a shared understanding of where we were going, a common goal. Both professional and social factors were much more in focus.

Bill, in line with this, explains:

> Those tensions, between my own commitment, my drive, my idealism – all that I want to achieve – and what the university has become, and what the university tells me to do – I'm kind of feeling frustrated.

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67 KD, *Meld.St. 16 (2016–2017).*

68 Ruth Barcan, "Paying Dearly for Privilege: Conceptions, Experiences and Temporalities of Vocation in Academic Life," *Pedagogy, Culture & Society* 26, no. 1 (2018): 105–121.

The interviewees point out that they feel threatened by a system of relevance that, firstly, is living a life of its own, and secondly, that does not wish them well. The use of words such as "monster" and "system on steroids" are strong symbolic indicators of this. Such designations show how the time budgets are *reified*. Reification can be understood as something non-human or superhuman, which cannot be controlled by humans, but nevertheless is man-made.[69] Through reification, the time budgets are experienced as a foreign entity, something our interviewees have no influence or control over. The consequence is a feeling of alienation. Interviewee Peter describes the workplace as "more of a production line, less of an educational institution" and he perceives a growing distance between this state of affairs and what he professionally feels is most important. Alienation is strongly linked to powerlessness and meaninglessness and in knowledge-intensive professions, research has found connections between alienation and NPM regimes.[70]

The emotional and professional cost is that the individual employees lose independence and influence over their own work. More generally, this loss of integrity and autonomy can be seen as a breach of the academic freedom itself, as postulated in a number of different Norwegian and European legal provisions.[71] However, powerlessness does not necessarily lead to apathy – at least not in the first place. Many of the interviewees talk about discouragement and frustration, several about anger and grief when they describe developments in their own workplace. Jenny explains:

> The development, the market liberalism way of thinking, that has changed everything; I find myself asking myself whether there's any meaning left. The system is standardizing things that should not be standardized, and it is killing my joy.

69 Peter L. Berger and Thomas Luckmann, *Den samfunnsskapte virkelighet* (Bergen: Fagbokforlaget, 2006), 100.

70 Robert Blauner, *Alienation and Freedom* (Chicago, IL: University of Chicago Press, 1964); William Brochs-Haukedal, *Arbeidspsykologi og ledelse* (Bergen: Fagbokforlaget, 2017); William Brochs-Haukedal, *Arbeidspsykologi og ledelse* (Oslo: Cappelen Damm Akademisk, 2010); Thomas Diefenbach, "New Public Management in Public Sector Organizations: the Dark Side of Managerialistic 'Enlightenment'," *Public Administration* 87, no. 4 (2009): 892–909; Daniel Simonet, "New Public Management and the Reform of French Public Hospitals," J*ournal of Public Affairs* 13, no. 3 (2013): 260–271.

71 See e.g. KD, Lov om universiteter og høyskoler; NOU (2022:2) *Akademisk ytringsfrihet: God ytringskultur må bygges nedenfra, hver dag*, accessed September 9, 2023, https://www.regjeringen.no/no/dokumenter/nou-2022-2/id2905589/?ch=5.

This quote reveals a sense of grief over lost freedom. Grief is often described as 'homeless love'.[72] For lecturers, it is the love of a professional discipline that has become homeless. As far as the interviewees are concerned, the regulations are killing something they hold terribly dear: a professional vocation, a desire to be a good teacher, meaningful aspects of everyday working life. More than grief, it can perhaps – with a borrowed expression from clinical psychology – be called *anticipatory grief*.[73] All the interviewees are still in full-time work, they still love their discipline, but the work of teaching as they know it and love it, is disappearing more and more year by year. They do not have control over the situation, and they do not know what comes next. Robert says that "there is a development in the direction of . . . well, a further rationalizing of teaching. We see from the time budgets that it is going steadily downwards."

And precisely this is part of the essence of anticipatory grief: Being in a situation where you know that you are about to lose someone or something that means a lot and that you don't want to let go of.[74] As we saw, interviewee Jenny stated, "it's killing my joy." The joy is not yet dead, but the interviewee is dreading the worst. Another aspect of anticipatory grief is the loss a sense of agency.[75] Anne describes how she reluctantly "commented on the last draft of a bachelor's thesis on Sunday morning because I know I won't have time to do it on Monday. Still, I wouldn't trade this job for any other." The quote is in line with the State Employee Survey for 2021, highlighting that employees who work in research and teaching report the most unequal balance between work and leisure.

In total, the interviewees express strong emotions when talking about time budgeting. The analysis shows that we can generally talk about four emotional reactions: a) perceived alienation and lack of freedom, b) frustration, c) loneliness, d) grief.

This section has provided insight into how the clash between different relevance systems creates emotional responses among the interviewees. In the next section we will discuss our findings altogether, starting with a table summarizing the central points of the analysis.

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72 Mikael H. Jacobsen and Ester H. Kofod, "Sorg – en fraværsfølelse under forandring," in *Hverdagslivets følelser* eds. Inger G. Bo and Michael H. Jacobsen (København: Hans Reitzels forlag, 2015), 245.

73 Donna S. Davenport, *Singing Mother Home: A Psychologist's Journey Through Anticipatory Grief* (Denton, TX: University of North Texas Press, 2002).

74 Davenport, *Singing Mother Home*.

75 Davenport, *Singing Mother Home*.

Discussion

Table 7.1 presents and systemises the two different logics of time described in the chapter. Through the table layout, the tension dimensions regarding time and time budgeting in academia are clarified. The table illustrates a pronounced conflict between the lecturers’ perspective on relevance and the management’s view on the same matter. This tension primarily revolves around how “good time” is perceived and communicated between the two parties.

Tab. 7.1: Tensions between two different time logics.

	Experienced NPM-signals from administration	**Experiences from professional everyday life**
Symbolic meaning of time	Time as *a commodity*. Time equals money.	Time as a prerequisite for meaning/ resonance.
Logic	Instrumental – time is controllable.	Vocation and commitment are fluid and cannot be squeezed into a strict system. Time management creates more administration, fragmentation and reduces time for meaningful work and joint projects.
Time budgets as a control mechanism	The systems provide control over resources.	The system has started living a life of its own.
Time budgets as a prerequisite for priorities	Creates relevant structures through balancing research and teaching responsibilities.	Creates irrelevant structures through constantly under-budgeting teaching. Use of free time necessary to keep up.
Use of time as a measuring unit for quality	Lecturing assignments can be quantified through norms.	Lecturing tasks involve unpredictability and are difficult to quantify.
Time budgets as standardization	Time management creates fairness and overview.	Time management does not take professional or individual differences into account, and standardizes what cannot be standardized, which also creates class divisions within the profession.
Consequence of time budgeting	Effective production.	Devaluation of quality, encourages cynicism.

Tab. 7.1 (continued)

	Experienced NPM-signals from administration	**Experiences from professional everyday life**
Use of time and approach to learning	"Filling a bucket": Teaching measured in time is equated with learning received, and thus with the production of trained candidates.	"Lighting a fire": Learning is a dialogue-based maturation process that does not take the exact same time for individual candidates.
Rational vs. emotional	Time management provides control over expenses.	Time management is an expression of lack of trust, and leads to exhaustion, anger, stress and dissatisfaction.
Resource distribution	Sufficient time resources are allocated.	Time is the scarcest resource, and the resource most easily manipulated by management.

Lecturers interpret "good time" as a qualitative concept, inherently tied to resonance and the capacity to foster a professional scholarly community. In contrast, management associates "good time" with the minimum time necessary for completing tasks, quantifying it in monetary terms. This implies a perceived scarcity and value attached to time. Lecturers, who view their profession as a vocation, believe that the administrative practice of time budgeting undermines their professional commitment. Originally intended as a planning tool, time budgeting has transformed into a management instrument that generates conflicting priorities and stifles individual initiative. The efficiency expectations embedded in this system, coupled with its use for financial adjustments, can be seen as cynical. Interviewees suggest that this approach not only fosters cynicism among lecturers but also has emotional repercussions and negatively impacts teaching quality.

The management's rigid daily timetables do not sufficiently accommodate the unpredictability of a typical workday. The concept of time embedded in time budgeting emphasizes increased production rates rather than improved quality and operates on a different temporal logic from that of lecturers. Moreover, time budgeting fails to acknowledge essential aspects of organizational and administrative work and informal student interactions, akin to what has been termed the "third shift" in family life.

This issue of unpaid, unacknowledged work, or "invisible time," in the time budgets mirrors the concept of "invisible labor"[76] in sociological research. The absence of recognition for these additional, unaccounted working hours contributes to challenges such as alienation and work overload. Similar challenges have been documented in the health sector.[77] In sum, the prevalence of invisible time poses a pervasive challenge within the context of our accelerated society.

Time budgeting is not merely perceived as a negative concept. The problem is made deeper and more profound due to the central overarching idea it has given birth to the idea that time is a quantity that can be equated with money. In this way, the time budgets reinforce the NPM logic that already prevails in academia.[78] As shown, the NPM language rubs off on the interviewees. In the long term it might establish itself as *the* professional language of academics. Another issue is that time budgeting as logic is perceived as having grown out of original proportions, and thus reifiedo to something beyond the control of the concerned. We would therefore argue that a functioning time budgeting must be based not on "scheduled time" or "timeless time," but on proper time.[79]

Proper time is basically "not a question of perfect duration, pace, tempo, or length, but – instead – it is about reflexive consideration."[80] The core question that should recur when considering time spent is how "understanding can be achieved in, and through" the individual career in question (ibid.), in our case, higher education and specific disciplines. Proper time differs from what we call "good time" in that, firstly, it does not only take into account individual considerations related to the use of time, but also focuses on the outcome and the intersubjective meanings related to time use. It is strongly linked to vocational and professional meaningfulness; still, the term does not reduce resonance to individual desires for timeless time and flow experiences. The term is thus also suitable to clear up in different concepts of professional time, and it is able to address questions of time as a structural matter, rather than privatizing it.[81]

By taking "proper time" into account, one can approach an ideal of mutual understanding, according to Ball. He states that "Our communication is fast and

76 Marion Crain, Winifred R. Poster, and Miriam A. Cherry. *Invisible Labor: Hidden Work in the Contemporary World* (California: University of California Press, 2016).

77 Ingvild B. Lied, Moa L. Lindgren, and Lindis K. Helberget, "Tidspress blant sykepleiere kan påvirke kvalitet og pasientsikkerhet: en systematisk review," *Klinisk Sygepleje* 35, no. 3 (2021): 242–254.

78 Bleiklie and Frølich, "Styring, organisering og ledelse."

79 Ball, "Multimedia, Slow Journalism"; Ylijoki, "Boundary-Work."

80 Benjamin, "Multimedia, Slow Journalism," 433.

81 Rosa, *Resonance*, 13.

technically easy, but understanding one another (. . .) requires time."[82] Proper time also involves a willingness to look at what one usually sees, and to listen to what one usually hears, in the assessments of enough time, to ensure good and respectful communication. Embedded in this concept, arguably, is a recognition of the teachers' invisible and, until now, unplanned work tasks. In other words, this is part of "scheduled time," and the desire to create space for" timeless time." It is a form of social time that foregrounds disciplinary and professional considerations rather than an administrative logic but still encompasses the need for planning; and not least, it is a time logic that prioritises resonance rather than acceleration. It is, so to speak, a time that wants to breathe, and a time that requires dialogue. In our context, this implies that professional actors belonging to two different relevance systems tune into the same professional time zone.

Time budgeting, as practiced today by many traditional Norwegian educational institutions, thus seriously undermines creativity, cooperation, (slow) long thinking and willingness to do the job. If more quality is desired in teaching and education, working days and work tasks should "speak" to the teachers' everyday academic reality, not micromanage, and not be applied as a tool in economic accounting.

Timely Thoughts for the Future: A Conclusion

Our main finding is that time budgets reportedly undermine the lecturer's chances of resonating with the object of their work. Demands regarding efficiency adversely affect lecturers' engagement levels and perceptions of quality, and the focus on time as the central unit of production undermines the meaning and relevance of work. As Ylijoki notes, the quantification of work leads to inauthentic practice, evoking alienation.[83] The university is very much built on the sum of different academic vocations – and it is also the vocation that inspires the lecturers to work in their leisure time.

Additionally, the interviewees experience that the time budgets have gone from being a planning system to a *controlling* system. This is further complicated by the experience that the time budgets have taken on a 'life of its' own' – one of the interviewees refers to it as a "system on steroids," making academic lecturers feel that they are being consumed by it. In a habermasian sense, one could argue that the system has colonized the professional life world of scholars, or that opti-

82 Benjamin, "Multimedia, Slow Journalism," 344.
83 Ylijoki, "Boundary-Work."

mizing resources for the organization challenges the opportunity of resonance. In Biesta`s term the time budgets are a mechanistic system of control and productivity that strives to reduce all risks whilst making ever greater demands. Real education though – as with real resonance involves a risk, and the risk is there because education is not about filling a bucket but lighting a fire.[84]

In this chapter, we argue that time budgets are used in a counterproductive way because they are perceived as being merely a production-focused, top-down corporate system of control, one that does not capture the core of academic work and thus undermines the responsibilities and professional norms of being a lecturer in higher education. If time budget systems are to have a time planning function, the frame of use should be *leadership,* not *management.* In addition, the time budgets should be the object of a broader academic discussion, focusing on professional and didactic principles as well as the importance of self-management and vocation in knowledge-intensive institutions. In line with Rosa's critique of the resource-centred focus in modern societies, we find that the time budgets transform lecturers' work tasks (teaching and tutoring) into hours to be accounted for. Time budgets reinforce the acceleration of academia and become disruptive and instrumental elements creating dissonance and alienation. With this, the lecturers' sense of vocation is undermined, as is the possibility of experiencing resonance in the workplace and in life more generally. And given the unregistered nature of the unregistered work it gives rise to, *this is a problem that has largely remained unaccounted for so far.* And no one knows how large this time resource really is, as no one knows how extensive the under-budgeting really is.

If the Norwegian Government really wants to turn things around in the university sector, and thus avoid going down the road of Dark Academia, the time budgeting system is the first thing that should become subject to reform.[85] Concerns related to time budgeting should be taken seriously. If not then we risk the chance that lecturers will prioritise quantity over quality, production over reflection, and efficiency over depth. A fruitful academic discussion about time should not solely treat time as a productional resource, but as a foundation for self-efficacy, and thereby for space of resonance. We have to make time for this. In the meantime, as the Ministry of Knowledge works on future plans for higher education, academics will continue to burn the midnight oil in their own homes, and each new working day will continue to be overshadowed by a fundamental lack of time to do what needs to be done.

84 Biesta, *Utdanningens vidunderlige risiko*.
85 Fleming, *Dark Academia.*

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8 Between Festivalisation and Spectacularisation: The Compression of Time in Biathlon

The MTV Logic and its Sporting Ramifications

This paper digs into the structuring of time in sport events. Time in late modern society is *compressed*; short time spans threaten to replace the longer ones.[1] This is evident in many fields: popular culture, media, music, literature, news, academia – and sport. What we term *the MTV logic* implies that the attention span of individuals is limited, which is reflected in entertainment representations. An average radio hit lasts for about three minutes,[2] and the average music video consists of frequent changes of images, scenes and perspectives.

Speed compresses time. Current culture is restless, claims Eriksen.[3] The rhythm of the MTV music channel from the 1980s and 1990s, symbolises this cultural shift. In all aspects, people are busy finishing things rather than dwelling on things for a prolonged period of time. When the radio became a key source of music, a tune needed to not exceed three minutes to have hit potential.

While a pop music hit normally lasts for three minutes, most sport competitions have a longer duration. A football game lasts for 2x45 minutes, and some events can last even longer (ice hockey lasting for about 2,5 hours, tennis often even more). To tackle the limited amount of time spectators and TV viewers are willing to follow an event, the format is framed to ensure a sufficient number of intermediate highlights. For Norwegians, cross-country skiing is a striking example. Barely any other sport has been more thoroughly transformed in order to adapt to the TV audience. Shorter competitions have replaced longer ones, and the contest is structured differently, with mass starts and new track profiles (several laps in stadia rather than in the woods, out of sight for arena spectators).[4]

1 Thomas H. Eriksen, *Tyranny of the Moment: Fast and Slow Time in the Information Age* (London: Pluto Press, 2001).

2 Daniel Thrasher, "How Long Should a Song Be?" *Improve Songwriting*, accessed February 10, 2024, https://improvesongwriting.com/how-long-should-a-song-be/.

3 Eriksen, *Tyranny of the Moment.*

4 Thor Gotaas, *Oddvar Brå: Et skiløperliv* (Oslo: Gyldendal, 2018).

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Time-consuming events are divided into separate sessions. In multi-day competitions such as Tour de France (cycling) and Tour de Ski (cross-country skiing), there are mini-competitions along the way (mostly sprints) in addition to the finish of each lap and the overall standing (podium ranking). In cross-country sprint competitions, each heat represents a session, each consisting of at least one decisive moment (the finish).

Biathlon, normally lasting about an hour, is another (and a significant spectator and TV) sport that has been altered (historically adjusted) in the same way (according to such logics) in order to suit the needs of its audience. New, shorter, competitive formats have been introduced, and highlights of "fast time" are emphasised, among them the shooting events and the final finish, favouring the overall "duel" dynamic between athletes, believed to be commercially attractive, thus downplaying the "slow" time of "lowlights" such as the skiing part between shootings (laps). In effect, everything has become more compressed (shortened time spans).

This is done by limiting the length of the laps where athletes run cross-country skiing between shooting sessions, especially in the relay and the sprint format. At the pair relay in biathlon, the intervals between shooting sections have been compressed to 2–3 minutes, compared to 6–7 minutes for the mass start, while in the "classic" 20 kilometres/15 kilometres for men and women respectively, these intervals last for 9–10 minutes.

In this essay, we analyse the structuring of time in biathlon. Based on fieldwork, we ask two questions. First, how an event like the World Championship or a world cup weekend can be interpreted as a sport festival, suspending the structures and routines of everyday life to create an atmosphere of celebrative fun and socialisation. It represents a different mode of time, characterised by specific rituals and symbols to communicate the idea that the event is integrated in a celebratory atmosphere. Second, how the International Biathlon Union (IBU) frames the events towards spectators. Such framing might encompass the function and timing of the public announcer/commentator, the interplay of music, stadia atmosphere and announcements, and how time intervals (periods between highlights) are structured.

Next, the development of biathlon over the years is outlined. Then, two concepts of time are presented: *time as a social category*[5] and *the replacement of slow time with fast time, including gap-filling strategies*.[6] The former notion serves as an interpretative framework for what may be named *the festivalisation* of biath-

5 Jiří Šubrt, *The Sociology of Time: A Critical Overview* (Cham: Palgrave Macmillan, 2021).

6 Eriksen, *Tyranny of the Moment.*

lon as a social category (the process of transforming an event according to festival logics), reflecting a particular time, happening, mood and/or rhythm other than everyday life. We link the latter notion to what we label *the spectacularisation* of biathlon: Factors making the sport event attractive, which are not part of the competition at such. From this point of view, compression of time in biathlon has spectacularisation as its starting point. Further, methods are sketched, followed by a discussion of how the conceptual lenses light-shed our findings.

The Times They are A-Changin': Shifting Competitive Format

Since around 1990, biathlon has enjoyed huge popularity, both in terms of stadia attendance and TV consumers. Historically, it was hardly a spectator sport at all. The outcome of the effort in the shooting range was unknown to spectators, and even to athletes, until the race was over. This changed with the introduction of auto-displaying targets in the 1970s, where both the athlete and spectator instantly could now see whether a shot hit the target.

Throughout the 1980s, biathlon remained a small sport. There were only two individual events, the "normal distance" (20 kilometres consisting of five laps of four kilometres each, with shootings after 4, 8, 12 and 16 kilometres) and the "sprint" (10 km consisting of three laps of 3,3 kilometres each, incorporating two shootings). In the former distance, one minute extra was added to the total time for each missed shot. In the latter, each miss meant that the athlete would run a penalty lap of about 150 meters (taking around 20–25 seconds). Both these events had individual starts. The sprint was introduced in the Olympics in 1976. There was also a relay event with a mass start.

During the 1990s, other formats were introduced to add to the number of events. First, women's biathlon was introduced in the 1980s, entering the Olympics in 1992. Second, a pursuit race was added to the sprint event (results from the sprint decided the starting position/the time behind the leader/winner of the sprint), where the first to cross the finishing line was the winner, unlike the events with individual starts. In 1999, the World Championship introduced the mass start. Here, the number of athletes were limited to 30, who qualified based on previous sporting criteria. 'The formula one' of biathlon soon became one of the most prestigious events.[7]

7 Dag Vidar Hanstad, *Fullt hus: Eventyret norsk skiskyting* (Oslo: Akilles, 2005).

Later, the programme has been further extended. The last World Championship consisted of 12 events – the 20 km, the 10 km, the pursuit, the mass start and the relay for both men and women, plus two relays: one mixed relay where two male and two female athletes ran a traditional race with two shootings each (the laps were slightly shorter than in the traditional relay), and one 'pair relay'/single mix relay'. The latter had much shorter laps (and penalty laps), and the teams consisted of one male and one female athlete running three successive legs each.[8]

This backdrop should be kept in mind when addressing our second research question, as the changes represent a different time structure from the original events. First, however, we offer a more overarching conceptual lens to interpret spectator cultures in biathlon and the structuring of time.

Times in Transition: Social and Fast Time

Our focus is on the social *structuring* of time. We emphasise two sets of structures that might yield insight into the biathlon festival. Analysing our first question, concerning how to understand biathlon events as festivals, we introduce an idea of different rhythms between everyday life and celebratory periods. To light-shed our second question, concerning the concrete structuring of time *within* sport events, we take Eriksen's concepts of *fast* and *slow* time as a starting point.[9]

First, time is structured by the fact that different periods or phases involve different rhythms. In modern society, weekends follow five working days, allowing for a break in the day-to-day routines. More occasionally, the week-to-week routines are paused by prolonged periods of holidays or vacations. In some form, this seems to have always been the case. For instance, most religions include a day off work a week, as well as more prolonged periods of celebration (as Christmas and Easter).

Following Durkheim, classical sociology held that, historically, the function of the calendar was not so much to measure time as to provide a certain rhythm to it.[10] A calendar year consisted of "critical" dates intended to interrupt the continuous flow of everyday life. These interruptions were marked by rituals. Holidays

8 Kjell-Ivar Pettersson, *OL og VM i skiskyting* (Oslo: Dreyers forlag, 2016).
9 Eriksen, *Tyranny of the Moment.*
10 Šubrt, *Sociology of Time.*

and ceremonies represented dis-continuity rather than continuity. According to Sorokin, the calendar promoted rather than reflected collective life.[11]

With industrialisation, time took on a different function. It became more homogenous, as the clock makes time a quantitative asset and indefinitely divisible.[12] Even the number of hours off work is quantitatively defined by the interval between leaving the workplace and entering the next morning. Modern life has, in short, re-structured time.

However, even modern industrial societies offer breaks from the everyday rhythm. Most notable are weekends, vacations and holidays – but also sport events. The Olympics interrupts a four-year period with a period of celebration, both in ancient Greece and in the current world (the span is two years if we take the Winter Games into account). Weekends off work in industrial society are also marked by sport events. It is, for example, a widespread suggestion that the anger and outrage that can be observed among some football fans can be explained by the need to "let off some steam."[13] Football, or any sport event that can be watched by an audience, is an arena for marking that the routines and moods of everyday life have been temporarily suspended.

While industrial society is regarded as highly structured in terms of time, the perhaps most common ground for theories of contemporary times – *post-industrial society*,[14] *late modernity*[15] or *information society*[16] – is time flexibility: From the punch clock (time recorder) in industrial society, to a widespread principle of deadlines in post-industrial society, where you decide the schedule yourself as long as you submit on deadline. In short, working hours are less fixed for many. Some people work most weekends, and some must work throughout Christmas and Easter too. In the "creative" industries, the distinction between work and leisure is blurred. Still, periods of celebration or vacation are a part of the rhythm for most people.

The IBU World Championship is a celebratory period in this respect, a 12-day festival. However, few spectators stay for the whole event. For some, it takes on the weekend structure, with people travelling to the venue for 2–3 days to watch

11 Pitrim A. Sorokin, *Sociocultural Causality, Space, Time: A Study of Referential Principles of Sociology and Social Science* (New York: Russel-Russel inc, 1964), 183.

12 Šubrt, *Sociology of Time*, 54.

13 Nick Hornby, *My Favourite Year: A Collection of Football Writing* (Phoenix, 1993), 20.

14 Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (New York: Basic Books, 1973).

15 Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age* (Cambridge: Polity Press, 1991).

16 Eriksen, *Tyranny of the Moment.*

sport and have a good time. For others, the period of celebration is extended to 5–7 days. The whole event is framed in a way that ensures that spectators are reminded that they find themselves in a celebratory period, and people act to confirm this both to themselves and to others. We will return to the practices underlining the celebratory aspect of the event, but first we introduce the second set of structures relating to how time is structured.

Time in our time (modern society) is compressed in a process following *the MTV logic*, resulting in *the tyranny of the moment*.[17] Regarding the MTV logic, the standard music hit from the 1950s lasted three minutes, implying that longer pieces of music did not fit the radio format. It was deemed to be the case that listeners would not be able to pay attention should any record last more than three minutes. Following the rise and expansion of the World Wide Web from the 1990s, and social media in the 21st century, people's attention span is said to have shrunk even more.[18]

The classic Hollywood movie has a steadily rising drama curve, interrupted by small peaks along the way, before culminating in a dramatic release of tension (be it action, romantic drama or other genres) towards the end. Eriksen believes that recent entertainment movies are increasingly adapted to *the MTV logic*: Ideally, no more than a few minutes should pass between highlights, otherwise viewers will switch channel.[19] The modern man has no time to sit around waiting for something to happen.[20] And the MTV logic has spread. Almost every form of popular culture, even sport, is transformed to entertainment events.[21]

The MTV logic holds two aspects of time. First, Eriksen distinguishes between *slow* and *fast* time. Slow time is the time spent on time-demanding projects like reading, not least writing, a book. You have to spend several hours, days or even weeks and months to accomplish what you had in mind, and your focus must be on the task itself. Fast time is the time spent on tasks that are done in seconds or a few minutes, like replying to an e-mail, listening to a three-minute bulletin or watching the Olympic final in the 100 meters. *Information society*, claims Eriksen,

17 Eriksen, *Tyranny of the Moment.*

18 Kalpathy Subramanian, "Myth and Mystery of Shrinking Attention Span," *International Journal of Trend in Research and Development* 5, no. 3 (2018): 1–6.

19 Eriksen, *Tyranny of the Moment.*

20 James Gleick, *Fortere og fortere: Turbosamfunnets inntreden på nær sagt alle områder* (Oslo: Gyldendal, 1999).

21 Neil Postman, *Amusing Ourselves to Death: Public Discourse in the Age of Show Business* (London: Penguin, 2005).

involves a process where slow time is threatened by the number of tasks that must be accomplished quickly.[22]

Second, *gaps* are the moments of time where you accomplish no particular task, like when walking to the bus stop, waiting for the lift to arrive to your floor, or when you are waiting in boredom for a belated friend to arrive at the lunch table. Nowadays, gaps are filled with fast time activities.[23] While walking to the bus or hitting the bathroom was previously a gap which allowed for contemplation, recreation or time "off," we can now check e-mail, post a link on social media or listen to a podcast, or all three. Fast food enables us to eat while watching TV. As soon as we are bored, we pick up the phone for some rapid entertainment or 'fast' (breaking) news (what happens right now?).

With such changes, it is hardly surprising that the logic of time also influences sport. The popular spectator sports in the information age (except football), where everyone competes for the modern man's attention, are those that are compressed. 100 meters of running is done in ten seconds, alpine downhill skiing is spectacular and fast, while 10,000 meters of speed skating is slow, thus threatened by elimination.[24] However, there is limited research into other ways of compressing sport events than shortening its time.

There are three ways to compress time in spectator sport. First, the event itself should not take too long.[25] Second, the intervals between important/decisive moments should not be too long. Some sports are fast by nature. Other sports take more time but can be restructured to allow for more frequent moments of drama or action. In table-tennis, the number of points needed to win a set was reduced from 21 to 11. Partly, this contributes to a reduction of the total amount of time that a match takes, partly it allows for the introduction of more frequent decisive moments – you approach 11 points in almost half the time compared to 21. And third, gaps can be filled with various forms of entertainment and information, so that fast time overshadows slow time between drama curves. We discuss two gap-filling strategies in biathlon: the organiser's use of music in stadia and the way in which the announcer controls the flow of information.

22 Eriksen, *Tyranny of the Moment*, 17.

23 Eriksen, *Tyranny of the Moment,* 34.

24 Eriksen, *Tyranny of the Moment,* 84.

25 There are numerous counterexamples to this trend, contradicting the compression hypothesis. The Tour de France event is still popular, even if it is not fast in terms of highlights. Most stages consist of 5–6 hours with the favorites keeping an eye on each other, without much drama. Ski Classics (cross-country skiing) consists of 50–90 kilometers double poling in the woods, and most often the only climax is the finish sprint (after several hours). A game of football still lasts for one and a half hour plus a 15 minute break, and does not fit very well to the tendency of speed.

Biathlon seems suited to the MTV logic, as the most common distances (mass starts) usually consist of three or five 'transport stages' of 6–9 minutes (cross country skiing) and with four highlights (shootings), lasting 30–60 seconds. Newer events have aimed to reduce the duration of the lap (tendency of time compression) to shorten the intervals between shootings, as these are regarded as being the most entertaining and decisive moments of the entire event.

Given that performances on the shooting range can alter the results, biathlon satisfies the need for *uncertainty of outcome*, an aspect that supposedly makes spectator sports commercially attractive,[26] even though this hypothesis may be contested in relation to some sports.[27] An attractive sport contest requires excitement in terms of winners and losers, and that spectators and TV-viewers can have a good view of it.[28] The unpredictability of biathlon is regarded as fitting into the dramaturgical TV logic, making biathlon attractive for viewers and sponsors.[29] Even an athlete who leads by a huge gap before the last shooting section, may fail to win if he or she does not perform well.[30]

Inside the Festival: Fieldwork in the Biathlon Arena

Our data is generated from fieldwork carried out during the IBU World Championship, Oberhof, Germany, February 2023. The fieldwork lasted for twelve days, nine of which included competitive races at the arena. Partly, we also build on previous fieldwork from World Cup events and World Championships, including Ruhpolding (Germany, 2013), Nove Mesto na Morave (Czechia, 2013), Oberhof (2015) and Antholz (Italy, 2020).

26 Stefan Szymanski, "The Economic Design of Sporting Contests," *Journal of Economic Literature* 41, no. 4 (2003): 1137–1187.

27 Babatunde Burraimo and Rob Simmons, "Do Sport Fans Really Value Uncertainty of Outcome? Evidence from the English Premier League," *International Journal of Sport Finance* 3 (2008): 146–155.

28 Harry Arne Solberg, Dag Vidar Hanstad and Kari Steen-Johnsen, "The Challenges of Producing Popular Sports Contests: A Comparative Study of Biathlon and Cross-Country Skiing," *International Journal of Sports Marketing and Sponsorship* 10, no. 2 (2009): 187.

29 Hanstad, *Fullt hus*, 122.

30 In some respects, however, the unpredictability of biathlon seems to be less evident today, as commercialisation and professionalisation have led to stronger dominance by a few countries, especially Norway. The fastest skiers can at times make up 20–30 seconds on their rivals per lap, according to Jørn Lekve, *Jacob Lund: Sponsorkongen* (Bryne: Jæren forlag, 2021), 24.

Our fieldwork consisted of different elements, of which two are of particular interest here. First, we looked into whether and to which degree the event was designed to underline *the suspension of everyday routines*, more precisely the way in which the general expectations on how to behave and to organise a daily rhythm different from everyday life was influenced by the overall framing of the event. The concept is based on sociological theories of rituals, and we are particularly in debt to Levang et. al., who studied music festivals within a similar framework.[31] We analysed how the atmosphere was framed by music (before, during and after the sport events), by inviting spectators to participate in celebratory behaviours (shouting, singing, drinking and dancing).

Second, we aimed to examine the more detailed structuring of time in different elements in the races themselves. To explore the second set of questions, we emphasise two dimensions of spectacularisation. First, we *quantify* the compression of time. Applying what we denote to be a *stopwatch sociology*, we measure (with a stopwatch), among other things, how long the announcer was silent when a shooting section starts, and for how long the stadia music stopped. Second, we analyse *strategies* of compression. The *stacking* of time (intervals of fast time rather than continuous slow time) means that there is less time for each activity. The strategies consist of either (a) cutting down the time for each thing (shortened announcements, music hits, laps etc.), or (b) doing several things at the same time (for instance announcements and music at the same time). In biathlon, we find both, and we must therefore analyse the interplay of strategies. Regardless of which option is chosen, less remains of the slow, continuous time.[32] In our closing discussion, we emphasise the downside of increasingly replacing slow with fast time.

To grasp these issues, we positioned ourselves in various sections of the stands and tents at various days, sometimes in the midst of the crowd, sometimes in the back, trying to distance us from the crowd to get an overview. Some days, we arrived especially early at the stadia and remained there for a number of hours after the conclusion of the event in question in order to gain a sense of the accumulation of atmosphere, and sometimes we spent our time solely in the tents. Many people followed the sport events from the tents rather than the stands. Reasons for this included the weather outside being too cold, the views from the stadia being obscured due to fog, the better availability of alcohol in the tents (shorter queue) than in the stadium, and the inability of some to afford a

31 Lisbeth Elvira Levang et al., "Musikkfestivalens kollektive effervesens," *Tidsskrift for samfunnsforskning* 58, no. 1 (2017): 62–83.

32 Eriksen, *Tyranny of the Moment,* 134.

stadia ticket. For the men's and women's relay, especially, the tent outside the stadia entrance was packed.

The Festivalisation of Biathlon: The Suspension of Everyday Life

The main difference between a World Championship and the average World Cup weekend (normally running Wednesday/Thursday–Sunday) is the duration of the event. However, most spectators will stay for only parts of the event during a World Championship. Typically, they stay for a weekend or for either the first or second half of the event.

Oberhof is a small village in Thuringia, Germany, with a population of roughly 1,700. With tens of thousands of spectators, it goes without saying that many of them stay in hotels outside town. However, many of them arrive in Oberhof or the arena hours before the events, and many also stay there for a few hours afterwards. The arena itself is located two kilometres west of town, meaning that both the town of Oberhof as well as the arena can be regarded as "scenes" where spectators are invited to celebrate the joy of biathlon.

These scenes are designed to invite guests to acknowledge that they leave the burdens and routines of everyday life behind them upon entering. In downtown Oberhof, the main street was packed with small shops selling foods and drinks, and a "Stadtpark" (town park) holding medal ceremonies. In Oberhof town, there was also a huge tent (taking about 400 guests), selling food and drinks. Here, guests could enjoy the races on TV screens. In the evenings, there were occasionally bands and orchestras entertaining.

At the arena, just outside the ticket control, attendees can enter an even bigger tent that can hold about 1,000 guests. Here, too, there is a mixture of music played by a disc-jockey and live music. In the arena tent particularly, musicians and announcers will occasionally make some effort to encourage guests to join the celebratory atmosphere explicitly. Typically, people find a table to have a drink or a quick meal while talking to friends. The tables can, however, hold around ten people each, encouraging people to have a chat with strangers sitting at the same table. Some guests also invite people to dance around in the tent during some musical performances.

To us, all these phenomena serve as markers of entering the festival (or indicators of whom having entered into, accepted and embodied the festival spirit and not), adding to the sense of feeling that the continuous flow of everyday life is suspended. Sometimes the attempts at getting guests to join are successful,

sometimes they are partly successful, and sometimes they fail. What these attempts aim for, is sociologically what Durkheim coined *collective effervescence*, a kind of embodied joyous intoxication or exhilaration, enhanced by the community, within the framework of symbolic, ritual or ceremonial acts. In this case, the stadia and tent facilities are part of this symbolic process.[33] This joint feeling of excitement stemming from a process of intensification of shared experience, which is produced when people start to collectively dance or sing along, produces some kind of bonding even with strangers. This is typical for the rituals that contribute to the suspension of everyday life, illustrating how spectators enter a different mode of time.

Collins points out four ritual ingredients of group dynamics that may produce effervescence, of which we apply three.[34] First, some kind of *group assembly* and *bodily copresence* is required. For instance, it helps that the tents are packed full, as this allows the various forms of group activity to spread more easily. Second, people must have a *mutual focus of attention*. It can in some cases be the sport event itself, but it may also be the music played on stage. And third, this must result in a *shared mood*, for example a feeling of celebration. The mutual focus of attention and the shared mood can intensify the feeling of group solidarity and effervescence, as they feed each other. Music or any kind of rhythm-based stimuli, is believed to be particularly conducive to producing these potential effects.

Summing up, the sociology of time might shed some light on these rituals. By entering the biathlon festival, spectators to some extent agree to suspend everyday life, creating a different mode of time. In some respects, biathlon spectators are encouraged to enter a *liminal space*.[35] They leave their traditional roles and statuses for a limited period of time, and enter a space where the everyday social norms are suspended and replaced by others. This means, for example, that it is not surprising or disturbing that many people can be found drinking alcohol at 9am, or that otherwise calm and shy individuals suddenly dance (some on the tables) or sing, or approach strangers in an informal manner. This is deemed to be totally acceptable throughout the stadia, especially so in the beer tents, as one reckons that everyone present are like-minded (festivity oriented), signalised in clothing.

Following Šubrt, we propose that the changing mode of time is a way to understand the contrasts between everyday life and the celebration and group soli-

33 Emile Durkheim, *The Elementary Forms of the Religious Life* (New York: The Free Press, 1965 [1912]).

34 Randall Collins, *Interaction Ritual Chains* (Princeton, NJ: Princeton University Press, 2004), 48.

35 Arnold van Gennep, *The Rites of Passage* (Chicago, IL: The University of Chicago Press, 1960 [1909]).

darity that can be observed during the biathlon events. In these cases, time is celebratory and there are no fixed hours telling you when to celebrate or for how long, apart from the opening hours of the arena and the tents. When it comes to the structuring of time *within* this framework, timing is everything. This is what we turn our attention to next.

The Spectacularisation of Biathlon: Interplaying Music and Announcements

Biathlon certainly follows the general trend pointed out by Eriksen.[36] The time gaps between highlights of drama are shortened. Shorter laps between shootings, as well as faster athletes, should imply that shootings (as it takes up more of the time in each contest) became more important for the result, consequently contributing to the uncertainty of outcome, a key factor for the attractivity of a given sport.[37]

The revision of the competition programme may be regarded as a strategic move that addresses *audience orientation*. Competitions are structured to fulfil the needs of spectators and TV viewers. Gjermund Eggen's finish in the 50 km in the cross-country skiing World Championship in 1966, is illustrative of the old way of covering events, *not* working today. The TV camera was focused on a fixed point in the woods, where one waited for Eggen's arrival. "*This is extremely exciting, does Gjermund arrive in time?*," the TV commentator asked. Since then, the history of cross-country skiing can be read as the history of avoiding such waiting, following the MTV-logic.

Both in popular culture and contemporary sport, gaps are filled with action to please the restless need for something to happen. We find this evident in biathlon too. The most obvious time-structuring strategies are centred around the announcer's function and timing (the structure of the information flow, and its interplay with music and stadia atmosphere; when to talk/play music, for how long and when not, and the framing of time intervals – the minutes between highlights).

A first remark was that the announcer adjusted the information flow to suit the specific sporting situation, becoming more energic, dramatic and loud at decisive moments, waiting for the favourite to take the lead or win when the time margins (the seconds separating athletes) were low. Another thing was the build-

36 Eriksen, *Tyranny of the Moment*.

37 Solberg et al., "Challenges of Producing Popular Sports Contests."

up to final shootings. The announcer built up the tension going into the final shooting section, especially if there was a "duel" between competitors, implying that they arrived at the shooting range together. During most events, the announcer was silent (except from announcing whether the athletes had hit or missed the target) for 30 seconds at the first shooting, then for a shortened period of time (about ten seconds) for each subsequent shooting, partly as athletes were more spread on the track, partly as a strategy to underline that the last shooting is normally the most decisive for the ranking order at the end of the event (the podium output).

This strategy may be taken as an aspect of the compression of time: The more important (decisive) the highlight, the more compressed the time. In other words, time is compressed the most at times of perceived or assumed climax (the assumption and feeling that this very moment will decide the contest, serving as the very top of the drama curve).

For instance, both the information flow and the music switched more rapidly during the highlights (about 15 seconds per song, compared to 30 between highlights), having shorter intervals and almost no "silent" pauses. Like movie music, this added to the impression that something important and unmissable was about to happen. It was also our impression that both the announcer and the music were louder (higher volume) at these points, just as Eriksen describes how the drama curve increases in intensity during the choruses in songs, underlining an approaching climax.[38] Such framing of highlights is in line with the MTV logic of gradually intensifying a sense of build-up, often reaching a threshold of a "drop" before (often before the chorus in music) the arrival of the climax.

The drop in our data may be the point at which the music stops, for instance just before the sprint to the finish line, and the announcer energetically comments on the last seconds of the race, often with no music at all or with low music as a backdrop orchestrating the scene of the climax. Another example of a drop underlining something important, was that the volume of the music was reduced markedly just before and during shootings, and was sometimes even turned off. This was then followed by an increase in volume again at the conclusion of the event (the finish), especially in cases where five hits had been achieved by an athlete. During the 10-second build-up to an athlete arriving at the shooting range, "dramatic" music was played in order to communicate the importance of what was about to happen.

These drama curves amplified by higher intensity (more noise and more dramatically presented), and shortened fractions (more rapid shifts) of announce-

38 Eriksen, *Tyranny of the Moment*.

ments and music, also had two other characteristics. First, unlike music hits and movies which are fully "scripted" and worked out prior to final execution (following a manuscript), most sports, including biathlon, revolve around *assumed* climaxes. Events can unfold in various ways, and it is always hard to predict exactly when a decisive moment will occur. Rather, the announcer and the audience must take into account that a decisive highlight can happen at any time. From the perspective of compressed time, this means that the highlights may be many in number, and that the important thing in terms of framing the event is to have as many highlights as possible so that the audience does not get bored. Pauses between potential highlights should be short. Typically, we observed that such drama curves consisting of loud and dramatic announcements and music tracks, occurred three or four times in most biathlon disciplines.

Second, the assumed climax is *subjective* in nature. Something that may be perceived as an exciting climactic by one spectator may not be seen as such by someone else. As the World Championship was located in Germany, the announcer concentrated on German athletes, even though they at best were only occasionally fighting for the podium (medals). This resulted in some absurd situations, with the announcer and the German audience orientating themselves towards German athletes, while the rest of the stadia's attention was paid to the top of the scoreboard.

Further, the climax represents fast time.[39] Apart from shooting sections and important crossing points in the laps (points in which temporary rankings are made), assumed highlights or climaxes are structured as fast time moments. We revealed three strategies of framing fast time. First, the more rapid the switches between music and announcements, the more a climax was being highlighted. Second, the songs played to set the scene for a highlight (more energic) often differed from those played between highlights. Third, the structuring *within* the songs seemed more orchestrated (planned) for the highlights. When the drama curve was rising, the music centred exclusively on rousing choruses, in other words the most well-known and catchy parts of songs. Periods of slow time between highlights often involved longer sections of music hits, including more of the verses.

The compression of time often consists of gap-filling strategies, where fast time replaces slow.[40] Generally, we noted that the music stopped when the athlete on target one was ready to shoot (expectedly in 2–4 seconds), but started again *before* the fifth shot. The absence of music nevertheless helped to thicken the at-

39 Eriksen, *Tyranny of the Moment*.
40 Eriksen, *Tyranny of the Moment*.

mosphere and concentrate a momentary silence that sharpened attention. Rather than playing full music tracks of about three minutes, most hits in the stadia lasted for about 20 seconds, favouring the chorus. Rapid shifts in the music seem to function as a way of sectioning (compartmentalising) the "waiting" period between highlights. The compression of music was also somewhat present in the tents. Some songs were only played for a minute or so, and the transitions between them were compressed in a way that emphasised a rapid changeover between tracks accompanied by a marked rise in volume in each case (the start of the next song in higher volume). This was also the case when live bands were playing. Our take is that this was a strategy designed to avoid silences and "downs" in the atmosphere that had been at the rise during the song (to keep the atmosphere running at a high pitch).

In the relay events, the average time of the laps was about 5,30–6 minutes, implying a 12 minutes "break" of slow time (no shooting sessions) between shootings and exchanges (changes of athletes). This was the longest period during the entire championship that did not have obvious highlights, and led to the interesting use of gap-filling strategies. Examples included the conducting of interviews with experts and previous biathlon stars such as Sven Fischer, presented at the big stadia screen. For the normal distance (individual start), a new song was played about every half minute. Every new start – with the interval of athletes of 30 seconds – the first 15–20 seconds where rather loud, while the sound lowered the last ten seconds, as the announcer introduced the next athlete. This ritual is repeated until the first starter (nr. 1) arrives at the first shooting section.

Also in the mass starts and especially the pursuit, the music during shooting sessions lasted longer, as more athletes entered this section of the event together (some seconds between athletes in the pursuit). This reflexive use of music acts as a way of giving the impression of a change of pace and rhythm, and that something is happening, even though nothing actually happens (in reality, it is slow time between the fast time of highlights).

At times, when little was happening during the laps, the announcer oriented himself towards the spectators and tried to interact with them. For instance, the announcer tried to engage spectators and receive some response by announcing things such as "*Ihr seid das beste Publikum der Welt!*" ("*You are the best spectators in the world!*"), "*Oberhof, make some noise!*," "*Are you ready?*," etc. Otherwise, well-known hits such as "*We will rock you*," accompanied by the championship song "*O-O-Oberhof*," Oktoberfest-lyric "*Ein Prosit, der Gemütlichkeit*" and the folk song "*Rennsteiglied*" from Thüringer Wald were played, all in an attempt to get people to sing along.

Gap-filling was not only about getting the attention of the audience; the announcer also tried to influence the mood of spectators. When German athletes

made mistakes at the shooting range or had to do penalty laps, as often was the case for Benedikt Doll, cheerful music such as "*Let's twist again*" was played as they finished the penalty lap, serving as a tool to help spectators forget the disappointment and move on. Spectators often followed the announcer's call, twisting and cheering for about ten seconds. As the case with the German athlete Doll illustrates, the announcer did little to aspire to objectivity. A common strategy was to use the music as a way to draw particular attention to the German athletes. When the Norwegian Johannes Thingnes Bø, the best male athlete in biathlon for years and the leader in the race, was in for his last shooting session, the announcer chose to focus attention on a German athlete fighting for a top ten position. In this situation, the announcer was totally ignored by the audience, as even the Germans opted to cheer for Bø rather than their countryman.

Although the main remit of the announcer is to provide information, there are instances where he tries to instigate cheering when athletes are on their way into the stadia. The audience willingly goes along with this. The most notable spectator response in terms of time compression was an audience-initiated ritual right before the start of all the events. When the stadia clock revealed that there were ten seconds until the start, the audience started a countdown. This ritual was never something the announcer orchestrated or commented upon. Sometimes this loud countdown started as the announcer was talking about something completely different. This "oppositional" act is not only subversive, but it also serves to compress time. It builds up a sense of expectation, focus and atmosphere *before* the competition had even started, and before a scheduled highlight (the start ritual) has begun. Indeed, it has become a highlight in its own right, although it is hardly a sport climax.

Biathlon's Way Forward: Compressed Times and the Evil Circle of the Tyranny of the Moment

Biathlon has succeeded as a spectator sport in Scandinavia and continental Europe.[41] We suggest that the compression of time is an important contribution to biathlon's popularity. More precisely, the compressed times of biathlon,[42] seems to fall in line with Eriksen's diagnosis of modernity.[43] Biathlon is a key example

41 Hanstad, *Fullt hus*.
42 Pettersson, *OL og VM i skiskyting*.
43 Eriksen, *Tyranny of the Moment*.

of a sport that has enjoyed increasing success due to the implementation of time compression techniques.

And as we have discussed, the IBU also uses strategies to structure the event within the competition programme (micro-structuring internally in the event). These are the strategic use of music and the announcer's interactions with the audience. Biathlon has adapted to the pace of modern societies. But that does not necessarily mean that future changes will be as successful. MTV's restless form of communication has become a precise image of our time.[44] And time compression is *contagious*: The more compression in one field, as in the film industry, the greater the expectation of the same in another field, for example sport.[45] And when you can choose between fast and slow time, the fast time wins (as reflected by the fact that many people prefer to read social media posts rather than newspaper articles, and newspaper articles rather than books, etc.). However, people in distinct fields respond distinctively to the compression of time, as distinct fields hold distinct audience logics. A distinction between cinema spectators and sport spectators, is that the sports audience contributes to the very show that they are attending, responding more actively to the highlights (such as a miss or hit in biathlon or a goal in football), while the cinema audience more often passively consumes the show as consumers. But if the highlights come at close intervals, there is both *less time to* and *less reason to* respond.

In the same way that industrial society's punch clock synchronised efficiency where time saved was money earned,[46] today's popular culture seems to operate according to the same logic: Time saved is attention gained. The more you can compress an entertainment product, the greater is the chance of attaining people's attention. Spectator sport might be different.

The tyranny of the moment hypothesis states that technologies have made a lot of processes more time-efficient, yet people seem busier.[47] In principle, this way of working encourages people to make themselves available and approachable regardless of fixed working hours or location. Needless to say, these trends are even more visible 20 years later, with the introduction of the smartphone and social media. The tyranny of the moment warns us that the more highlights are compressed, the less value is put on each moment (this is the tyrannical aspect of time compression). We have no time to dwell upon any one highlight, because the next one lies expectantly around the corner. This is how the next moment is *para-*

44 Eriksen, *Tyranny of the Moment,* 84.
45 Eriksen, *Tyranny of the Moment,* 94.
46 Šubrt, *Sociology of Time.*
47 Eriksen, *Tyranny of the Moment,* 7.

sitic (cheating) on the present.[48] There is a certain threshold of compression of time: If a given fast time-compressed activity (like biathlon) is compressed even more, there will soon be nothing but highlights left. And a highlight (drama curve) is nothing if not contrasted to "lowlights" (no or little drama).

If biathlon continues to compress the time between shootings, the competition runs the risk of violating its dramaturgical character in the pursuit of fast time, where the highlights lose their value. In handball, for instance, the whole game has become a game of highlights, and this influences spectators. There is no reason to celebrate a goal in an enthusiastic way, as the likelihood is that another one will be scored in the upcoming minute. As things stand, however, the compression of time in biathlon has become subject to a moderate level of criticism from spectators. More actively subversive actions by biathlon spectators may become evident if the sport is subjected to any further time compression techniques in the years to come.

However, the two dimensions of time emphasised in this paper, may interact to ensure that biathlon remains a popular spectator sport. The danger that lies in too much time compression (the tyranny) may be compensated by the facilitation for the less sport-centred atmosphere of festivity and celebration imbedded in the suspension of everyday life. In other words, less entertaining sport events can be compensated by even more festivity.

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48 Ibid, 34.

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Tom Bratrud

9 The Exurban Timespace: Spatiotemporal Decompression among Urban-Rural Migrants in Norway

Introduction

This chapter discusses how construction of time is inextricably linked to perception of place. The discussion is based on ethnographic fieldwork among urban-rural migrants in Norway who seek to escape the compression of time they experience in the late-modern city. By spending time in the countryside, many migrants experience to "take time back" indicating how time is not about duration and sequence but a space to be filled with value realisation and increased sense of agency which cannot be separated from spatial dimensions. Yet, the migrants' constant shuttling between the countryside and city, whether geographically or digitally, suggests that their migration does not simply mean abandoning "city time" for "rural time". Rather, their movements produce new layers of time in their lives, whose aggregation makes up what I call the exurban timespace.

In spite of a steady population decline in most rural areas in the world, many people have a vivid dream of the countryside and its associated lifestyle.[1] In Norway, as in many other places, the attraction of the rural is often held in contrast to developments of the city. Whereas the city may be experienced as grey, expensive, noisy and stressful, rurality is experienced – or imagined – as green, quiet, spacious, and safe.[2] The speeding pace of the late-modern city, in combination with more opportunities to work from anywhere through digital technologies, has made the dream of moving to the countryside more realisable for many.[3] However, for many rural dreamers, to actually move to the countryside implies too many sacrifices in the end, such as the fear of leaving one's social network,

1 According to the United Nations' 2018 Revision of the World Urbanization Prospects, 55% of the world's population lived in urban areas that year. The proportion is expected to increase to 68% by 2050.

2 Arild Blekesaune, Marit S. Haugen and Mariann Villa, "Dreaming of a Smallholding," *Sociologica Ruralis* 50 (2010): 225–241, accessed May 9, 2023, doi: 10.1111/j.1467-9523.2010.00513.x; Jeremy MacClancy, *Alternative Countrysides: Anthropological Approaches to Rural Western Europe Today* (Manchester: Manchester University Press, 2015).

3 See e.g., Rachael A. Woldoff and Robert C. Litchfield, *Digital Nomads: In Search of Meaningful Work in the New Economy* (Oxford: Oxford University Press, 2021).

https://doi.org/10.1515/9783111428970-009

entering a less diverse job market, and abandoning a familiar urban lifestyle. Yet, the concept of "moving home" is quite common in Norway. Here, half of the population lives in the municipalities where they grew up when they are 40 years old.[4] In addition to living closer to "home" and kin, scholars point to economic factors, particularly work but also more affordable housing as the most important reason for moving (back) to the countryside.

In this chapter, however, I discuss another key motivation for urban-rural migration in Norway. Based on ethnographic research in the Norwegian highland valley of Valdres in 2020–23, I argue that desire for reduced pressure on time and space, what I call *spatiotemporal decompression*, is key for many of the migrants. These are people who experience time pressure [*tidsklemme*] in the city, making them stressed and less able to realise desires, relations, and values important to them. When in a rural environment, however, the migrants find themselves in a different experience of time. This is a time where they form new relations with themselves, with others and with landscapes and sensory experiences.[5] People's experiences and constructions of time are thus inextricably linked to the qualities of the place and vice versa, a hybrid process Nigel Thrift and Jon May conceptualise as *timespace*.[6] However, my migrant interlocutors keep shuttling back and forth between the city and countryside both geographically and digitally to work, to maintain relationships, and to fulfil various interests and desires. They therefore do not simply exchange "city time" for "rural time." Rather, their migration introduces new layers of time in their lives whose aggregation produces what I call a distinct *exurban timespace*. While urban-rural migration can be seen as a protest against the acceleration of pace in life that scholars argue characterises late-modern society,[7] it may also be a symptom of it, as people try to fit the benefits of a previous city-life and a new rural-life into one.

The exurban migrants in the study come from two main groups; people who have moved full-time to Valdres, either as newcomers or returnees, and people who are there part-time through access to a second home, usually a cottage

4 Kjetil Sørlie, Marit Aure and Bjørg Langset, *Hvorfor flytte? Hvorfor bli boende? Bo- og flyttemotiver de første årene på 2000-tallet* (Oslo: Norsk institutt for by- og regionforskning, 2012), 28.

5 See Keith Basso, "Wisdom Sits in Places: Notes on a Western Apache Landscape," in *Senses of place*, ed. Steven Feld and Keith H. Basso (Santa Fe, N.M.: School of American Research Press, 1996), 54–56; Nancy Munn, "The Cultural Anthropology of Time: A Critical Essay," *Annual Review of Anthropology* 21 (1992): 103.

6 Jon May and Nigel Thrift, *Timespace: Geographes of Temporality* (London/New York: Routledge, 2001).

7 Thomas Hylland Eriksen, Overheating: An Anthropology of Accelerated Change (London: Pluto Press); Hartmut Rosa, *Social Acceleration: A New Theory of Modernity* (New York: Columbia University Press, 2013).

[*hytte*]. As we will see, by coming to the countryside people of both groups experience to enter a different timespace that makes them feel better and more able to fulfil important desires, relations and values important to them. Yet, there is a difference in what full-time migrants and part-time migrants typically seek in the countryside, which shape their rural timespace. For part-time migrants, the rural is often about taking a break from their busy everyday life in order to experience a change of pace and to de-stress. For them, the rural is experienced as being a slower-paced place compared to the city, which enables them to relax and gain a sense of wellbeing. Periods spent in the countryside thus take the form of ritualised breaks from the intensity of everyday urban life and with this comes a sense of calmness and mental clarity. For full-time migrants, however, the move is often motivated by a more permanent reorganisation of their time and space which allows them to realise a different everyday lifestyle. Rather than seeing the countryside as slower, it is primarily a place where they achieve a greater sense of autonomy than in the city.

In the following, I first present some background for the research, including an introduction to Valdres and methodological issues. I go on to outline the concept of 'the rush', which many of my exurban interlocutors seek to escape, and the theoretical perspectives on time and place on which I build my analysis. I go on to discuss the compression of time that most of my interlocutors find problematic in the city. In the next two sections, I examine the similarities and differences in part-time and full-time migrants' construction of their distinct rural timespaces. In the final part, I discuss how the migrants' mobility in an urban-rural continuum produces a distinct exurban timespace. I end with a short conclusion.

Valdres and Methods

Valdres is a valley of 5,406 square kilometres and around 17,500 permanent residents in the South-Eastern Highlands of Norway. It is located approximately midway between the country's capital Oslo and the second largest city Bergen, and is protected by the Jotunheimen mountains in the West and North, and the Gol mountain ridge in the South. Historically, the valley has depended on an agricultural economy, but tourism, especially the industry based around cottages, has grown steadily in the past few decades. Valdres is currently the place of almost 19,000 second homes[8]

8 Statistics Norway, "05467: Existing Building Stocks. Number of Holiday Houses and Holiday Houses per Kilometre (M) 1998–2022," accessed October 20, 2023, https://www.ssb.no/en/statbank/table/05467/.

which makes up more than 56,000 'cottage people' [*hyttefolk*], or 'part-time residents' [*deltidsinnbyggere*].[9]

Valdres is also the district where I was born, grew up, and lived until I finished secondary school in 2003 and moved to Oslo to study. My parents have continued to live in Valdres since that time, and I have returned for holiday visits every year since I left to study and work in the city. After training as an anthropologist and conducting research in the South Pacific for a decade,[10] I returned to Valdres in February 2020 to conduct research on a question that had interested me for several years, namely: what happens to the social and political dynamics of a place when the number of second homes exceeds the number of local residents, a point Valdres reached in 2018. My research for this project started just before Norway closed down due to the Covid-19 pandemic in March 2020 which generated a massive influx of city people who sought safety at their rural second homes, demonstrating the multiple meanings that a rural connection has for many people in the country.[11] Valdres has also become relatively popular with urban young adults who are seeking a life closer to the outdoors. In 2021, I started conducting research among this group as part of the research project *Private Lives: Embedding Sociality at Digital "Kitchen-tables."*[12] The research for this chapter is based on participant observation and interviews from both of these research projects.

Both of my research projects coincided with the Covid-19 pandemic as well as with me spending most of my time in Valdres from March 2020 to May 2023 for family reasons. Being based in Valdres as an urban-rural migrant (or returnee) myself has opened up new possibilities for forming relationships with other migrants and following them over time as research interlocutors. However, it has also caused challenges as I share many interests, perspectives, and references with my interlocutors and have become friends with them. Forming these relationships, with people with whom I shared many interests and views, thus made it difficult to see them with a critical researcher's eye. I have therefore gradually felt the need to distinguish between private life relationships and researcher-interlocutor relationships as the re-

9 Marit Beate Kasin, "Skjer hyttebygginga i hytt og vær, eller har kommunene kontroll?" *Avisa-Valdres,* October 18, 2021, accessed May 9, 2023, https://www.avisa-valdres.no/skjer-hyttebygginga-i-hytt-og-var-eller-har-kommunene-kontroll/f/5-54-637326.

10 See Tom Bratrud, *Fire on the Island: Fear, Hope and a Christian Revival in Vanuatu* (New York: Berghahn Books, 2022).

11 Tom Bratrud and Marianne Lien, "The Cabin, the Village and the City: Negotiating Belonging in Times of Crises," *Norsk antropologisk tidsskrift* 32 (2021): 55–71, accessed February 6, 2024, doi: https://doi.org/10.18261/issn.1504-2898-2021-02-02; see also Marianne Tønnesen, "Movers from the City in the First Year of Covid," *Nordic Journal of Urban Studies* 1 (2021): 131–147, accessed October 20, 2023, doi: 10.18261/issn.2703-8866-2021-02-03

12 Funded by Norwegian Research Council, project number 303048.

search progressed, a boundary which has been fuzzy and constantly subject to change. Over time, one way to tackle this challenge has been to exclude kin and family friends from my pool of research interlocutors. Nor have I included people who live in the same town as my family. These challenges of living and constantly going in and out of the field provides one example of the "patchwork ethnography" conceptualised by Gökçe Günel, Saiba Varma and Chika Watanabe, where the researcher must be working with, rather than against, the gaps, constraints, partial knowledge, and diverse commitments that necessarily characterise all research.[13]

The chapter is based on ethnographic research among a pool of 32 persons, a group that includes individuals I was already acquainted with from growing up in Valdres, people I have come to know from being connected to the valley since I moved out, and new acquaintances I have met upon my own return. To make it easier to keep track of the named interlocutors in the chapter, I include an overview below (Tab. 9.1):

Tab. 9.1: Overview of named interlocutors in the chapter, ordered by their introduction.

Pseudonym	Age	Part-time/full-time migrant
Sarah	57	Part-time migrant
Stig	58	Part-time migrant
William	65	Part-time migrant
Oda	55	Part-time migrant
Knut	56	Part-time migrant
Ivar	42	Full-time migrant
Kari	35	Full-time migrant
Charlotte	35	Full-time migrant
Audun	37	Full-time migrant
Vilde	37	Full-time migrant
Ulrik	36	Full-time migrant
Lina	41	Full-time migrant
Henrik	41	Full-time migrant
Ingrid	36	Full-time migrant
Bente	44	Part-time migrant

Snowballing has been an important method for my research, as migrants have invited me to social events which in turn have led me to meeting new people and engaging in new activities. The ethnographic material for the chapter is based on

13 Gökçe Günel, Saiba Varma and Chika Watanabe, "A Manifesto for Patchwork Ethnography," *Fieldsights*, June 9, 2020, accessed May 9, 2023, https://culanth.org/fieldsights/a-manifesto-for-patchwork-ethnography.

eight months of focused fieldwork in 2020–21 relating to my two projects, but which amounts to 37 months in total from 2020–23 when taking into account the time spent conducting less formal observational work and engaging in general conversation with my interlocuters.

'The Rush' and other Time-Space Entanglements

Studies of time as a socio-cultural construction have met with a renewed interest in a range of disciplines, including anthropology, geography, philosophy and sociology.[14] The perspective on time, but also space, as inherently social and both derived from society and informing society can be traced to pioneering sociologist Émile Durkheim and his introductory chapter to *The Elementary Forms of Religious Life*, originally published in 1912. Here he argues that "we cannot conceive of time except by distinguishing its different moments [. . .] The divisions into days, weeks, months, years, etc. correspond to the periodical recurrence of feasts and public ceremonies. A calendar expresses the rhythm of collective activities, while at the same time its function is to assure their regularity."[15] We may therefore see time as qualitative; that it has to do with ensuring specific content; rather than just measuring and dividing a time span. Building on Durkheim, anthropologist Clifford Geertz has also been influential in his approach to qualitative time. In his analysis of personhood, kinship and time on Bali he holds that

> Balinese calendrical notions – their cultural machinery for demarcating temporal units [. . .] are largely used not to measure the elapse of time, nor yet to accent the uniqueness and irrecoverability of the passing moment, but to mark and classify the qualitative modalities in terms of which time manifests itself in human experience. The Balinese calendar [. . .] cuts time up into bounded units not in order to count and total them but to describe and characterize them, to formulate their different social, intellectual, and religious significance [. . .] they don't tell you what time it is; they tell you what *kind* of time it is.[16]

14 E.g., Simone Abram, "The Time it Takes," *Journal of the Royal Anthropological Institute* 20 (2014): 129–147, accessed May 9, 2023, doi: 10.1111/1467-9655.12097; Michelle Bastian et al., "Introduction: The Social Life of Time," *Time & Society*, *29* (2020): 289–296, accessed May 9, 2023, doi: 10.1177/0961463X20921674; Jens Kjaerulf, "Situating Time: New Technologies at Work, a Perspective from Alfred Gell's Ouvre," *Hau: Journal of Ethnographic Theory* 10 (2020): 236–250, accessed October 20, 2023, doi: 10.1086/707928; May and Thrift, *Timespace: Geographies of Temporality*.

15 Émilie Durkheim, *The Elementary Forms of Religious Life* (Oxford: Oxford University Press, 2008 [1912]), 12–13.

16 Clifford Geertz, "Person, Time, and Conduct in Bali." In *The Interpretation of Cultures*, ed. Clifford Geertz (London: Fontana Press, 1993), 391–393.

Many studies have built upon Durkheim and Geertz's work in order to extend our understanding of time as something inherently social that is conditioned by culture, social organisation, politics and economics.[17] However, as May and Thrift argue, most attempts at developing social theories of time have worked within the confines of a persistent dualism between questions of time and space, rather than investigating their inter-dependency.[18] Indeed, as Nancy Munn holds, time and space have been treated in much Western theory as each other's antithetical other.[19] Whereas time has often been seen as the domain of dynamism and progress, the spatial has been a realm of statis.[20] Social theory of time has therefore not helped us to better understand how time is irrecoverably entangled with the spatial constitution of society and the implications it has for social meaning and action. Nor have they, May and Thrift argue, succeeded in grasping the full implications of studies that show how spatial variation is part of people's making and experience of social time itself.[21] Many readers may be familiar with accounts like "being here is like travelling back in time," "this place has a slower pace" and "being here dissolves notions of space and time." These expressions suggest that ideas of time are part of how people experience a place's character or potentiality. It ultimately suggests, as Munn argues, that spatial and temporal dimensions cannot be disentangled in our everyday lives.[22]

In one of the few studies that explicitly dissolve the time-space separation, Julia Shaw suggests that when searching for a better quality of life, people seem to find place easier to picture or think about than time.[23] Therefore, people often describe their experiences of the changing pace of life through the prism of the concept of place. As we will see, the vernacular term *rushen*, hereafter translated to 'the rush', is a key concept both part-time and full-time migrants refer to when explaining the spatio-temporal rhythm of the city that they seek to escape. Most explicitly, the rush points to rush hour traffic to and from work and weekend trips, but also the logistical hassle of getting oneself and one's children to and

17 E.g., Alfred Gell, *The Anthropology of Time: Cultural Constructions of Temporal Maps and Images* (Oxford: Berg, 1992); Carol J. Greenhouse, *A Moment's Notice: Time Politics across Culture* (Ithaca, NY: Cornell University Press, 1996).

18 May and Thrift, *Timespace: Geographies of Temporality*, 3.

19 Munn, "The Cultural Anthropology of Time," 94.

20 May and Thrift, *Timespace: Geographies of Temporality*, 2.

21 May and Thrift, *Timespace: Geographies of Temporality*, 3.

22 Munn, "The Cultural Anthropology of Time," 94.

23 Jenny Shaw, "'Winning Territory': Changing Place to Change Pace," in *Timespace: Geographes of Temporality*, eds. Jon May and Nigel Thrift (London/New York: Routledge, 2011), 121.

from leisure activities.[24] The rush is thus frequently specified as a main obstacle for experiencing a good work-life balance in the city. By moving full- or part-time to the countryside and avoiding the rush, many migrants state that they are "taking back time" and get more leeway to do what is important to them, typically spending more time to be with one's family, being more closely connected to nature, living an active lifestyle outdoors, and generally having more autonomy.[25] For my interlocutors the concept of time thus does not have to do with duration and sequence, which is often said to be the basic forms of time.[26] Rather, time is a space of potentiality to be filled with value realisation and increased sense of agency – a conceptual opposition to the migrants' experience of everyday life in the city. In the following section, I outline how the city has become a timespace where the migrants find important values and relationships to be jeopardised.

The Emergence of Time as Scarcity

In industrial and post-industrial societies, time is often talked about as our most precious resource because it is so limited by its very nature.[27] This explicit conceptualisation of time as a scarce entity may be traced to the transformations in economic practice following the Industrial revolution in the 18th century, which E.P Thompson argues led to the emergence of "clock time" as opposed to "task time."[28] Whereas task time derived from the natural rhythms of non-industrial livelihood, driven by the seasons and needs of crops and animals, clock time derived from the routines of the industries that were governed by the clock. The distinction between industrial society/clock time and non-industrial society/task time should be taken as a heuristic tool only, as there are many examples of how people with non-industrial livelihoods also stress about having a lack of time. Francesca Merlan and Alan Rumsey, for instance, point out how people of the Ne-

24 According to NRK.no, Oslo drivers spent 145 hours in traffic congestion in 2017, which was most in the Nordic countries, number 52 in Europe and 113 globally. When driving in Oslo drivers thus spent 30% more time going from A to B due to traffic in addition to normal travel time.

25 See also Christian Sørhaug, "Livsstilsmigranter (re)territorialisering av bygda: utkast til en ansamlingsanalyse av sted," *Norsk antropologisk tidsskrift* 33, no. 1 (2023): 30–44.

26 Eric Silverman, "Time, Anthropology of," in *International Encyclopedia of Social and Behavioral Sciences*, eds. Neil J. Smelser and Paul B. Baltes (Amsterdam: Pergamon, 2011), 406.

27 Julia Hiemer and Maike Andresen, "When Less time is Preferred: An Analysis of the Conceptualization and Measurement of Overemployment," *Time & Society* 29, no. 1 (2020): 75.

28 E.P. Thompson, "Time, Work-discipline, and Industrial Capitalism," *Past & Present* 38 (1967): 56–97.

bilyer Valley of Papua New Guinea regularly use comments like "the sun/time is finishing" in order to make people finish off tasks quickly because time is passing and they are behind schedule, this all being relative to amount of sunlight left in the day.[29] However, industrialisation has arguably had implications for perception of time, as time spent *not* working has more explicitly become connected to value being lost. Time, like money, increasingly became an omnipresent abstract measure of value which is reflected in the well-known and still often-used aphorism "time is money."[30]

Karl Polanyi describes the Industrial revolution as "an almost miraculous improvement in the tools of production [. . .] accompanied by a catastrophic dislocation of the lives of the common people."[31] The dislocation includes the disturbance many workers experienced in terms of ill health, loss of autonomy and less time to spend on their own and the family's welfare. The time-space compression of global capitalism, where spatial barriers are overcome in the urge to open up new markets and speed up production, has perhaps reached a zenith with the embrace of information and communication technologies in work and social life.[32] As the Industrial revolution entailed a shift in the social construction of time, from clock time to task time in Thompson's terms, many have experienced an unease between the rigid, linear work time and more flexible, anti-linear home time. The tension between the two is often mapped on to place: to work late when it is supposed to be family time at home, in the weekends, or on holiday often leads to bad feelings because it represents a fundamental incompatibility between work-related feelings (which are about moving on) and family-related feelings (which are about staying put).[33]

For some of my interlocutors, the expectation to always be connected and within reach has been expressed as a generator of stress – or "technostress."[34] This is especially so for those with a demanding job who come to their second home to 'disconnect' [*koble av*] from the demands of everyday life. With family

29 Francesca Merlan and Alan Rumsey, *Ku Waru: Language and Segmentary Politics in the Nebilyer Valley, Papua New Guinea* (Cambridge: Cambridge University Press, 1991), 238; see also Munn, "The Cultural Anthropology of Time," 103.

30 Kjaerulff, "Situating Time," 238.

31 Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 2001), 35.

32 David Harvey, "Between Space and Time: Reflections on the Geographical Imagination," *Annals of the Association of American Geographers* 80, no. 3 (1990): 418–434; Kjaerulff, "Situating Time."

33 Shaw, "Winning Territory," 126.

34 Giorgia Bondanini et al., "Technostress Dark Side of Technology in the Workplace: A Scientometric Analysis," *International Journal of Environmental Research and Public Health* 17, no. 21 (2020), accessed May 9, 2023, doi: 10.3390/ijerph17218013.

time becoming more scarce and threatened by work time in the form of longer, more intense or more flexible hours, the quality time expected to take place with the family is reduced. Even if one manages to work standard contracted hours, the spatial division between home and work is increasingly undermined by the difficulties of upholding this boundary as people feel obliged to answer e-mails, phone calls or social media messages from colleagues or clients in the evenings at home or on holiday.

For interlocutors with second homes in Valdres, the reduction of time to 'fully disconnect' [*koble helt av*] for relaxation, family life and leisure leads to increased attempts to find relevant coping strategies. When "finding time" gets more difficult in everyday life, holiday time – or 'time at the cottage' [*tid på hytta*] – becomes more important. This is time to dedicate to one's loved ones and things that are important for one's sense of self, including the freedom to not do anything.[35] In the next section, I will discuss the qualities that part-time migrants associate with, and ascribe to, their rural timespace in Valdres.

The Rural Timespace as Change of Pace

Sarah and Stig, an Oslo-residing couple in their late fifties with adult children, bought a cottage in Valdres in 2021 during the Covid-19 pandemic. They were thus part of the 'Corona rally in the cottage market' during the first year of Covid lockdowns (2020–2021) when cottage sales increased by 47% in the period 1 July 2020 to 30 June 2021 compared to the previous year.[36] Sarah and Stig try to spend as many long weekends at their cottage as possible in order to acclimatise themselves mentally and make optimum use of their time in view of the fact that the journey time from Oslo involves a three-hour drive. Sarah works in landscaping and Stig holds a leadership role in the financial sector, which, according to Sarah, makes him very busy and results in him being in a position where he feels he can never rest. Stig elaborated:

35 See Simone Abram, "The Normal Cabin's Revenge," *Home Cultures* 9, no. 3 (2012): 233–255, accessed May 9, 2023, doi:10.2752/175174212X13414983522071; Shaw, "Winning Territory," 126.

36 Hanna Ghaderi, "Corona-rally i hyttemarkedet: En 'typisk' hytte koster nå 2,5 mill.," *E24*, February 18, 2021, accessed May 9, 2023, https://e24.no/naeringsliv/i/X8d2Mg/corona-rally-i-hyttemarkedet-en-typisk-hytte-koster-naa-25-mill; Trond A. Steinset, "Hyttesalget på fjellet i taket i pandemiperioden," *Statistics Norway*, October 3, 2021, accessed May 10, 2023, https://www.ssb.no/bygg-bolig-og-eiendom/eiendom/artikler/hyttesalget-pa-fjellet-i-taket-i-pandemiperioden.

> Before the Covid lockdowns, I didn't know where to spend my days and where I'd live the coming week. I was in Stockholm and other cities during weekdays and tried to be home in Oslo in the weekends. It was stressful before Covid, but even more during Covid because of the quarantines when travelling between countries. But having a home-office when possible was a dream for my life [*en drøm for livet mitt*]. To get here [to the cottage] is a liberation [*befrielse*]. To run in the forest or go skiing, those things are fantastic. When I see my colleagues in London and Paris sitting in small apartments without balconies with little children, it's a big difference. We are lucky.

I asked if they could elaborate more on the decision to buy the cottage, and Sarah continued:

> I've always lived in parts of Oslo where I've spent one hour in the rush each way, to and from work, every day. There is no point in that. And showing the boss that one is physically at work as much as possible? It doesn't say anything about what you achieve. We live in some prehistoric structures but where reality is in fact giving us some other opportunities. Staying long-weekends in the cottage, working from here, driving up before Friday and down on Monday [after most weekend visitors who leave on Sunday evening] to avoid the rush is efficient and reduces the use of energy too, making it better for the environment.

While talking, Stig received a phone call and left us rapidly for the bedroom. I could hear that the conversation was business related. He eventually closed the bedroom door and continued his conversation there. Sarah bent over the table that separated us and said softly: "When living with someone, it's also easier to get more time together if we can work from the cottage. That's my wish." Looking out of the window over the hilly landscape, Sarah carried on:

> It's really nice to just sit here, knit and watch the sunset. And it's so fantastic getting out to the fantastic Griugfjell [local mountain] and get that infinite view of the landscape. In an everyday life where everything is stressful and one ought to maximise everything in minimum time, that gives me such unbelievable joy [*en sånn ufattelig glede*].

Other cottage holding interlocutors also emphasised the value of escaping the accelerated pace of the city when getting to Valdres. William, for instance, has a busy business career in Oslo but has stepped down from a leadership position to work part-time and spend as much time as possible with his wife Kari at their cottage in Valdres:

> Our cottage means a lot. It is a free space [*fristed*] where you leave the city and work and stress behind. When I worked full-time, I got myself in the car every Friday, got up here on Friday evening. It's a free space where your mind is in another mode [*du får en annen setting i hodet*]. You experience the view, sun and mountains and easy access to outdoor life to keep in shape. It without doubt gives some additional values [*tilleggsverdier*] you won't get in the city.

Oda and Knut, a couple in their 50s also from Oslo, that I met after the annual meeting of a cabin association in Valdres, talked to me about their cottage's significance for them:

> It's the freedom to just go out and spend every day being outdoors, from eating outdoors to be on longer hikes. It's actually too far to drive from Oslo, about three hours, which means a whole workday in the car. And then the rush in addition. But it's still so lovely [*deilig*]. One knows what one is coming to [*hva man kommer til*]. It's the peace one is experiencing in just another way [*ro som senker seg på en annen måte, altså*].

Oslo is known for having nice outdoor areas, but Oda meant it was different coming to their Valdres cottage:

> The difference, I think, is that here one has dedicated a full weekend to not do anything else, whereas in the city you have things around you all the time, with the washing machine and 'I should have fixed that', you know. Here, we just . . . yeah, we cut some firewood and . . . nothing is urgent. It's setting aside the time to do nothing, really. We don't really do that at home. It's the freedom. To wake up in the morning and look out the window. And know that you're not in the city. Knowing you can . . . of course that you are free of work and these things. But it's a feeling. I think it is simply wonderful to wake up in the cottage.

Oda's husband Knut continued:

> It's the silence [*stillheten*]. Having the window open during night and just hear the whisper of the river or the wind. In Oslo, we can hear the noise from the tram over the whole hill [*skrangle i hele åsen*]. But here it's quiet. It's wonderful. And the view. We have a view at home too, so we can't complain but still. It's something about the mountains that gives a particular calm [*gir en egen ro*].

For Sarah, Stig, William, Oda and Knut we may say that particular places (the spatial context of their cottage) and particular manifestations of time (what happens when at the cottage) have agency. Or put differently, that experiences of time require a particular social and physical environment in order to manifest themselves.[37]

Shaw provides examples of studies that show how geography has a large impact on the pace of life.[38] This has been measured for instance by the average time it takes to complete routine tasks, walking speeds (which is found to differ between urban and rural areas) and that certain American cities such as Boston are found "faster" and attract more Type A personalities (e.g., more aggressive and impatient) than Type B personalities (more easy going and relaxed). Shaw further suggests that when searching for a better quality of life, people seem to

37 See Bastian et al., "Introduction: The Social Life of Time," 290.
38 Shaw, "Winning Territory," 121.

find "place" easier to picture or think about than "time." Therefore, people often describe their experiences of the changing pace of life through the concept of place. With opportunities for relaxation and the spending of time with one's loved ones being a scarcity, particular experiences of time have become a selling point for many industries, especially tourism. A slower pace of life has become a new luxury, and lifestyle magazines and social media seem to equate the good life with the slow life. With a market-driven demand for a slower pace, "slow-down" has also become a commodity that places outside the big cities, including Valdres, capitalise upon.[39]

However, whereas my temporary migrant interlocutors tend to emphasise the *pace* in Valdres as a value – that is, that the countryside is comparatively "slower" and more "calm" than the "faster" city, my full-time migrant interlocutors questioned the relevance of this idea. While the motivations of part-time migrants were characterised by the desire to take a break from everyday life in the city, moving full-time to Valdres was more about regaining control over one's time in order to spend it on whatever one finds most meaningful. In the next section, I will discuss these motivations as they were expressed by some of my full-time migrant interlocutors.

The Rural Timespace as Increased Spatiotemporal Autonomy

On the way to a dinner party at the refurbished smallholding of the exurban migrant couple Ivar and Kari, I got a ride with Charlotte, a woman and outdoors enthusiast in her mid-30s, who moved to Valdres from a Norwegian city four years earlier. She asked what I had been doing that day and I explained that I was trying to write a chapter for this present book about time as a signifier for people moving from cities to Valdres. I presented my tentative impression that migrants found the countryside to embody a slower pace of life than the city did, upon which Charlotte quickly replied:

> I don't think it's about a slower time on the countryside, or that 'slow time' [*saktetid*] is important at all. I think it's 'self-controlled time' [*selvkontrollert tid*]. Like me, I like tempo, that things are happening continuously. But I want to spend time on what I like. I don't want to depend on the rush and specific rush hours and so on. It's not necessarily that

39 See Filip Vostal, "Slowing Down Modernity: A Critique," *Time & Society* 28, no. 3 (2019), accessed May 9, 2023, doi: https://doi.org/10.1177/0961463X17702163.

> things are faster in the city, or that the pace of the city is the problem. It's that others are deciding your time for you [*at andre bestemmer tida for deg*]. It's easy to think that the pace in the countryside is different. But it's really about determining your own time.

For Charlotte, to leave the temporal organisation of the city thus meant regaining more personal autonomy – that is, freedom to spend time on what she likes. She even pointed to the perceived slowness of the countryside as reflecting an urban bias based in fantasies as well as prejudice:

> I think the comparison between the countryside as slow and the city as fast is too simple. It's just based on an idea city people may have about how people in the countryside are or live. If I still lived in the city, I think I'd have more time to spare than here. I think one is freeing up more time for activities here. You can easily fill up your days completely, it's not 'either or' as in the city where you need to spend 45 minutes commuting to and from work, eat and change, and then ask the question: "do I still have the energy to go out and do something?" Perhaps it's so stressful that you end up not going out at all. But here, one has more time after work. Fewer obstacles. When sitting an hour in traffic each way to and from something in the city, I think time actually feels slower than it does here.

When Charlotte and I reached the smallholding of Ivar and Kari, we started talking about this book chapter about time again. Once again, I presented my notion that change of place perhaps implied a change of pace for urban-rural migrants like themselves? Similar to Charlotte, Ivar and Kari objected. As Ivar replied:

> For me it's not really about time, I think it's about having more space. Having the space to realise things I want in my life, like having a workshop, setting up the kind of house I'd like to have of traditional logs and so on. And having the space to grow a big vegetable garden, have some chickens and so on. We would never have that opportunity in the city. So it's more about having space than time, really.

Audun, a man aged 37 who six years earlier moved from Oslo to a smallholding in his native Valdres village with his wife and two kids, emphasised a similar spatio-temporal autonomy as key motivation for moving. Talking about what he found attractive about moving back to Valdres, he said:

> You have the opportunity to set up *your* [Audun's emphasis] life on the countryside. I mean that's the whole deal [*man har muligheten til å rigge sitt liv på bygda. Det mener jeg er hele greia*]. You can live in all kinds of ways. You can live on a low budget or earn a lot of money. You can set up your life as you want it. One example is Ana who has built a tomato business with a big greenhouse. And now she is selling to fancy restaurants in Oslo, like Maeemo [three star Michelin restaurant].

Charlotte, Ivar and Audun thus all point to more spatiotemporal autonomy as a motivation for moving to the countryside. The autonomy that they and other full-time migrants refer to often includes the desire to focus less on work and more

on leisure. This desire should be related to Marianne Gullestad's argument that autonomy (*selvstendighet, uavhengighet, selvforvaltning, selvråderett*) is a core cultural value in Norway that people seek in many domains of everyday life.[40] Emphasising autonomy means emphasising both the freedom *to d*o something and the freedom to *refrain* from other things and can thus be a culture specific way of handling boundaries.[41] Moreover, it is useful to relate it to the tendency in late-modern society where many people are discouraged by spending a disproportionate part of their life on meaningless work which they find psychologically destructive, as discussed by David Graeber in his book *Bullshit Jobs*.[42] This is pertinent to the relatively privileged middle class where the reduction of working hours is frequently seen as a route to greater freedom and wellbeing.[43]

Most of my full-time migrant interlocuters can be viewed as of this relatively privileged leisure class. Vilde, a woman in her mid-30s who is originally from Valdres, for instance, moved back from Oslo after 17 years in 2021 with her partner Ulrik and toddler daughter. Vilde elaborated on their decision to move as an explicit 'life choice' [*livsvalg*], as an alternative to their previous 'job choice' [*jobbvalg*]. A day we met for coffee, six months after their move, she told me that:

> The last couple of years we have lived mostly in Oslo to *work*, not so much to *live* [emphasis mine]. We always go away to do things, whether it is going to the mountains to ski, cycle or visit friends and family. Ulrik has wanted to move for several years, but I've always had good jobs in Oslo that I've liked very much. But during Covid, we were here [in Valdres] for two and a half months to stay with my father who had much space. Ulrik became keen to start a pizza place here and we started checking out some houses for fun. Then we found a house we really liked at the same time as Oslo closed down again [due to Covid-19]. We thought: 'what if we had to sit in the sad Oslo flat now?' We understood that it was time. I guess it was Covid that made us end up in Valdres but not that we moved out of the city. That was part of a larger plan we've had over several years. But as I said, I really enjoyed my job in Oslo so it was hard to leave. But in the end, it was about taking a life choice and not a job choice. That's what I'm reminding myself.

For Vilde and Ulrik, as well as other full-time migrants like Charlotte, Ivar and Audun, moving to the countryside has enabled a timespace that eliminates ob-

40 Marianne Gullestad, *The Art of Social Relations: Essays on Culture, Social Action and Everyday Life in Modern Norway* (Oslo: Scandinavian University Press, 1992).

41 Halvard Vike, Hilde Lidén and Marianne E. Lien, "Likhetens virkeligheter," in *Likhetens paradokser: Antropologiske undersøkelser i det moderne Norge*, eds. Marianne E. Lien, Hilde Lidén and Halvard Vike (Oslo: Universitetsforlaget, 2001), 20

42 David Graeber, *Bullshit Jobs: A Theory* (New York: Simon & Schuster, 2018).

43 Ursula Balderson et al., "An Exploration of the Multiple Motivations for Spending Less Time at Work," *Time & Society* 30, no. 1 (2021), accessed May 9, 2023, doi: 10.1177/0961463X20953945.

stacles that previously separated them from the lifestyle they find most desirable. As for many exurban migrants in Valdres, however, the countryside and city are not entirely separated. Vilde, for instance, has continued working 50% as consultant for an Oslo based company which pays 30% more than her other 50% job in Valdres. The extra pay is useful for her and Ulrik's rural lifestyle which includes refurbishing an idyllic traditional farmyard.

As we will see in the next section, many of my exurban interlocutors, both full-time and part-time, retain their rural timespace by maintaining similar connections to the city. It is therefore necessary to talk of a *continuum* between the urban and rural rather than a sharp distinction between them, a perspective scholars of (r)urbanity have discussed for decades.[44] Moreover, because the exurban migrants shuttle so much between the city and countryside, I argue that they have not simply exchanged "city time" for "rural time" when they moved. Rather, both part- and full-time migrants introduce new layers of time in their lives which in sum produces their distinct exurban timespace.

The City's Place in the Rural Timespace

Lina and Henrik, a couple in their early 40s, bought a cottage in Valdres six years before the start of my fieldwork. They were living in a Norwegian city I call Havby and wanted a cottage in order to stay closer to nature. For them the experience of being in the village where their cottage is located was transformative. After six years as cottage owners they therefore bought a house and moved permanently in 2021. During the two-year period I got to know them, they often expressed how much they appreciated their new lifestyle in Valdres and how much flexibility it enabled in terms of a wide variety of activities and travelling. However, in order to maintain that rural lifestyle, Henrik is keeping his job in the culture sector in the city, to which he mostly works remotely. Lina was also given the opportunity to work remotely from her workplace in the city, but decided to find a local job as she wished to be physically present with colleagues on a daily basis. Henrik easily admits that the main reason to keep his city job is the salary. As he told me once we talked about job futures: "If I got a job in Valdres, I would have to go down NOK 150,000 (approx. EUR and USD 15,000) in annual salary. I'm

44 E.g. Francisco Bienet, "Sociology Uncertain: The Ideology of the Rural-Urban Continuum," *Comparative Studies in Society and History* 6, no. 1 (1963): 1–23; Mary Bente F, *Bygdeutviklingas paradoks* (Oslo: Scandinavian Academic Press, 2012).

not interested in that if I can keep the pay and the freedom so we can travel and live the life we want."

Henrik drives to his physical workplace once every two weeks to stay for two or three days. These trips also allow him to maintain his main hobby, ice-skating, as Valdres has no ice rinks. Even though the drive of five hours can be exhausting, it also provided a space for meditation and rest that Henrik appreciates. The new kind of time he enjoys in Valdres, the new rhythm of work, and the spaces and practices between them all constitute new layers of time that make up Henrik's exurban timespace.

After moving to Valdres, Lina and Henrik have invested much in local relationships while also retaining friends from the city. The *kind* of time they get with their city friends and family who regularly come to visit have changed character after they moved, Lina told me once I visited:

> When friends and family come up here for a weekend, we get time to really be together, have good conversations and not just meet over a coffee here and there. They are excited about coming here and we get to be closely together over time. It helps growing stronger relationships. City friends are actually saying that it's a better way of being together when we are here, and I agree.

The *kind* of time Lina and Henrik experience with city friends and family in Valdres can thus be another new layer of time that has been added to their lives after moving, and that is part of their exurban timespace.

Ingrid, a migrant from Oslo in her mid-30s, who had lived in Valdres for five years with her husband and two children when I started fieldwork, have also introduced new layers of time in her exurban world. One is consciously setting aside the time for social media communication with friends in Oslo. As she told me once: "I'm conscious to daily send Snapchat messages with my best friend in Oslo. It's so simple but still so important. That daily contact where I don't feel like I have moved completely away. I think that's necessary for feeling good here. That I feel I haven't lost them." Another layer is the experience of feeling close in time to people that are important to her in the city, which provides her with a sense of agency as she can realise desires related to her rural life while retaining closeness to people and interests outside of it. As she explained it:

> What's unique here in Valdres is that I can take the bus for three hours and then be downtown Oslo. It's the connection to the city that makes me feel that I'm not so far away. I don't know if it would be the same if I lived further away. An important mindset for me is also that 'yes, I'm here now and doing this, but I'm not necessarily going to live here for the rest of my life'. Otherwise, I wouldn't have enjoyed so much being this 'city girl on the countryside', which I really like.

Similarly to Lina, Henrik, Vilde and Ulrik, Ingrid is thus not simply exchanging her city time for rural time, but engage in new layers of time which are aggregates of the two. The same can be argued for several of my interlocutors with a cottage in Valdres. For many of them, a typical reason for choosing Valdres is the relatively short travel time from Oslo, which creates a proximity between their de-stressing rural time and their everyday life in the city. As Sarah told me when listing the benefits of having a cottage in Valdres, specifically: "The value here is this wonderful light, the access to ski tracks, that there's people but little traffic, that there's a lake reflecting the sun, and that it isn't very far from Oslo." The quality of life that follows from combining the rhythm of the city and the rural was also emphasised by Bente, a woman in her 40s, who together with her partner spends about half the time at their cottage in Valdres and half the time in the city:

> There are many possibilities in the city, but there's a different latitude [*handlingsrom*] here, another freedom. It's a not a stream of impressions the whole time. I work remote while here, so a lot is happening on the job front which means I get to challenge myself. And maybe it's something in that contrast? If I lived full time here and maybe had a boring job it would probably be different. But now, I get to challenge myself in my [city] job during daytime and take it slow in the evening. I think the ideal way of living for me is like I have it now, to have both places, the cottage here and the city.

In this sense, the exurban life of migrants like Vilde, Ulrik, Lina, Henrik, Ingrid, Sarah and Bente can be seen as a complex web of interdependencies that make up their own feedback-loop, where the output from the urban is constantly used as input in the rural, and vice versa. Similar to Victor Turner's notion of the dialectic relationship between structure (everyday life) and anti-structure (ritual), migrants find their rural timespace to infuse them with new agency and vitality – but this potential is only realised because they can also take breaks from it to realise other needs and desires.[45] Thus, the rural experience that most of my full-time and part-time migrants value so much is not a result of rural qualities alone. Maintaining a continuum with the city gives the migrants some economic, psychological and social benefits that they would not have without this enduring connection.

45 See Victor Turner, *The Ritual Process: Structure and Anti-Structure* (New Brunswick, NJ/London: Aldine, 2008 [1969]), 129.

Conclusion: The Exurban Timespace

In the chapter, we have seen how various notions of time are arising from particular configurations of relations, interrelations and dependencies.[46] When in the rural environment, my interlocutors are not only *in* a certain experience of time, they are constructing it through the relations they form with themselves and others and various reference points. The process of living in the countryside is thus a spatio-temporalisation going on in multiple forms continuously, consciously or unconsciously.[47] However, for many urban-rural migrants, a good life in the countryside depends on being connected to the city. In this way, the urban-rural migration is not simply a protest against the compression of time in the city that many state that they want to escape. Neither is it a simple embracement of a "rural time" which is outside of "city time." Rather, I suggest that it is joining the two in new layers of time which constitutes a specific exurban timespace. From one perspective, the exurban migrants' escape from the city can thus involve some paradoxes and contradictions: if exurban migration is a protest against the ever-increasing pace that is claimed to characterise late modernity, it can also be seen as a symptom of it, as people refuse to let go of the city's opportunities while also wanting those of the countryside. For many of my interlocutors who have the opportunity and who manage to strike the balance, however, the combination appears to provide a high degree of fulfilment of options and choices as they seek to meet their desires and conceptions of a good life.

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46 Bastian et al., "Introduction: The Social Life of Time," 291.

47 Munn, "The Cultural Anthropology of Time," 103.

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Part III: **Time as Lived Experience: Living Your Time at Your Own Pace?**

Hanne Thommesen

10 While Time Comes and Goes, They Keep Struggling Along. How people with mental health and drug-related problems experience time

Introduction

In this chapter, I will explore how people with mental health and drug-related problems experience time, how this influences their everyday life and social participation. The background for this theme is the common observation that people with drug and mental health issues often have problems interacting with broader society at appropriate times. The opening chapter in this book raises an intriguing question about the nature of time and the potential challenges society may face with its acceleration. This chapter delves into the complexities surrounding our understanding of time, particularly for individuals with mental health and drug-related problems. However, it will be revealed that reaching a consensus regarding a specific time proves challenging for those interviewed. There was even a difficulty of understanding the time and fixing the time for the interview, i.e., agreeing on something taking place at a particular time is difficult for them.

Many fairy tales begin with the phrase "Once Upon a Time." These opening words implicitly direct us to understand time in a linear mode. Our wristwatches do the same. This way of looking at the time tells us that time is linear and goes from past to present to the future. Days come and go, and we progress from being children to being elderly. We discuss what happened yesterday and what we should do tomorrow as if time is the same everywhere. In physics, Carlo Rovelli says time is different for every point in space.[1] There is not one single time; there is a vast multitude of them. George Woodcock claimed that clocks transformed time from a "process of nature" to a commodity that could be bought and sold on the market.[2] Watches or "objective time" can organise everyday life and drive us forward. Although all this may be true, the people I have interviewed claim something else. They claim that time is perceived as an ongoing flow of events, activities, thoughts, and bodily flashbacks. To live an ordinary everyday life is not that easy

1 Carlo Rovelli, *The Order of Time: An Enquiry* (London: Penguin Books, 2019).
2 George Woodcock, *The Tyranny of the Clock* (The Anarchist Library, 1944).

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for them. The problem is that they all dream about living an ordinary everyday life, but it seems they do not manage to create one.

The interviewees proclaimed that time, for them, is a way of "struggling along," as Desjarlais calls it in his book, *Shelter Blues. Sanity and Selfhood Among the Homeless*.[3] In other words, time is organised in sequences and periods, not as a continuous process forward. Therefore, time is a difficult concept for the participants in this study, and they experience themselves as deviant from other people. Usually, when one debates the lack of participation in society among people with disabilities (or, as here, mental health and drug-related problems), one asks whether this situation is due to their lack of ability to participate or society's failure to integrate people with disabilities or is attributable to both explanations.[4] My informants' stories and descriptions made me realise that many people with drug and mental health issues perceive time differently than most. In this chapter, I will show that the lack of social participation may be due to the way that people with mental health and drug problems understand or misunderstand time.

In the following, I will outline some theories relating to how people with mental health and drug-related problems experience time in their everyday lives. After that, I will detail the methods used to collect data. In the next part, I explain how people with health and drug-related problems experience their youth, their trouble in everyday life and their understanding of time. In the end, I have concluded.

Time and Everyday Life

Time is relative, situation-dependent, place- and culture-dependent, and subjective.[5] Nevertheless, we treat time as if it is objective. We share standardised time and depending on it for almost everything we do. For example, we rely on a standardised notion of time when living a social life and keeping appointments. Barbara Adams proclaims that living beings have a sense of time, like internal bioclocks.[6] She says that people are rhythmically organised, which endows them with memory, the capacity for planning, and the ability to relate adequately to others.

3 Robert R. Desjarlais, *Shelter Blues: Sanity and Selfhood Among the Homeless* (Philadelphia: University of Pennsylvania Press, 1997).

4 Michael Oliver, *Understanding Disability: From Theory to Practice* (New York: Palgrave, 1996).

5 Jacob Dahl, *In Search of Time: Understanding the Nature and Experience of Time for a Better Life* (London: LID Publishing, 2022); Rovelli, *The Order of Time*; Barbara Adams, *Time and Social Theory* (Cambridge: Polity Press, 1990).

6 Adams, *Time and Social Theory*.

"Struggling along" is Desjarlais's term to describe the experience connected to cultural, social, and political services, and to time.[7] In his fieldwork at a night shelter in Boston, he discovered that the people who lived at the shelter did not always process experience in the expected way. The residents' time was structured by the opening hours of the group home. Time for the people in residence was organised in terms of sequences and periods, not as a progressive process. The here and now could be filled with activity in the night shelter but could also be forced by some necessity to take place elsewhere. Filling time – struggling along – became the residents' way of being in the world. To escape from, for example, the cold in the streets, the residents forced themselves to step out of the linear manner of organising time. They often stopped experiencing reflexively by disconnecting the activity from thoughts. They did this by performing relatively meaningless and repetitive movements. The days, weeks and months did not become a coherent whole because the parts were not connected. The pieces did not form a linear whole. Desjarlais describes it like this:

> Too much calm can get to a person, after a while. An idle mind, after all, is an ill mind, and pacing and other activities help lessen the worries of living in the shelter. The trick is to keep the senses within the equatorial lines, to find the "grey area" between sensory vitality (which can include hearing voices) and walking around in a stupor.[8]

Charmaz writes about people who are chronically ill. She says that many of them relate to time in new ways.[9] Maybe they have little time left, or the pain occupies all their time. Nevertheless, time usually becomes an issue when a person gets ill. People with chronic illnesses and intense pain can have good and bad days. They tend to take one day at a time to cope with the bad days. Charmaz states that living one day at a time differs from existing from day to day. In her words, living one day at a time means having a strategy for controlling pain and emotions to get through troublesome periods. Existing from day to day means getting through the days and life beyond control. If a person exists from day to day, he or she lives only in the present. The long-term outcome of this way of living is that they do not think about how their actions today have consequences for tomorrow. The future will fade, and the here and now is all there is. Time is no longer a continuous process.

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7 Desjarlais, *Shelter Blues.*

8 Robert R. Desjarlais "Struggling Along," in *Things as They Are*, ed. Michael Jackson (Bloomington, IN: Indiana University Press, 1996), 87.

9 Kathy Charmaz, *Good Days, Bad Days: The Self in Chronic Illness and Time* (New Brunswick, NJ: Rutgers University Press, 1997).

Charmaz also stated that a time frame denotes how a person frames, organises, and uses time. In contrast to this, a time perspective relates to ideas and opinions about the content and structure of time and how time is experienced. The difference lies on the one hand, in how a person uses time, and on the other hand, in how they must reshape their perception of time based on what the body allows the person to do at any given time. When the pain and disorientation become too excessive, time ceases to be linear but breaks into fragments, replays and blurred images of the present.

To study the way a group of people participates in society the researcher must look at the everyday lives of those included in the study. Everyday life consists of days that come and go. These days, each of us must fill our lives with content and meaning. Over time, such days turn into weeks and years, and if people look back, all these days become their life. In such an understanding, everyday life is the life each of us lives, maintains, renews, restores, and transforms daily. The days in a person's life are often organised in a similar way. The person gets up and goes to bed at roughly the same time every day. They eat several meals a day, usually at approximately the same time. When the seasons change, the person pursues more in the way of outdoor activities and wears clothes suitable for the season. Therefore, every day and season usually has a fixed rhythm. However, is this way of thinking about everyday life valuable for the informants in this study given that they say that time is a difficult concept and that they perceive time as an ongoing flow of events?

Method

This chapter is based on a fifteen-year-old sociological study about everyday life and self-perception of people with mental health and drug-related problems, or so-called dual diagnosis.[10] The data from the study regarding time and participation has never been analysed and published before. The data material consists of 47 research interviews conducted over two-and-a-half years with seventeen people, ten men and seven women. All seventeen were interviewed between two and five times, and their average age during the first interview was 26 years.[11] The interviewees were given fictional alphabetical names in the order they were in-

10 Hanne Thommesen, "Hverdagsliv, selvforståelse og dobbeltdiagnose. Om mennesker med uvanlige erfaringer" (PhD Thesis, Høgskolen i Bodø, 2008).

11 The study is approved by the Norwegian Social Science Data Services (NSD), now SIKT – Norwegian Agency for Shared Services in Education and Research.

terviewed, from August to Rita. Through the interviews, I gained access to their personal stories. I use quotes from some of the stories in this chapter, but the conclusions are based on all the interviewees stories.

All informants had been diagnosed with mental health diagnoses, and all said that one problem was that they had ongoing thoughts that kept their minds busy. Many thoughts were spinning around in their minds, and they experienced this as an extensive noise inside their bodies. They called this phenomenon a 'mind rush' [tankekjør]. They all took different drugs (some on prescription and some illicit) to stop the rush in their mind. As Bendik said: "Once the high sets in, my mind get slow and fuzzy. The head becomes silent."

There is a widespread understanding that a generalisation problem exists with regards to qualitative research data.[12] If the results are treated as truthful propositions of knowledge rather than absolute statements of truth, the study could have a useful impact. According to Andenæs, the transfer value of the results must be discussed after the survey has been completed.[13] She emphasises that one should be more concerned with where the result of the study is going than just explaining where the data comes from when discussing the study's transfer value. Although a study with only seventeen young adults cannot constitute statistical support for the claims about the understanding of time by people with mental and drug-related problems, the study highlights important aspects of this. At the same time, the study sheds light on these people's social difficulties in participating in society.

As mentioned, the empirical data in this survey is more than fifteen years old but, in my view, it is still relevant. The perception of time among people with mental health and drug-related problems does not change over time. The internal noise from wiring thoughts and the drug's time-cancelling effect are timeless. In 1953, William Burroughs wrote about "time" in the book Junkie (later: Junky) in the same way my interviewees talk about it: "A junkie runs on junk time. When his junk is cut off, the clock runs down and stops. All he can do is hang on and wait for non-junk time to start. A sick junkie has no escape from external time or place to go. He can only wait."[14] Nevertheless, many people will say that understanding time is more complicated today than it was a few years ago. The ongoing digitalisation of the welfare state further increases the complexity of understand-

12 Donald E. Polkinghorne, *Narrative Knowing and the Human Sciences* (Albany, NY: State University of New York Press, 1988).

13 Agnes Andenæs, "Generalisering: Om ringvirkninger og gjenbruk av resultater fra en kvalitativ undersøkelse," in *Kjønn og fortolkende metode*, ed. Hanne Haavind (Oslo: Gyldendal Norsk Forlag AS, 2000).

14 William S. Burroughs, *Junky* (London: Penguin, 2003), 72.

ing time for people in the life situation like that of these informants. Digitalisation of the welfare state makes access to services even more strictly time and clock dependent, and thus even more difficult to handle for people that plunder with both technology and time.

Mind Rush is a Disturbing Part of Everyday Life

Mind rush is a difficult thing for the interviewees to describe, but understanding this phenomenon is essential if we are to understand how they regard to the concept of time. August had to think before explaining. When he finally spoke, he described it as sequences of thoughts forced upon him. He said: "It involves thinking the same thoughts repeatedly." The lack of ability to express what is problematic makes the interviewees feel lonely and makes their everyday life difficult. This also contributes to why they do not always receive proper help and are not met with the necessary degree of understanding.

It is not just August who needs help expressing what mind rush is. Grethe said the following: "My head spins round so quickly. All sorts of things go around in it." What spins around in her head is associated with absurd thoughts about injustice. This involves events, things, or fantasies which become challenging for her. It may be things she sees or experiences that become drawn into her thoughts. Sometimes the spinning becomes so intense that she can feel and hear what she is thinking. She says it seems like she has other people's voices in her head. She can have conversations with these voices, and she often does. However, the internal discussions distract her from what is happening around her. She becomes detached, and time disappears.

Bendik also ponders when he must talk about mind rush. He says he is afraid of multiple options. This has resulted in him producing arguments – both for and against – rather than considered decisions. He makes statements at such a speed that it affects his everyday life. His thoughts sometimes develop into absurdities that he does not understand, leaving him unable to act. He becomes unclear as a person, both for others and for himself. His body turns heavy as lead, and he cannot get out of bed, much less keep track of appointments and the clock time. The internal noise from thoughts results in a lack of concentration, which results in events appearing as fragments or separate episodes. Mind rush is a constant torment for all the informants when they have bad days.

Mind rush is a mental challenge but also physical. Liv describes how her thoughts and feelings are physical and produce pain in her body. Dagfinn tells how his emotions make him depressed and that he feels the depression as physi-

cal pain. Egil describes thoughts that make him throw up. When Konrad had to talk about his mind rush, he said that "it itches inside the body." The turmoil in his body always makes him "want to get his hands on something." It seems to him that his body is active even though his exterior is calm. He says he cannot relax and has to relieve the pressure in one way or another. The problem is that the pressure is often expressed as aggression. Like Konrad, most interviewees report that the mind rush may be transformed into aggression. They describe temperament as a symptom of mind rush, not the problem itself. For them, aggression is a manifestation of a troublesome mind. Jenny says: "It feels as if my body is going to explode." The turmoil or pressure in her body is also often expressed as aggression. This led to conflict during her childhood and teenage years. However, she claims that her arguments were never heard because her aggressive behaviour overshadows the causes of social conflicts. Several interviewees spoke about how their thoughts can make them overactive and unable to act. They also emphasise that they cannot manage to calm themselves to get the rest they need, which means much trouble with sleep. The pressure or turmoil in their bodies must get out, which is incompatible with rest. The days and nights mix, and they lose track of time, days, and weeks.

Each of us can experience the feeling that our thoughts are disconnecting us from what is happening in specific situations or for brief periods. Our head fills with sorrow, social uncertainty, or something as banal as a song. This may be experienced as troublesome, but the vast majority of us manage to control the phenomenon. In contrast to this, the interviewees describe how the whirring from their thoughts has become more and more constant. The form and intensity of their thoughts sometimes makes it difficult for them to function in a way they and those around them expect them to. Many thoughts are whirring in the interviewees' heads, and separating one thought from another is difficult. Their thoughts are mixed, and everyday activities and social relationships become problematic because they often live in another time frame than others.

To sum up, the tormenter in the body causes the hours and days to be mixed, and the lack of sleep makes it difficult to separate days from nights and compromises the ability to track time. As a result, they are rendered inactive, and what is happening around them is difficult for them to understand. It becomes challenging for them to make plans, keep appointments, get enough to eat, and drink, look after their health, and keep up an ordinary job and everyday life. Time is just an ongoing flow of action and events.

Their Life is an Ongoing Flow of Housing, People, Events, and Activity

The young people in this study have experienced many strange things, and everything they have been involved in seems like an ongoing flow of unusual experiences. Moreover, these experiences are mixed. They do not remember when things happen and even if these things have happened at all. Because of their mind rush, they often are unsure if it is something they just have thought about or if it is reality.

The interviewees have lived their personal lives in relation to many people, their so-called meaningful others.[15] These people are not necessary in their life today. Their unstable life and relationships have given them a mind rush and a confusing view of time. Dagfinn grew up in a traditional childhood home with a mother and father, but this is not the rule among the seventeen interviewees. Ten informants were placed outside their childhood homes with help from the police, child protection or the health service. The placements outside the parental home were based on the child's (the informant) disruptive behaviour or psychological problems. It is important to remember that what the researchers, service providers and other adults talk about as placement is for the child to move from their home and parents.[16] Many informants placed outside their childhood homes run away from these "new homes" to live in random accommodation or on the streets. Their siblings were not moved from their parent's homes by the authority. The discrimination between siblings made the interviewee feel that the family disliked them. The seven interviewees who lived in their childhood homes say that they operated independently in their childhood without a sufficient degree of oversight from their parents. This means that most of them spent parts of their childhood in transit between different random places of residence.

The unique thing about the informant's family relationships is that they often represent floating and unfixed points of reference. Parents, stepparents, foster parents, institutional educators, employees in child welfare or psychiatry, siblings, stepsiblings, foster siblings, and institutional siblings tend to disappear over time. This means the interviewees' "family" was constantly changing. Old members disappeared, and new ones were added. Many relationships become close, but at the

15 George H. Mead, "The Problem of Society: How we Become Selves," in *Movements of Thought in the Nineteenth Century*, ed. Merritt H. Moore (Chicago, IL: The University of Chicago Press, 1936).

16 Agnes Andenæs and Kaare H. Skollerud, "Flytting i offentlig regi," in *Barn utenfor hjemmet: Flytting I barnevernets regi*, ed. Elisabeth Backe-Hansen (Oslo: Gyldendal Norsk Forlag, 2003).

same time, they become less stable over time. A brother or cohabiting child today may become a stranger tomorrow, and vice versa. These experiences develop a new type of family which is, in principle, limitless. The interviewees' borderless family is based on emotional and physical closeness. This means that institutions' residents/patients and staff can be seen as a family, while biological parents and siblings can be seen as strangers. To define the interviewee's childhood home and family, the starting point must be the interviewee, not their biological family.

The informants have continued to move in adulthood, and most of them have experienced living in various institutions, different homes and on the streets. As I see it, they have lived many "different lives" with several people, in an ongoing flow of relationships and homes. This ongoing flow of relationships has made them afraid of close relationships and unsure in social settings. The lack of confidence means they no longer seek out other people if they need to talk to someone for support. If, contrary to the presumption, they do, they need to meet a human being and not an online mapping form, which is common when seeking services from the welfare state today.

Their work and financial situations have always been uncertain. Most of them live in an ongoing flow of work and activity to get money. Just two had lasting jobs when I met them. Dagfinn has been a carpenter ever since he got his diploma and throughout his period on drugs. His working relationship has been interrupted by four prison terms and a lengthy sick leave. Konrad got work after he became a heroin addict. He works at a harbour loading goods. He can do so because of his agreement with his boss. The agreement says it is acceptable to be on drugs while working if he does not take heroin with him to work. This is a functional deal; he has had the job for many years. Jenny has also had a stable income not through work but through social security payments. Still, all interviewees have depended on obtaining money for food, clothing, and housing. They said they have lived on student loans, social security, financial help from parents and periods of begging. Several of them have also had many odd jobs, most of which can be called undeclared work. Some of these work activities are criminal in nature. For example, Egil says he had been involved in multiple forms of financial illegality: "It has been everything from simple theft to grand burglary, theft and fleecing the family (. . .) everything possible." In addition, several of them have smuggled and sold drugs.

These fluctuations have contributed to them feeling that their course in life is not connected, and life is lived in sequences. Time is not linear, and life is not stable. The interviewees have used different coping strategies to deal with their constantly changing life and mental problems. Some of them cut themselves to stop the mental and physical pain, but most of the time they take drugs. Often, they take drugs on a doctor's prescription, but often they also take drugs that

they have purchased illegally. One of the downsides of doing drugs is that the drug amplifies their ability to understand time in the way others understand time. The interviewees remember something, but most disappear in buzz and fog. They plan and make agreements but fail to follow through on scheduled tasks since their time is lost in a massive train of thought and sequential living. Rita says she understands that time is linear and constant because an hour is always an hour. She also understands that time goes from the past via the present to the future (time perspective). However, Rita says that time is only sometimes experienced this way. She has experienced that the time frame can change from being linear and constant to becoming diffuse and fluid, an ongoing flow. She says, that

> [i]t is incredible how time flies. I hardly perceive that it is one season before there is another . . . I cannot keep up . . . Before, I could not sleep at night and woke up sick in the morning. I was ill all the time. Then it will be a completely different time frame, but time passed quickly. That is why it was so hard to get hold of anything. It was just noise and noise the whole time. I fail to show up for some things. It is impossible to follow up.

To sum up, the informant stated that life is an ongoing flow of housing, people, events and activity in the present life and childhood. Looking back, they mix memories and time and cannot say when different events in their life happened. Their perception of time can be understood as a sequenced forward process. However, as we shall see, the informants' understanding of time is more complex.

The Past, the Present, and the Future

Truls Wyller proclaimed that he could look forward to something in the future and regret something in the past.[17] He says it makes no sense to look forward to something he has done or regret something he will do. The interviewees, on the contrary, talk about bodily flashbacks. This phenomenon, they say, mixes the past and the present. It transforms time from a linear dimension to an unpredictable phenomenon.

The interviewees state that the body remembers what has been done to it: to them. This means that the past must be relived in the present. The time dimension is cancelled, and a person is back in the past. Jenny cut herself when the pain and wiring in her body became overwhelming. If she uses drugs, her need to cut herself diminishes. She used both drugs and cutting as protection against her physical recollection of sexual abuse during her childhood and youth, against

17 Truls Wyller, *What Is Time? An Enquiry* (London: Reaktion Books, 2020).

flashbacks. Her body's recollection relates to the awakening of specific memories. Every single day she relives the sexual abuse which she was subjected to during her childhood. She senses the taste of the abuse in her mouth, smells the abuser with her nose, and feels the abuser on and in her body. The body remembers the abuser and the abuse, and the abuse is relived even many years after the last incident. Thoughts, senses, and the body are occupied by a mind rush related to the abuse, and there is a great need to reduce the discomfort. Jenny puts time and tasks on hold and does the same as the men and women in Desjarlais' study – floats away with the help of meaningless (thoughtless) activities – struggling along.[18] Since she discovered that drugs help her with the flashbacks, she has used drugs on prescriptions from doctors but also illicitly to avoid these memories. The mental pain is of such a nature that she must have an outlet, and both the cutting of herself and the taking of drugs relieve the pressure in her body. These coping strategies free her from flashbacks but give her body marks. These marks are visible to people around her. Her body thus draws attention to her trouble, and people around her keep her at a distance. That is good on the bad days but gives her trouble in social settings on good days.

However, the trouble is that the bad days give the informants an unusual way of understanding time. They have experiences in the past that give them trouble in the present. Flashbacks and mind rush make it challenging to experience time as a linear concept. Time is experienced as an ongoing flow of fragments. These fragments are repeatedly experienced, and the person cannot associate the experience a being part of a timeline. Anna Kirkengen defines flashbacks as feelings that arise suddenly and are about something in the past.[19] Time gets linked to experiences which are so severe and life-threatening that they leave behind damage. Time becomes hard to conceptualise as something associated with an orderly linear progression of events.

Three men and four women, including Jenny, talked about experiences of sexual abuse. Most of this abuse occurred in childhood before they became drug users and before the mind rush became troublesome. None of the interviewees is asked directly if they have experienced sexual abuse. Therefore, more than these seven may have had this type of experience.

In addition, several of the informants have experience with other types of violent incidents that continue to bother them. For example, Konrad said, "I was kidnapped once and beaten up. Not a few punches, but a hefty beating." This informant also has other experiences that include violence. These violence events

18 Desjarlais, *Shelter Blues.*

19 Anna L. Kirkengen, *Hvordan krenkede barn blir syke voksne* (Oslo: Universitetsforlaget, 2005).

give him a mind rush and flashbacks today. Such unforeseen events are relatively common in the environments the interviewees frequented but not so much in most people's environments. The term flashback is used not only for specific events. Flashback also describes unpleasant sensual experiences that may occur long after having taken drugs.[20] Therefore, someone suffers from bad trips here and now but also experiences them long after they occur. The time dimension is lifted, and the person is back in the past. All the informants have experienced so-called bad trips. These bad trips can come back as flashbacks at any time and in any social setting. This means that most of them fear this will happen in inappropriate situations. When they experience flashbacks, they are unable to function normally. Bad drug trips bring the past into the present. The present becomes connected to the past so that today disappears, and time as a continuum is ended. For example, Cato says: "Reality became completely distant, and it becomes scary. In retrospect, experience has persisted, and I have experienced it repeatedly . . . intense flashbacks."

To sum up, flashbacks, both from drugs and sexual abuse or other trauma, remove the sense that life is being lived as part of a timeframe. They understand that time goes forward, but the collective impact of their traumatic experiences fools them into thinking that this is not the case. As shown, painful experiences in the past can overshadow the present and the future. The consequence is that time becomes a difficult concept to relate to for the informants.

Deviant Attitude in Society

The participants in this study see themselves as different from the majority, and the majority often see them as deviant. Maybe they were unusual children, maybe not. In any case, their life has contributed to the fact that they have had more and more unusual experiences, and their life has become more and more different from that of people whom society considers to be "normal." This has resulted in the accumulation of visible physical scars on their bodies. These scars are noticeable to the outside world, and most people define the interviewees as outsiders and deviants as a result. They are different both in the eyes of the majority of the population and in their own eyes.

Howard Becker uses the term "outsiders" to refer to individuals or groups whom other people define as deviants and who thus remain outside the circle of

20 Babette Rothschild, *Kroppen husker – om krop og psyke i traumebehandling* (Copenhagen: Forlaget Klim, 2000).

"normal" members of society.[21] He stresses that labelling someone a deviant – outsider – may push the person further out towards the margins of society than they otherwise might have gone. A vital point here is that deviation results from a process involving other people's reactions to the actions of the person being labelled as deviant. Becker's theoretical project does not involve explaining the essence of deviation. Instead, his research aims to describe how social categorisation affects the lives of those categorised as deviant. The marginalisation process often goes on over the years – over days that come and go – but the essence is that some people do not live their lives in ordinary ways according to commonly accepted cultural and moral norms. Instead, they are active in the community in a way that the majority does not accept – like the informants in this survey.

In childhood, the young people in this study experience the sense of not fitting in with their families and community. This may involve innocent circumstances such as, for example, being more aggressive than their siblings, behaving like girls when they have masculine bodily features or the reverse. In school, some of them like schoolwork better than leisure activities, or wearing different types of clothes than other children of the same age. In adulthood, this may involve having experience being homeless, abusing narcotic substances, criminal activity, or imprisonment. People who participate in activities not accepted or understood by society can fall outside the social community. In their short life, the interviewees have experienced bullying, illness, incest, rape and other violent episodes, diagnosis processes, homelessness, lengthy periods spent in institutions, and unemployment. However, they have little experience of ordinary working life, even though they have all been involved in income-earning activities at one time or another.

Their drug use initially eased the impact of mind rushes and provided them with a certain type of knowledge. They have much knowledge that is unusual. This knowledge is, unfortunately, not something they can use to get a job. They all have acquired knowledge of medications and illegal narcotic substances and their effects. They have also gained extensive experience of applying for social security benefits from the many varied bodies of the welfare state, but this was before the digitalization of the state. All these experiences can make the interviewee look equal as a group but unequal to the majority. Unfortunately, the community sees them as members of deviant groups defined by stereotypical behaviour, not as individuals. The marginalisation process has made the interviewees unsure of their value as human beings. Their life has led them into many strange and dangerous situations. The constant fear has settled in their bodies, and their activity patterns

21 Howard S. Becker, *Outsiders: Studies in the Sociology of Deviance* (New York: The Free Press, 1991).

are based on dealing with anxiety. Their experience leaves a mark on their bodies and minds, creating obstacles. More and more opportunities are closed to them. Their life course is an accumulation of problems, an expanding feeling of being deviant and an expanding need for help.

In social contexts, the informants have experienced being made to feel invisible and being overlooked as individuals. They have experience of relatives seeing them but choosing to ignore them. They do not count them as part of the family. The teachers see them, but they only see their aggressive behaviour or non-traditional clothing. They send them away to special schools without even giving them an explanation. The same happened regards to child services. The system took them from their parents and sent them away without explanation and without proper oversight. The man in the street sees them but demonstratively walks across the road when they meet them. Psychiatry sees them but sends them for addiction treatment. The addiction care service sees them but sends them back for psychological treatment. NAV can occasionally listen to them but does not assist.[22] These experiences lead to the young people feeling that they are different from the majority, and believing that other people in their local community deliberately overlook them. Growing up, they were aware of this sense of rejection and of a lack of tolerance of their unique qualities, and that this was obstructing their chances of participating in society. As a result, they lost trust in others and lost a sense of self-respect. It all makes them see themselves as deviant.

As shown above, the informants in this study have lived an unstable everyday life. During their childhood, many of them were placed outside their parental home by the welfare system. They have much experience with unstable social relationships, income, and health. They are tormented by mind rush and take drugs to reduce the buzzing of their thoughts and the restlessness of their bodies. Mind rush and flashbacks make their everyday life painful, and they have problems with concentration. Because of these experiences, time has become a difficult concept for them. They have trouble separating day and night, separating weeks, months, and years. They say that they experience time as an ongoing flow of events. The days come and go and are smashed into an inconceivable haze. Participating in society and social life is extremely difficult when linear time no longer makes sense. Working life, family life, social relationships, leisure activities and contact with the welfare system are based on clock time or standardised time. The fact that the surroundings of the young people in the study relate to

22 NAV: The Norwegian Labour and Welfare Organisation. The organisation is a central agency and an element of the municipal social service systems. NAV is designed to help provide social and economic security while encouraging a transition to activity and employment.

standardised time makes it difficult for the interviewees to function based on society's expectations. Society expects children and young people to have learned these normative functions during their school years. However, when people do not participate in the expected way, they do not acquire the knowledge required to function in society. Rita stated that she had been heavily addicted to drugs and said, that

> [i]t is hard to get things to stick. I must work a lot more to remember. I also feel that five years have passed me by. Those are the years when people went to university or school. I was stone these five years people spent acquiring new knowledge and getting ahead. I was not there then.

Here, it is essential to clarify that having an adequate understanding of time is becoming increasingly important in ongoing flow of digitalization of the society. Individuals living outside society for an extended period have missed critical information. For example, it is no longer possible to ask for help by showing up at an office. Welfare offices are often only open a few days each week, and an appointment is necessary. Most applications must be completed online, requiring electronic devices and technical knowledge. Booking appointments necessitates the possession of a bank ID and paying a deductible with a bank card. None of these things are easy to obtain for people with a history, like those who were interviewed or others who face mental or cognitive challenges. If the persons are homeless, struggles mentally and does not have an adequate understanding of time, life becomes challenging. To be in the right place at the right time has become more and more necessary now when the opening hours at the welfare state's offices are reduced.

To sum up, although specific health and welfare institutions seek to help the interviewees, they do not manage to do what is required to get the help they need. Relating to a specific time is essential to living a so-called "normal" life. They have become stigmatised as being deviant. They no longer participate in social activities because of their mind rush, lack of confidence and knowledge. They can now longer participate because they do not manage the complexity in the society and to understand time in the same way as most people around them do.

Conclusion

The interviewees in this chapter say they want to live as normally as possible. However, being able to live such an everyday life requires that you have enough self-control to be able to plan and initiate activities. Moreover, the person must

be able to process thoughts and memories and to understand how society works. It is about remembering what you will do and when. It is also a challenge for them to engage with other people; in short, participating in everyday life is difficult.

At the beginning of this chapter, I stated that the lack of participation in society and social relations could be due to the way in which the interviewees understand (or misunderstand) time. As shown, the interviewees say their thoughts are upsetting and confusing, and that this makes time disappear for them. The ongoing flow of events, mind rush, flashbacks and the informants' drug abuse have forced them to live with a different time perspective than others, and also to withdraw from social participation. Ordinary everyday activities become challenging and sometimes unimportant; life is about existing day by day. Maintaining a daily rhythm requires effort, but planning is complicated for them. During these bad days, they try to be invisible in a crowd of people or stay at home because they cannot manage to be social. They try to become an everyman who disappears in the mass of ordinary people. They withdraw into themselves in a "struggling along" existence. The interviewees say they have two different "struggling along" options to get through these stormy periods. They can either try to stay active, or they can try to doze away the internal pain. Unfortunately, both options cause them to lose time, overlook commitments and to take drugs.

What knowledge can be drawn from this chapter about understanding time? As pointed out in the introduction, Woodcock states that clocks transformed time from a "process of nature" to a commodity that could be bought and sold on the market.[23] It would be correct to say that technology and capitalism have changed society's view of time. Adherence to standard time is more critical today than in the 19th century. Understanding time linearly is essential to function in today's society. The welfare state depends on it. The various departments of this sector require that people take it upon themselves to make appointments, and afterwards to be on time. The biggest problem for people like the participants in this study is that they, as adults, need help from the welfare state system. However, getting help requires them to meet service providers from various parts of the welfare system at the appointed time or do it digitally. Planning things precisely and showing up at the correct time is very difficult for people with mental health and drug-related problems, and for others with a history. Therefore, it is very important that the welfare system become more attuned to the needs of this particularly vulnerable group of people. In particular, the welfare system needs to have

23 Woodcock, *The Tyranny of the Clock*.

some other ways to connect with and help people who cannot manage the digitalization of the welfare system and cannot relate to standard clock time.

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Dagmar Dahl

11 Flow with the Flow – Experience of Time in Wild Swimming

> Below me just green-blue-dark depth, and then a rocky landscape, a veritable mountain range, a jungle of algae and aquatic animals, jellyfish in unusual colours, concentrate on the arm pulls, catch, fingers, hands diving into the soft water, right, left, right, left, I feel the current, my exhalation lets funny bubbles fall into the mountain range below me, bubbles on my face, I become part of the stream, am part of the sea. As I leave the middle island behind me, the sun suddenly shines in my face as I breathe in, after it was grey and rainy before. Happiness. Just happiness, my tears of emotion mingle with the salt water of the stream. One can become religious for less[1]

When I crossed the world's strongest tidal current – the Saltstraumen – for the second time on 28 August 2020, I experienced a flow rush of previously unimagined strength. Without a stopwatch and the companions in the boat, I would not have been able to tell how long this swim took. Time not only stood still, it simply was not there. It was nothing. This was in stark contrast to the meticulous planning of the entire action, but also in contrast to our modern time management, where not a single second should be wasted. Where even the watches around our wrists monitor us at all times for our physiological effectiveness. This here was a real "Time-out"!

This dissolution of the perception of time, lifted out of linear time perception into an experience of being in the here and now, allows us to draw connections to the philosophy of Zen Buddhism and Mihaly Csikszentmihalyi's concept of *flow*, a well-known phenomenon in the world of sport. Generally speaking, flow is the answer to our longing for happiness, contentment and the good life, and this, if it were possible, preferably timeless – eternal. On closer examination, swimming, and especially swimming in nature, seems to be particularly suitable for exploring the perception of time in a flow state. My personal experience is not an isolated case. Several similar autobiographical descriptions could be given. For example, Roger Deakin's *Waterlog*, Joe Minihane's *Floating*, Lynne Roper's *Wild Woman Swimming* and Tessa Wardley in her work *The Mindful Art of Swimming*.[2] In addition, there is a new study on the aesthetic experience of

1 Dagmar Dahl, "Mein Saltstraumen-Erlebnis: Persönliche Schwimmtagebuchnotizen" (Bodø: Unpublished manuscript, 2020).

2 Roger Deakin, *Waterlog: A Swimmer's Journey through Britain* (London: Vintage Books, 1999); Joe Minihane, *Floating: A Life Regained* (Richmond, VA: Duckworth, 2018); Lynne Roper, *Wild*

https://doi.org/10.1515/9783111428970-011

wild swimming.[3] Furthermore, in other studies on the experience of wild swimming, especially cold-water swimming, interviewees report meditative experiences, a feeling of being out of time, and mental benefits, that point to the feeling of flow, of happiness. This may provide the reason for the enormous increased interest in those activities of late.[4] The main question of this chapter is therefore: *Why can we swim "out of time" and into a state of bliss when being part of the surrounding natural water?*

To explore this "swimming out of time" into a sense of timelessness in the context of flow and Zen Buddhist meditation practice, the following subordinate questions are relevant: What sense of time, what experience of time is significant here? Where are the parallels to the understanding of time in Zen Buddhism? Why in particular, is free swimming in nature (wild swimming) so predestined for the experience of timelessness? Where are the connections to Zen Buddhist meditation, the flow experience and the sensual-emotional experiences of swimming in open waters? Which physical, bio-chemical, and mental or cognitive bodily effects does this give, and how does that influence perceptions of time, of being-in-time and of well-being?

After a general overview of relevant aspects of individual time perception, self-time or mind-time, we will first look at the mental framework, the concept of flow and relevant aspects of Buddhism. Then we will turn to our "object of study," which is the perception of time, or rather of non-time, while swimming in nature. What characteristics make swimming seem particularly suitable to explore the sense of timelessness? These questions will then be applied to the concept of flow in order to address parallels and connections to the Zen Buddhist understanding of time and meditation. On the basis of these reflections, it should then be clear why it is precisely free swimming in nature that allows us to swim out of time into a state of happiness and flow. Methodologically, I draw on my own qualitative studies in the field, which are based on text analysis and qualitative interviews with ice swimmers, as well as autoethnographic approaches, and on literature studies on the topic.

Woman Swimming (Lewes: Selkie Press, 2018); Tessa Wardley, *The Mindful Art of Wild Swimming* (London: Leaping Hare Press, 2017).

3 Dagmar Dahl and Åsa Bäckström, "Meeting, Moving, Mastering: A Text Analysis of the Aesthetic Attractions of 'Wild Swimming'," *International Journal of Aquatic Research and Education* 14 (2023), accessed May 10, 2023, doi: 10.25035/ijare.14.01.12.

4 Dahl and Bäckström, "Meeting, Moving, Mastering."

Self-Time – Body Time – Mind Time – Perception of Time

In his detailed work, 'Phenomenology of Perception,' Merleau-Ponty explains:

> Likewise, I treat my own perceptual history as a result of my relations with the objective world. My present, which is my point of view upon time, becomes one moment of time among all others, my duration becomes a reflection or an abstract appearance of universal time, and my body becomes a mode of objective space.[5]

How we experience time is closely linked to the sensory impressions of our body, but also to the emotional aspects while experiencing it. In Western European philosophy, Merleau-Ponty is one of the most prominent representatives of this approach, which, as we will see below, is not unlike a Buddhist perspective. Our body is the mediator to the world and enables us to be aware, not only of this world but also, of our own body with its experiences. We can both *be* in the body, and thus stand in space and time as an integrated part of the whole, and on the other hand *have* our body, which means that we perceive it separately with its modes of reaction, sensory impressions as well as its temporality.

According to the neurophysiologist Benjamin Libet, who was one of the first to conduct extensive research on the subject of time perception as part of his studies on how the brain creates consciousness, this time consciousness is also referred to as "mind-time."[6] Yet this mind-time is not obviously present for our experience in everyday life. When we are busy with a task and are completely absorbed by it, this cognitive subject-object split does not take place. This means that even the time we spend on an activity remains unreflected and unconscious.[7] Only the moment of reflection and awareness allows us to recognise that the subjectively experienced "mind-time" is an "abstract aspect of universal time" and a "moment of time among others."[8] As embodied time, so to speak, time is visualised internally and experienced in relation to the environment. In physics, consequently, there is no past or future: "Time does not pass; time simply is."[9]

Buddhist philosophies convey a similar insight. The understanding of time is thus closely linked to our perception of it. Closely related are other concepts of

5 Maurice Merleau-Ponty, *Phenomenology of Perception* (London: Routledge, 2014), 73.

6 Benjamin Libet, *Mind Time: The Temporal Factor in Consciousness* (Cambridge, MA: Harvard University Press, 2004).

7 See Karen Gloy, *Zeit: Eine Morphologie* (Freiburg: Karl Alber, 2006), 51.

8 Merleau-Ponty, *Phenomenology of Perception*, 73.

9 Claudia Hammond, *Time Warped: Unlocking the Mysteries of Time Perception* (Edinburgh: Cannongate, 2013), 6.

subjective time experience within the literature on time research: Individual's 'own time' or self-time sometimes called 'body time.'[10] This subjective construct expresses our perception of time, which we experience in our own bodies. This again is influenced by both our emotions and the environment. For example, people in a state of anxiety are likely to experience a time dilation, i.e. a period of time is experienced as longer than objectively measured (in seconds/minutes). In a cold environment or a varied environment, time is likely to be perceived as shorter, well noted in personal reflections.[11] Time perception occurs, for example, through bodily rhythms and processes such as the heartbeat or breathing. The body functions here as a mediator for reflection, in the Merleau-Ponty sense. As we will see later in the explanations of *flow*, when time as an experienced concept changes into a form of nothingness. Body time and proper time are not sufficient concepts when it comes to determining measured time:

For the time-experiencing consciousness, being bound to the body's own time is not enough; in any case, it needs a reference outside in the world, beyond its own body. Consciousness is in the body and in the world, and therefore time is corporeal and worldly.[12] Wittmann solidifies this when he says:

> Because I have a body, I perceive the passage of time. The body processes are the temporal reference for the processes of the external world. . . . Depending on the bodily state between relaxation and excitement, subjective time passes differently.[13]

The intensive and immersive experience of swimming in cold water in nature, an unusual environment for our bodies, can contribute to a different experience of precisely these time references between the external world and own body. Teachings in Wisdom, such as Buddhism, reflect on how the "consciously designed part of life can be brought into accordance with the body rhythms," a synchronization of life and rhythm.[14] Central here, are above all the rhythms of breath and heartbeat, which can both be consciously experienced and even counted. These physical 'timers' play a critical role both in swimming and in Buddhist meditation. Let us now look at the concept of time which is represented by Buddhist philosophies. What is it about time when we are in "flow," and what is "flow" anyway, more precisely? What insights can be derived from this for the experience of "swimming out of time" that we are investigating here?

10 German: 'Eigenzeit.' See Rüdiger Safranski, *Zeit* (Frankfurt: Fischer, 2022), 177.

11 Hammond, *Time Warped*, 39–40

12 Safranski, *Zeit*, 177.

13 Marc Wittmann, *Gefühlte Zeit: Kleine Psychologie des Zeitempfindens* (Munich: C.H. Beck, 2016), 151.

14 Safranski, *Zeit*, 178.

Buddhism, Flow: Concept and the Understanding of Time

Buddhism, as one of the largest world religions, is multifaceted and complex, so a more detailed consideration is not possible in this context. There is no *one* Buddhism, but there are nevertheless some basic features of the teaching that are common to all forms. In addition to some aspects of the basic doctrine that are important for our discussion, statements on the concept of time will also be presented. Buddhist philosophy is anchored at its core around the realisation of time and the temporality of all existence: everything is in constant change, nothing is fixed.[15] Moreover, this transience causes suffering. The common structuring into past, present and future is considered one of the reasons why suffering arises: "The form of time, moreover, is also responsible for the fact that there can be no end to suffering within time, for the concept of time never ends, since it itself forms a 'circle', without beginning or end."[16]

We would like to stop time at will, instead we experience the loss of the disappearing moment as painful. But through this realization, and the various helpful practices in Buddhism, the "suffering" can be overcome, as we will return to shortly.[17] Zen Buddhist and meditation teacher Paul Kohtes puts it succinctly "In flow, time is suspended."[18] It is therefore obvious to turn to this phenomenon as well as to Zen Buddhist forms of meditation when it comes to taking a closer look at the perception of time in Buddhism. The "flow" phenomenon was first investigated and described in 1975 by psychologist Mihaly Csikszentmihalyi.[19] The closeness to Buddhist thought is obvious here, as a former colleague of Czikszentmihalyi, Prof. em. Glyn Roberts, of the Norwegian School of Sports Science, confirmed to me in an informal conversation in 2008. Roberts suggests that Csikszentmihalyi was definitely close to Buddhism. The current perception of the flow concept also suggests a close

15 Thorough studies on the concept of time in Buddhism can be found, for example, in Rolf Elberfeld, *Phänomenologie der Zeit im Buddhismus* (Stuttgart: Frommann – Holzboog, 2004) and Birgit Capelle, Time *in American and East Asian Thinking* (Heidelberg: Universitätsverlag Winter, 2011).

16 Elberfeld, *Phänomenologie der Zeit im Buddhismus*, 165.

17 See Dagmar Dahl, *Zum Verständnis von Körper, Bewegung und Sport in Christentum, Islam und Budddhismus* (Berlin: Logos, 2008) and Capelle, *Time in American and East Asian Thinking*.

18 Paul J. Kohtes, *Das Buch vom Nichts: Mit Zen zu einem Leben in Fülle* (Munich: Gräfe und Unzer, 2012), 14.

19 Mihaly Csikszentmihalyi, *Flow: The Classic Work on How to Achieve Happiness* (London: Rider, 2002).

proximity to Buddhist teachings and meditation practices. Therefore, the focus will first be on elements of Buddhism and Buddhist meditation.

The basic insight in Buddhism, mentioned above, points out that all existence is impermanent and changeable. All is impermanent. This is expressed in the doctrine of the "Four Noble Truths," which are less about truth in the sense of correctness and rightness, but rather about the realisation that "everything is subject to time and thus essentially impermanent."[20] In the teachings of the so called 'eight-limbed path,' which shows the way to overcome this suffering the steps six, seven and eight deal with practice, mindfulness, immersion and meditation, aspects that are particularly central in our case here: "Diligence, perseverance and regularity (6) are just as necessary for Buddhist meditation as concentration and the right method (7) and the right, deepened meditation process itself (8)."[21] Zen Buddhism, which is becoming increasingly popular in the Western world, originated in China and Japan. Explaining Zen is not easy, because according to the teachings of the great Zen masters, a clear definition of Zen is no longer Zen-like. The term itself means "immersion" (dhyana) and thus means concentrating the mind and immersing oneself in meditation.

Here we literally get associations with swimming, where we immerse ourselves in the surrounding water. This immersion in mediation is supposed to lead to the dissolution of opposing thinking and dualistic divisions.[22] A particularly high value is placed on one's own experience, and the intellectual grasp of the teachings is relegated to the background.[23] Schumann describes Zen as

> [a] return to the natural and simple. Zen turns against the academisation of the Buddha teachings, against their philosophical overload and against their lignification in scholastic formulas and tries to realise enlightenment (jap[anish]: sartori) in the direct experience of emptiness and commonality.[24]

In the enlightenment experienced during meditation practice, our mind becomes free, and we realise the consubstantiality of all existence. Central to this is the overcoming of dualistic thinking, but also the "non-attachment," the "not wanting to hold on" to forms of existence that are subject to constant change, i.e. are ex-

20 Elberfeld, *Phänomenologie der Zeit im Buddhismus*, 68.

21 Burkhard Scherer, *Buddhismus: Alles, was man wissen muss* (Gütersloh: Gütersloher Verlagshaus, 2005), 54–55.

22 See Dahl, *Zum Verständnis.*

23 Oliver Bottini, *Das grosse O.W.Barth-Buch des Buddhismus* (Frankfurt a.M.: O.W.Barth, 2004), 177.

24 Hans Wolfgang Schumann, *Handbuch Buddhismus: Die zentralen Lehren. Ursprung und Gegenwart* (Munich: Hugendubel, 2000), 285.

posed to a radical temporality. Essential for Buddhist philosophy's understanding of time shown in practices such as the Zen meditation, and the experience of flow, is the turning away from a substantialised, metaphysical theory of time.[25] This is a recognition that time in itself no longer exists.[26] A beginning, where in principle an end is always thought of as well, is considered the basic experience of suffering, since the transience of the world we perceive is radically brought home to us and thus contributes to a suffering-causing conception of time. Capelle refers to Zen Buddhist Masao Abe, who points to the Buddhist understanding of time as the "realisation of the impermanency of everything in the universe."[27] Let's now take a closer look at some important elements of the Zen meditation.

Zen Meditation

To experience complete stillness, without thoughts or musings, is at the core of Buddhist meditation. In many of the Buddhist forms of meditation, such as the forms of mindfulness meditation, similarities can be found, especially in the understanding of time. For our consideration here, where we are aiming for a link with swimming, let us take as an example, the basic kind of Zen practice, *zazen*, the seated form of meditation (sitting Zen): "In this state the activity of consciousness is stopped and we cease to be aware of time, space and causation."[28] The mind is empty and at the same time we are fully alert.[29] This state is called *samadhi*, a state that can also be achieved in everyday life, "for example, we become wholly immersed in a physical activity. In all these situations we experience a kind of samadhi" as stated in the introduction to Sekida's Zen Training.[30] It is precisely this aspect that will be discussed below in the connection between meditation, flow, and swimming. What is important to note here is the restoration and perception of pure existence and pure awareness.[31] Bottini summarises this as follows:

25 Elberfeld, *Phänomenologie der Zeit im Buddhismus,* 162.
26 Elberfeld, *Phänomenologie der Zeit im Buddhismus,* 162.
27 Capelle, *Time in American and East Asian Thinking*, 275.
28 Katsuki Sekida, *Zen Training: Methods and Philosophy* (Boston/London: Shambhala, 2005), 29.
29 Sekida, *Zen Training*, 12.
30 Sekida, *Zen Training*, 13.
31 Sekida, *Zen Training*, 30.

> Serious, regular meditation is a method of gradually overcoming the ego, of losing the self. With each individual practice, the boundaries between outside and inside become increasingly blurred, . . . eventually reaching that state also known as 'transcendence.'[32]

Referring to Dogen, an old Zen teacher, he specifies that zazen is not a method to reach enlightenment, but its realisation happens through the right practice posture. Ideally, "the body is in balance and the soul [is] purified of feelings such as anger, hatred and egoism."[33]

The basic elements of this form of meditation are similar on a fundamental level to the basic elements of swimming. Three central elements of this meditation technique are of interest to us here when we will find out, how swimming in nature lets us experience a similar feeling of timelessness in a state of Samadhi as the same three elements are crucial for good, effortless, and effective swimming: *Balance, Breathing and Attention*. A good sitting posture in balance is essential, on the one hand, to prevent distraction caused by aching, tense parts of the body, as the aim is to sit completely still; but also, to practice the other two aspects, breathing and attention. Breathing mainly involves the diaphragm and accordingly the action of the abdominal muscles. This allows a depth of breath to be achieved and, especially during the calming slow exhalation, a certain, pleasant muscle tension to be created, which in turn is conducive to the aspect of alert attention.[34] Like the meditation experience of samadhi and therefore interesting in our study is the experience of *flow*, which will be further explained in the next section.

Flow

Flow readily reveals itself to us as a form of timeless happy experience. In this state, time does not matter at all. We feel at one with the world. In the Merleau-Ponty sense we are body without perceiving itself as something separate from its surroundings: "I am time, and time is me."[35] One of the fathers of the flow concept, American-Hungarian psychologist Mihaly Csikszentmihalyi, was interested in what motivates people to engage in activity, even apparently useless activities such as play, to obtain happiness. What factors are significant when people perform actions for their own sake, intrinsically motivated, for the simple reason that it is fun, and happiness is experienced? Csikszentmihalyi discovered that by

32 Bottini, *O.W.Barth-Handbuch*, 40.
33 Bottini, *O.W.Barth-Handbuch*, 216.
34 Sekida, *Zen Training*, 45.
35 Elberfeld, *Phänomenologie der Zeit im Buddhismus*, 370.

being absorbed by their focus on a certain activity, the persons in his study experienced a pleasant state of timeless being-in-the-moment.[36] In this sense, understanding flow may help people cope with stress and improve their quality of life. Csikszentmihalyi emphasises: "Perhaps the clearest sign of flow is the merging of action and consciousness. A person in the flow state has no dualistic perspective. He is aware of his actions, but not of himself."[37] In this state, the structural understanding of past – present – future, is suspended, something which clearly relates to Buddhist thought. Elberfeld refers to basic Buddhist texts when he states: "Only then, when 'time' as such no longer exists, is the perfect solution to existence realised for the individual."[38]

The following factors were found to be essential for experiencing flow in sport and other activities, and we note that transcending time is specifically mentioned:

1. Challenge – skills balance;
2. Action – awareness merging;
3. Clear goals,
4. Unambiguous feedback;
5. Concentration on the task at hand;
6. Sense of control;
7. Loss of self-consciousness;
8. Transformation of time;
9. Autotelic experience.[39]

A prerequisite for experiencing flow, which is of existential importance especially in swimming, is the balance between challenge and skill. An insecure, anxious swimmer who does not have sufficient water competence in natural waters will hardly experience timelessness or 'transformation of time,' let alone the bliss of 'flow' in the sense of 'having swum out of time.' In the section on flow applied to swimming, we will discuss this in more detail. Although the "transformation of time" is a characteristic in its own right, the other aspects also point to possible consequences for temporality. Below, these characteristics of flow will be related to swimming in nature. In combination with elements of meditation, this will contribute to the discussion of the perception of time and indicate why we can expe-

36 Csikszentmihalyi, *Flow*.

37 Mihaly Csikszentmihalyi, *Das Flow-Erlebnis: Jenseits von Angst und Langeweile. Im Tun aufgehen* (Stuttgart: Klett-Cotta, 2019), 61.

38 Elberfeld, *Phänomenologie der Zeit im Buddhismus, 166.*

39 See Susan Jackson and Mihaly Csikzentmihalyi, *Flow in Sports* (Leeds: Human Kinetics, 1999), 16.

rience ‘swimming out of time’ into a state of bliss. Let us first look at the general phenomenon.

Swimming, and Swimming in Nature

There is something timeless to swimming. Swimming is, to put it pointedly, the movement of life, water is life. The first movements we make in the womb are quasi-swimming movements and individual elements of our skeleton and physiology remind us that our evolutionary ancestors developed and lived in water. The human body consists of about 70 percent water and water is essential for life. The development of our cultures is also essentially tied to the medium of water. Almost all large cities were founded on rivers or by the sea, and the extraction of food from the sea is still of enormous importance today. The need to learn to swim or to develop water competence to prevent drowning was thus a given in almost all cultures from the very beginning. Swimming is considered a basic human movement skill, and is mentioned early on in various accounts and texts.[40] In Japan, swimming was considered an important martial art by the Samurai. In the Samurai schools, swimming was practised daily in swimming ponds. Stevens quotes from the manual of the “Shinden School of Samurai Swimming”:

> Water is the source of wisdom; swimming is the mother of all the arts. . . . Body and mind must remain flexible. A calm mind is the single most important element of successful training. A swimmer must avoid struggling against the water, against him- or herself, or against others. A trainee must strive to harmonize him- or herself with the waves, becoming one with the body of water, be it a pond, lake, river, or ocean. Ride the waves with your mind as well as your body. . . . Swimming teaches us how to live properly. There is no way a solitary swimmer can impose his or her selfish will on the water. Swimming against the current will ultimately result in disaster. Swim with the flow without strain, resistance, confusion, or unnatural movement.[41]

What are the basic characteristics of this movement that can be relevant to the question of experiencing time? Regardless of the choice of swimming technique, swimming is a cyclical movement that always recurs more or less in the same way. This forms a characteristic almost evolutionary rhythm of movement that is experienced individually depending on the skill level. It is therefore considered a classic endurance sport, just like long-distance running, cycling, hiking or cross-

40 Karen Eva Carr, *Shifting Currents: A World History of Swimming* (London: Reaktion Books, 2022).

41 John Stevens, *Budo Secrets* (Boston: Shambhala, 2001), 61–62.

country skiing, but due to the weightlessness experienced in the water, it is much gentler on the joints and is generally considered a sport which can be recommended for health. Interestingly, all endurance activities are practised primarily in nature, and this was also true of swimming for a long time. The special features of this physical activity, namely the unmediated movement in water, had led to an increased shift of activities indoors in the cool climates of Central and Northern Europe, even though it has always remained a nature sport. The trend in recent years shows that swimming in open water has re-established itself as a year-round activity.[42]

Simply put, the special thing about swimming is the water. Since we are land-based mammals, being comfortable in water is a specific skill that has to be learned. Water as a medium of movement has several characteristics that are very different from air, and these have a significant influence on the body that is in and moving through the water. From its molecular structure, H_2O actually resembles a gas, the anomaly of water, via the properties of the Van-der-Waals forces, ensure the liquid's aggregate state at temperatures between 0–100 °C. Compared to air, water has a density 800–1000 times higher, which, among other things, gives us the physical effects of buoyancy and floatation.[43] Both are particularly important when people are learning to swim, because only when we have experienced that we can trust the buoyancy forces and float in the water, do we feel safe and can swim without fear, and implement any techniques for propulsion without stress.[44] For experiencing this 'challenge – skills' balance, which we saw was a necessary element of 'flow,' and subsequently, also for the experience of timelessness, this is crucial.

An important concept for understanding why we can swim is the 'Archimedes principle.' This says, that "a floating body displaces exactly its own weight in water. A body will sink if it isn't big enough to displace water that weighs as much as it does, even when submerged."[45] We experience our body as weightless; we float. Furthermore, the higher density of the water also ensures the experience of in-

42 See Beat Knechtle, Zbigniew Waskiewicz, Caio Victor Sousa, Lee Hill and Pantelis T. Nikolaidis, "Cold Water Swimming – Benefits and Risks: A Narrative Review," *Environmental Research and Public Health* 17 (2020), accessed November 10, 2022, doi: 10.3390/ijerph17238984 or e.g Craig W. McDougall et al., "Freshwater Wild Swimming, Health and Well-Being: Understanding the Importance of Place and Risk," *Sustainability 14* (2022): 6364, accessed January 24, 2023, https://doi.org/10.3390/su14106364.

43 Ørjan Madsen and Per Irgens, *Slik lærer du å svømme* (Oslo: Bodoni, 2005).

44 Robert Stallmann, "From Swimming Skill to Water Competence: A Paradigm Shift," *International Journal of Aquatic Research and Education* 10 (2017), accessed February 24, 2023, doi:10.25035/ijare.10.02.02.

45 YMCA, *Teaching Swimming Fundamentals* (Champaign: Human Kinetics, 1999), 110.

creased resistance during movement. This increases as the square of the speed and therefore it is important how we position our body in the water when moving to optimize streamlining. The most important thing, however, is buoyancy and balance, floating comfortably in the water. This is achieved through good familiarisation with the water. An anxious swimmer will experience poorer buoyancy, often combined with a less comfortable, more strenuous position in the water.

For our later considerations on the perception of time, breathing is of course particularly relevant here. Due to the medium of water, this is a critical skill to be learned. Without breathing we cannot live, without a sufficient supply of oxygen our muscles and brain cannot work. Since we cannot breathe in but only out in water, breath control and breath management play a special role in swimming. Rather less known is the importance of experiencing safe balance and buoyancy in the water. However, this is of crucial importance to achieve an unstrained breathing rhythm. Good water balance is made up of several aspects. To be able to swim, one must be able to glide through the water. To be able to glide, you must be able to float and maintain a certain body tension. And as we saw above with the Archimedes principle, this floating requires that we can submerge or immerse ourselves in water. These three elements are part of a good balance in the water. These moments apply to swimming in general, regardless of whether it takes place in the swimming hall, under controlled conditions, or outside in nature. Of course, when swimming in the great outdoors, a number of additional factors come into play, adding a number of challenges for a novice swimmer who has previously been in the pool with its regulated conditions (temperature, water quality, calm water, etc.). For the swimmer accustomed to natural conditions, these are precisely the attraction and fascination. They also likely play a role in the experience of timelessness in flow, which we will discuss below.

Flow, Meditation and Swimming

To describe the flow experience and the associated sense of time when swimming in nature, it makes sense to include the aspects of the above-mentioned forms of meditation in the analysis. The combination of meditative elements, flow, and movement can undoubtedly also be found in other forms of activities, like yoga or running. So, what characterises swimming in this context? And how does it relate to the special potential of wild swimming, swimming in nature, to reach a state of flow and thus a transformed sense of time? In their book *Taking the Plunge: The Healing Power of Wild Swimming for Mind, Body and Soul* Deacon and

Allan asked Cameron Northsworthy, the founder of the "Flow Centre" in the UK, if wild swimming is conducive to finding flow:

> Absolutely. It's challenging, which is one of the characteristics of flow activities. It's cold, and there's a huge mental challenge in that. There's a need for the mind and the body to be very congruent and in a state of harmony in order to handle the kind of stress caused by the cold conditions – to allow the blood-flow to go to where it needs to. It's extremely important not to be distracted or to have your attention diverted. Wild Swimming would certainly be conducive to finding flow.[46]

As in other sporting contexts, the basic prerequisites are the elements of flow already briefly mentioned above. Applied to swimming, the relationship between challenge and skill, i.e. one's own water competence and swimming ability in the given situation, is existentially important. Not being able to master being in the water can have fatal consequences, namely drowning.

It is important to remember that 'challenge' in outdoor swimming is not a stable quantity, but depends on the respective conditions in the sea, river, or lake. "Action-awareness merging" and "Clear goals" can also be put into context here. Attention is connected to the swimming activity, and as a clear goal, simply diving into cold water can be sufficient. In wild swimming, aimlessness can also be regarded as a goal. Therefore, "concentration on the task at hand" is also apparent, especially when swimming in nature. The direct, immediate contact with the element of water provides "Unambiguous feedback" thanks to the pressure and temperature of the water. The perceived water competence and the chosen swimming technique and swimming location enable a sense of control. The peculiarity of the water, which during the swim facilitates a kind of immersion in the truest sense of the word, a merging with the element that physically and concretely carries the body, leads to an experience of loss of self-consciousness. As an "autotelic experience," an experience for the sake of the experience, an activity in itself, and not, as in the case of a boat accident, for the purpose of saving one's life, there is also the clear possibility of finally perceiving a "transformation of time" through all these elements. We then literally swim out of time. This potential for experiencing timelessness in wild swimming, much like the experience of timelessness in meditation, is enhanced by the basic characteristics of swimming, namely balance, attention, rhythm of movement, breathing, i.e., as in meditation, focuses on mind, body, and breathing. In the water, a physically completely different living environment than on land surrounded by air, we move in a different medium than the familiar one, which facilitates the experience of being "outside

46 Anna Deacon and Vicky Allan, *Taking the Plunge: The Healing Power of Wild Swimming for Mind, Body and Soul* (Edinburgh: Black & White, 2019), 42.

of time." Flow can generally be experienced when swimming in a pool, but in a different way.

Another aspect that contributes to the feeling of happiness and flow when swimming and thus to our altered sense of time is physiological. Recent physiological research has shown that swimming, the gentle touch of water, has an impact on our body's production of oxytocin; known as one of the "happiness hormones."[47] Together with serotonin, dopamine, and endorphin, which are produced in the body when swimming in cold water, these contribute to an experience of joy and relaxation through swimming.[48] The experience of time when swimming in nature is different from swimming in an artificial pool, as several influencing factors play a role here, such as the structure of the water in the form of waves or a flowing river. In contrast to the artificially predetermined metric standard design of a swimming pool, natural bodies of water are open in their temporal experience. In addition, as a rule, no metric or temporal goals are important in Wild Swimming. The activity as such is the goal, the *becoming one* with the element. "The loss of the sense of a self-separate from the world around it is sometimes accompanied by a feeling of union with the environment."[49] Wardley describes the similarity to Mindfulness Meditation:

> When I talk to other swimmers about their experiences, they usually start by describing how they feel when first getting into the water. This is always a key moment for wild swimmers. The sensations of the body are brought into sharp focus, instantly bringing the swimmer into here and now. Once the water has their full attention and they start swimming, most swimmers talk about how they focus on the rhythm of their strokes and marry them to their breathing. Many people describe how they feel so alive, calm and focused; feeling the water and letting the strokes flow. An almost identical vocabulary is used by the practitioners of mindfulness and meditation. It appears that wild swimming is facilitating that state of mindfulness.[50]

An important aspect of meditation, as well as swimming, is breathing.

47 Kerstin Uvnäs-Moberg, "Oxytocin, Calmness, Tranquility and Well-Being, from Being in the Water," Paper presented at the World Aquatic Conference 2023, Lund, Sweden, January 12–15, 2023.

48 Knechtle et al., "Cold Water Swimming."

49 Csikszentmihalyi, *Flow*, 63.

50 Tessa Wardley, *The Mindful Art of Wild Swimming* (London: Leaping Hare Press, 2017), 17–19.

The Importance of the Breath

Breathing is an important, if not the most characteristic, element in swimming. Together with body balance, breathing is the basic prerequisite for successful water mastery. It is our own breath, i.e. an aspect of our inner body perception, our inner clock, that we have to master when we swim. Together with, for example, the heartbeat and intestinal activity, our breathing rhythm structures our biological time. Thus, breath is also given a central role in the experience of time while in the water. "During swimming, respiration is synchronized with the rhythm of movement."[51] The cyclical movement of swimming in combination with respiration not only provides the body's own timing, which can vary depending on effort and water conditions but also promotes attention. When swimming in cold water, breathing, and especially exhaling, also has an anti-stress function as a reaction to cold shock. This intensifies the experience in the water and deepens the possibility of flow. An increased focus on exhalation stimulates the parasympathetic nervous system and thus has a calming effect.[52] Wardley underlines the proximity to mindfulness meditation:

> There are many reasons why swimming feels like meditation and the focus on breathing is just one of them. Swimming has been shown to stimulate neurogenesis in the hippocampus – neurogenesis literally means 'birth of neurons' and is the process by which stem cells generate new neurons for the growth and development of brain tissue. The hippocampus of the brain is an area that can atrophy (waste away) during periods of chronic stress, resulting in long-term anxiety and depression. Prozac and other drugs are used to stimulate neurogenesis – but swimming has been shown to stimulate the same response in the brain.[53]

Especially in cold water swimming, the experience of cold shock, a physical stress reaction, inevitably gives breath control a special role as one of my interviewees explains:

> There is a physical explanation, namely that something happens in the body when you are immersed in cold water. The other thing is that you do it of your own free will, you make your own choice and that is the psychological, mental that I spoke about, that this is my yoga. (..) It becomes a kind of inner wish that I go and bathe. There are many stages . . .

51 Michael G. Leahy, Mckenzie N. Summers, Carli M. Peters, Yannick Molgat-Seon, Caitlin M. Geary, and A. William Sheel, "The Mechanics of Breathing During Swimming," *Medicine & Science in Sports & Exercise* 51 (2019): 1467, accessed January 24, 2023, https://doi.org/10.1249/mss.0000000000001902.

52 Rebecca Dennis, *Bevisst pust: Pusteøvelser for bedre helse og mer energi* (Oslo: Cappelen Damm, 2019).

53 Wardley, *The Mindful Art of Wild Swimming*, 35.

> There is breathing technique and everything else that I'm not conscious of, hahahaha . . . aware of really.[54]

Another female ice swimmer explains it as follows: "So, I feel that there's a kind of mindfulness in it as well. It is important to breathe when one's in the water. And mindfulness works something like that with the breath and staying aware that one is in the present."[55] Let us move from our body's own timers to the external timers, namely the water surrounding us when swimming and the nature in which it is embedded.

The Importance of Water and the Surrounding Nature

As we have seen, the medium of water has special characteristics when it comes to human movement. When we swim, we experience this acutely and directly on our bodies, due to the higher pressure in a much stronger form than is the case with the medium of air. In its nature, water can also be a *'timer'*, a time-indicator. For Buddhism, Elberfeld describes "water and man are not essentially different, but both are basically just continuous flow."[56] From Zen Buddhism, the metaphor of the wave is known as a symbol of our existence. Willgis Jäger describes this image very vividly:

> If we imagine the First Reality as an infinite ocean, then we are something like the waves on this ocean. If now the wave experiences "I am the sea," then there are still two: wave and sea. In the mystical experience, however, this duality is also transcended. The I of the wave dissolves, and in its place the sea experiences itself as a wave. It experiences itself in the unity of both and as the unity of both. (. . .) Everything is wave and ocean at the same time.[57]

Natural waters can be very different and yet they also show biological traces of time. The sea, which retreats or pushes ashore in a fixed time structure due to physical laws in ebb and flow of the tide. The river, which flows at a certain speed, or the lake, which changes its face according to the seasons during a period of 12 months. These are the big timelines, but water can also convey a sense of duration on a micro scale, for example when a wave rolls towards the swimmer. Water

54 'Tommy', Ice-bathing man, Bodø, personal interview, 2020.
55 'Marion', Ice-bathing woman, Bodø, personal interview, 2020.
56 Elberfeld, *Phänomenologie der Zeit im Buddhismus,* 78.
57 Willgis Jäger, *Die Welle ist das Meer* (Freiburg: Herder Spektrum, 2007), 43.

gives the swimmer direct feedback and experienced swimmers can "read" the water. Swimming in nature has a special role to play here. We are in the natural environment, without artificial, technical man-made limitations. Numerous studies have shown the enormous importance of the natural environment for human health and well-being, for example Florence Williams' *The Nature Fix: Why Nature Makes Us Happier and More Creative* or the studies on the well-known biophilia hypothesis developed by Edward O. Wilson.[58] Following on from the original work of Wilson, numerous researchers have examined the "hydrophilia hypothesis" in different scenarios. For example, one of the most popular scientific works is *Blue Mind: How Water Makes You Happier, More Connected and Better at What to Do* by marine biologist Wallace J. Nichols, in which he analyses and describes the various positive aspects of spending time in and around water for our well-being.[59] Deborah Cracknell's *By the Sea: The Therapeutic Benefits of Being In, On and By the Water* and Catherine Kelly's *Blue Spaces: How and Why Water Can Make You Feel Better* also demonstrate the importance of natural waters in an accessible way.[60] There are also numerous scientific anthologies and articles on the subject.[61] All of these highlight the potential of spending time in natural waters for human well-being. The combination of being surrounded by nature and being carried by water provides particularly favourable conditions for experiencing flow, and thus an experience of time transformation. Swimming "only" in a swimming hall with its reduced environmental stimulus and metric, spatial specifications (25m lane/50m lane) does not have the same effect. The natural environment stimulates in a way that is not possible in the stimulus-reduced swimming hall. This applies to the experienced swimmer, and by this is meant that a swimmer chooses a body of water that she considers "manageable" for herself, for which she has sufficient experience:

58 Florence Williams, *The Nature Fix: Why Nature makes us happier, Healthier, and More Creative* (New York: W.W. Norton, 2017); Stephen R. Kellert and Edward O.Wilson, eds. *The Biophilia Hypothesis* (Washington: Shearwater Books, 1993).

59 Wallace Nichols, *Blue Mind: How Water Makes You Happier, More Connected and Better at What to Do* (London: Little Brown, 2014).

60 Deborah Cracknell, *By the Sea: The Therapeutic Benefits of Being In, On and By the Water* (London: Aster, 2019); Catherine Kelly, *Blue Spaces: How and Why Water Can Make You Feel Better* (London: Welbeck Balance, 2021).

61 Examples include Ronan Foley et al., eds. *Blue Space, Health and Wellbeing: Hydrophilia Unbounded* (London: Routledge, 2019); Eakey Britton et al., "Blue Care: A Systematic Review of Blue Space Interventions for Health and Wellbeing," *Health Promotion International* 35 (2020): 50–69, accessed November 21, 2023, doi.org/10.1093/heapro/day103; McDougall et al., "Freshwater Wild Swimming."

> As a swimmer, you notice details, with your child's eye view of the world three inches above the surface, and the voles had made new holes at water level, just too small to take a tennis ball. But the most spectacular change I noticed, as I breaststroked up and down, was the explosion of birdsong all round the moat.[62]

Clearly, the perception of swimming as meditation also depends on the individual horizon of experience, depending on personal preference, swimming in the pool can also be experienced as such.

> I liked the fact that the measured breathing gave me something to meditate on when I swam in a pool or lido, where I could see the bottom and the chances of enjoying the gabble of coots and swops of kingfishers was non-existent, in contrast to some of the wilder spots I'd got used to swimming in. I was now reserving my preferred head-out breaststroke for ponds, rivers and bays, places where I wanted to observe nature and feel part of the scene.[63]

With regard to the experience of time, however, the metrically exact courses mean that the conditions here are different from those in open water. Another factor influencing the perception of time in the water is, as we saw at the beginning, the respective temperature and condition of the water, as well as the surroundings and any plants and animals. In the swimming hall, all these external stimuli are reduced. A factor that is of course an advantage for learning to swim and the necessary safety in doing so, but also a decisive aspect for competitive sports when it comes to registering records and performances. In Wild Swimming, it is the moment and the personal experience that counts per se, without the goal-oriented time structure of competitive sports. In Wild Swimming, the goal is just to be in the water.

"Out of Time, in the Middle of Life!"

Free swimming in nature clearly has a clear potential for a meditative experience of timelessness. With a number of similarities to elements of Zen Buddhist meditation and potential for a flow experience that we have outlined, it should be clear why it is possible to "swim out of time" especially in skilful swimming in nature. As one ice swimmer pointed out in conversation in winter 2023: "You are out of time and yet in the middle of life." Time that presses us, or runs away from

62 Deakin, *Waterlog*, 71–72.
63 Minihane, *Floating*, 38.

us, in stressful situations, and puts the body on unhealthy alert, but also too much time that causes boredom, can be unfavourable for our well-being:

> When we think we have too much time, the fear of NOTHING stirs within us. Our idea of what should be right now seems more reliable and obvious than what is right now. And in such situations we make time our enemy. . . . Whenever we lose our sense of the quality of the moment, we end up in the time trap.[64]

Swimming in nature offers an opportunity for a "time-out" in the truest sense of the word and, thanks to the physical properties of water, in a particularly accessible form. Thanks to the physical properties of water, we can experience not only timelessness but also the feeling of being weightless. Swimming is therefore a way for all people, regardless of their physical stature, to literally swim away from stress that is harmful to their health. The timeless time in the sea or lake experienced as weightless bliss contributes to relaxation and health maintenance. This sets swimming apart from other land-based movement activities as a particularly suitable means of experiencing flow or simply a feeling of blissful existence: "Perhaps we are simply more at home in or around water than on dry land. Perhaps dry land is our problem."[65] Several interviewees underline this effect on mental health: Marion says in a personal interview in 2020:

> Because I find my job as a teacher can sometimes be very stressful, not the kind of stress that you can easily let go of when you go home. So that when I take an ice bath, I feel that I release this stress, that it is left in the water in a way. In a way, that's what keeps me going in the winter. . . . Yes, [it's a mental aspect] because I work as a teacher at a high school, so one is, you become a kind of 24-hour person.

A male Wild Swimmer, Kris, reports in a talk around the same time:

> Well, I think that it was powerful, when I was aware that one of us in the group was going through a difficult time in his life and said that it was . . . . helped him in bearing the difficult days. That was very motivating . . . so that's a fine memory. And I have very nice memories from out of . . . us meeting, bathing, having a good time

The special feature of wild swimming, compared to swimming in the swimming hall, lies in the surrounding nature and the natural water conditions. The latter has an inherent ability to shape time that is not regulated by humans, be it through the flow of a river, or the tides and waves in the sea. Together with the

64 Paul J. Kohtes, *Das Buch vom Nichts: Mit Zen zu einem Leben in Fülle* (Munich: Gräfe und Unzer, 2012), 20.
65 Deakin, *Waterlog*, 149.

biophilia effect of the surrounding nature, the conditions are favourable for an experience of happiness, a pleasant being out of time, which clearly contributes not only to mental health, but also to physical health. Safranski puts this in context with the idea of sustainability: "It simply means allowing time and giving time so that something can grow back – in nature, but also among people."[66] In this sense, the meaning of learning to swim is thus placed in a larger context; only when the element of water can be experienced as manageable can its potential as a stress-reducing meditation unfold in the form of swimming in nature, which conveys an experience of timelessness, a '*swimming out of time*.' Wild Swimming icon Roger Deakin underlines this particularly well when he says:

> The great thing about an aimless swim is that everything about it is concentrated in the here and now; none of its essence or intensity can escape into the past or future. The swimmer is content to be borne on his way full of mysteries, doubts and uncertainties. He is a leaf on the stream, free at last from his pretty little purposes in life.[67]

This quote, which is now 25 years old, is even more relevant in today's world, whose digital clocks seem to be chasing us through life in fast pace more than ever. Maybe the sense of meditative swimming is timeless also in the sense that it felt the same way 25 years ago, but this method of letting go of stress seems to be needed more than ever.

Keep calm – go swimming.

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66 Safranski, *Zeit*, 182.

67 Deakin, *Waterlog*, 86.

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Svein Halvard Jørgensen

12 Reflections on Time and Temporal Abnormalities

Setting the Scene

This chapter presents an "out-of-time" experience as an invitation to reflect on the constantly busy, managed and apparently time-controlled reality of modern lives. We want a lot, and there is a lot wanted from us. Limited by a lifespan, we just have to press more into each day, and there is no time to waste. My example is set within a group of people that could be said to break away from the constant change and time-is-money regulatory regime of the time of our times.[1] Albeit not leading secluded lives isolated from the busy world around, they organize their lives according to a different time-frame.

I have spent around 20 years of my life according to such alternative values and activities, connected to several groups and places. This particular community is only briefly presented, but serves as a reminder of the many alternative orientations and lives found within our regime of accelerating change and time management. There will always be people leading different lives in accordance to different times within our time. Just as the classical anthropological "others" opened for reflections on modern society, the alternative lives and times of "others" within our modern society can inspire reflection on the way we understand time and our temporal existence.

Time is a basic phenomenon imbued in our lives and our understanding of it. Initially this chapter presents some general reflections, before it introduces an example that is somewhat explored trough the perspectives of Henry Bergson (1859–1941) and Gaston Bachelard (1884–1962). The pivot of the presentation is a personal experience of slipping out of time, into a void not accessible for memory. During a continuous activity, in which absolute attention and focus is crucial, I clearly remember the first and last seconds, but even before the activity ended, I realized the total erasure of the "centerpiece" – I could not activate a memory of the immediate bygone. It is nothing out of the ordinary to "lose track" of details and the compartment of every "stretch of time" during a snowboard ride down a mountainside. It is intense, focused and fast, and there are blurry details within a memory unabridged from the top to the bottom. Riding into a temporal void, as in my case, is altogether different. I will draw on some insights from Gaston Bach-

1 See Astrid Marie Holand's introduction in this volume.

https://doi.org/10.1515/9783111428970-012

elard in order to reflect on the possible implications of such an apparent anomaly from time as evolving duration.

As Bachelard explicitly posited himself against Henry Bergson, the latter representing a more "normal" understanding of temporal development against which my example is deemed abnormal, I will also present some of Bergson's claims regarding time. While Bergson's vitalist position, with its constant flow of time as durée, accessible through memory and grounded in intuition, is somewhat familiar to many, Bachelard's critique of this, and his alternative perspectives, are perhaps less familiar.

Why turn to texts from the first three decades of the 20th century when there are so many contemporary alternatives? Bergson and Bachelard wrote these texts in an era of earth-shattering developments in physics, relating directly to the understanding of time. They also made explicit references in their works regarding the possible implications the new discoveries in physics could or should have on the philosophical understanding of time. It is safe to say that the groundbreaking discoveries in physics in the early 20th century altered the way in which the world, and cosmos, was understood. Einstein's theory of relativity twisted the macro-perspective, and quantum mechanics did the same with the micro-perspective. Both Bergson and Bachelard were familiar with, and oriented in, physics and mathematics. Bergson had published articles on mathematical problems, and Bachelard even started his academic career as a professor of physics and chemistry before turning to philosophy in his mid-30's. Bergson famously argued (against Einstein) for the limited relevance any understanding of time based on physics could have for the true understanding of time. It was through philosophy, and more specifically the method of intuitive insight, that the true nature of time as such could be found. Such philosophical insights were of a more profound and deep character than any science dealing with inert external objects and their movements in space.

Bachelard granted physics and science overall a more influential position, and his critique of Bergson reflects this. This critique is in many ways in accordance with quantum mechanics, focusing on unpredictability, change and dialectical dissonance. Bergson argued for a constant creative evolution, driven by "the vital impulse" through a uniform flow of time. Bachelard believed change to be necessarily tied to breaks, dissonance, and nothingness, and to be incommensurable with the idea of a constant flow of time. There is of course much to be said about the differences and particularities of these two rather antagonistic philosophers, but undoubtedly Bachelard in most respects has stood the test of time *on time* better than Bergson. As far as the example presented here goes, Bachelard also seems to offer a more applicable framework for conceptualizing a time-experience that represents nothingness and a break from a flowing temporality.

Albeit the time-experience presented in this text relates to an activity and a situation most likely foreign to many, it could hopefully inspire some general reflections. We seem to live in a world compressing and exposing us to more information, more action, and more time-government than ever before. We should be flexible and adaptive to continuous change and challenges, on-line at all times. It seems to me that a philosopher understanding time and life as a rhythmic compulsion of actions, breaks, lacunae, and nothingness could be of some relevance for our modern times, as well as his own modern times.

What is Time?

We live in a society where chronological time is an ever-present matrix in which our lives are entangled. Lectures, appointments, training, and short-, mid-, and long-term planning of events is how we organize and relate to the present as well as the future; our lives are conceptualized and organized according to a schedule. Hence, time is a structuring frame for what we do, and even how we think. We perceive ourselves and the world according to time as an external resource: "I wasted a lot of time," "I saved some time," "I will find time," "I bought myself some time." Time is a scarce resource, and it must be managed well. In many fields, success is measured according to how self-evidently busy a person's schedule is and how little time they have to waste; a busy schedule, and "lacking time," is a form of symbolic capital. It is of course easy to argue for the necessity and advantages of a society and life organized by chronological time. It is also easy to see why time is understood as an objective and self-explanatory value, but this is of course a historical, cultural and social phenomenon. Whatever time is, it is also operationalized in some way through social conventions; it is a part of our doxa.

It is easy to forget that time could very well be understood and defined independently from an external structuring device or global measurement system. That is, time is a phenomenon independent of our structuring of it in discrete units, be it through clocks or elaborate theories of physics – or so we at least perceive it. We cannot see time, nor touch or taste it, but we still have a "sense" of time, independent of measuring devices. This timeliness is a dimension of life in a world that moves, changes and appears to our senses, and we often refer to this lived, experienced time as temporality. As this indicates, time can be a number of "things," from the numerical measuring system manifesting in clocks, to perceptions of changing "nows" in a lifespan. More or less elaborate understandings of time are manifest in all cultures, regardless of explicit theories of physics or philosophy as developed through our traditions. Understanding time, and our lives

in time, presents a challenge that could be answered through myths of creation and development connecting individuals in a meaningful way to history and the future. We have always, everywhere, in some way or another, tried to make sense of time. For Aristotle, time is a thing in the form of numbers, an ordering system for labelling changes in spatial positioning, giving precedence to "things" and the material present. For Aristotle, and many other "makers of time," time becomes externalized, objectified and an aspect of nature outside of us. Time and the material world could just be a powerful illusion, in opposition to an objective, externally anchored "more real" world. This idealistic understanding of our perceptions of the world and all phenomena in it as mere representations, is what Plato argued in favour of. An external time, and a time of which our access through living experiences represents but a mere shadow, is of course the crux of many theories founded in physics. For Gödel, time was not just relative in the Einsteinian way, but also reversible.[2] To prove the formal logic of the claim, Gödel set up equations based on possible worlds in the non-Euclidian General theory of relativity.[3] This latter understanding of time is of course purely theoretical as regards the human experience of time – at least for the time being.

However far from our experienced time Gödel's theory might seem, it clearly illustrates a central issue concerning time; it can be understood as an externalized quantity, or internal quality. Regardless of mathematical calculations placing time as an abstract entity connected to an equally abstract space, we experience time through our lives. We cannot see, taste or touch time, but we "sense" time through our being in the world. Physicists understand time from external observations, experiments and abstract theories aimed at arriving at calculations; it all happens outside of us, and independent of us. Understanding time from the point of view of human experience, our "sense of time," is a philosophical issue. As such it can be inspired by or directly opposed to physics. Alas there is no necessary opposition between physics and philosophy regarding the understanding of time, but it is easy to see how time as an entity in physics could be seen as incommensurable with human temporality. Time is something we, as systemizing and rational animals, implicitly or explicitly employ in the ordering and framing that lets us operate and make sense of life and the world. The question of what time is

2 The non-existence of time, or a single and uniform flow of time, springing from Einsteins General theory of relativity, made it possible for Gödel to calculate and introduce time travel between parallel worlds as a logical possibility.

3 Palle Yourgrau, *A World Without Time: The Forgotten Legacy of Gödel and Einstein* (Cambridge: Basic Books, 2005).

has interested and intrigued man through all times, and it is by all measures one of the most central questions in philosophy.[4]

Human Time and the Autobiographical

As living and reasoning beings, we can intellectually grasp ideas and read and relate to measuring devices, and we can adhere to abstract models of the universe where time is non-existent or reversible. But then there is life and our being in a world, which seems very different from hypostatized universes and objective "observers." As we live and experience the world, it seems time is a multiple, flexible, and obvious aspect of our being in it. Whatever time "really" is, it is definitely "something" interwoven with our existence and subjective understanding of self and surroundings. I will approach the matter through my own experiences, a very subjective and to some questionable scientific method. It is the seemingly more trivial every-day experiences of temporality that interest me, and in particular those which stand out as breaks, or ruptures, from the steady flow of temporality. What I call autobiographical empiricism is of course also a phenomenological approach, albeit not explicitly tied to any particular theory within this tradition. I will present a case, or experience, of temporal confusion that seems to stand as an abnormality compared to the bulk of our "life-times."

Can special events set you outside of time, as temporal experience, and what could we learn about time from such experiences? My example of a "time-experience" out of the ordinary is of course a personal account, but during my research on improvisation, the people I interviewed described incidents that much resembled the one offered here.[5] If nothing else, this at least underlines the heterogenous nature of temporal being-in-the-world, but I would claim that it also raises some questions and issues concerning theories on temporality. Illustrating this, I will try to argue for the incommensurability of Bergson's theory of temporality (Durée) and a rupture in time as given in my example. I will introduce Bachelard's perspective on time as an alternative and more encompassing theory for making some "sense" of temporal voids.

4 In the western philosophical tradition time is a central and debated issue. This does not imply that everyone, or every group, everywhere at all times have grasped with more or less abstract ideas and theories on time. Even in our civilization, most people probably spend little or no time contemplating or developing theories on what time really is.

5 Svein-Halvard Jørgensen, "På sporet av improvisasjonens potensiale," Doctoral Thesis, Norwegian University of Technology and Science, 2004.

During what could be described as peak-performances, time stalls, and the boundary, or subject-object relation, separating you from the surroundings vanish – you are outside time and your body is engulfed by its surroundings, and the inside/subject-outside/object distinction breaks down.[6] This is a radical transformation in a world understood as confirming to the Cartesian-Laplacian approach, in which a premise for our existence "assume[s] a dualistic conception of being, distinguishing the in-itself from the representation, and defining the subject as an absolute rational capacity and the object as a closed system."[7]

Can we speak of time without hyphens and brackets? It is obvious that time or temporality is an issue we cannot escape; we are born, and we die, which is a process of experiences ordered before and after, in a stretch of evolving time. Life is providing us a semi-structured series of experiences that we can remember, reflect upon, and use as inspiration for further actions. We project our future based on the set of experiences upon which we construct our history. This relates of course to subjective experiences of time, or "the time of our life," a type of time we know independently from the ontological questions and problems of time as such.[8] This time we often refer to as temporality, and although I use both time and temporality in the following, unless explicitly referring to conception of time in physics, I refer to temporality.

Circular Life

As my example of "warped time" is connected to a way of life and connection to nature that is perhaps not familiar to all, it seems appropriate to provide some contextual detail. For quite a few years I organized my life around all-year mountain activities. Hiking, hunting, climbing, and cycling during summer and autumn, and skiing and snowboarding during winter and spring. This is not a unique way to organize a life, and many small villages suited for these types of activities have what could be seen as "communities within the community," made up of likeminded mountain-oriented people. This is not a group sharing accom-

6 I am not here referring to the psychological term "peak-performance," nor "flow," as it is understood by Csikszentmihalyi and others in that tradition, Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper Collins Publishers, 2008 [1990]). For more reflections on this aspect, see chapter 11.

7 Pablo Pellegrini, "Merleau-Ponty's Phenomenological Perspective on Quantum Mechanics," *Continental Philosophy Review* 54 (2021): 484.

8 David Couzens Hoy, *The Times of Our Lives: A Critical History of Temporality* (Cambridge, MA: MIT Press, 2009).

modation or living in the same neighbourhood, nor do the individuals within the group share political views or socio-economic status. There are some aesthetic significators such as a preference for certain types of technical high-quality clothing and a variety of expensive equipment – which one often buys at discount prices through contacts within the community. These are of course not significators exclusive for this group, but it is definitively a visible trait. The group as such is loosely knit, and within it there are many "sub-units" made up of a handful of people who interact and form strong friendships. This "lifestyle-community" hence consists of a heterogenous group of people, occupying a variety of jobs, coming from different places and social strata, covering a wide age-span and including both male and female members. Not everyone shares all the same preferences as far as activities go, but there is a recognition of "belonging" within the community. You help out if someone needs a hand, and share experiences, knowledge and news related to landscape, current conditions and equipment. Unsurprisingly, most intimate relationships are also held within the group.

The pursuit of physical activities out in a rugged and wild nature is perhaps the common denominator for the range of activities enjoyed by all members of the group mentioned. Breathtaking, albeit sometimes scary experiences, are related to such activities, and stand as the motivation and reward for something that is also physically challenging and very time-consuming. The people involving themselves in these activities and lifestyle do not think of it as time-consuming, nor see it as a sacrifice of other activities or motivations. The broader set of activities related to, for instance, a chronologically evolving successful professional career that many construct their lives around, is regarded a silly waste of a good life. Living for the seasons, and prioritizing their particular activities, is just what you do, who you are, and what life is all about. It is hence a naturalized, internalized being-in-the-world, not just activities within a set of alternatives where any choice made is also a sacrifice of things you could just as easily do, if you had the time. You move through activities as the year passes in a cyclical fashion, and there is always just a temporary break in one particular activity. As such, this life is different in its framing from many other ways of modern life. There, in the "linear progression life," "now" is on-route to a changing and new tomorrow. Life could present something very different, or at least your hope and expectations centre on such an open future. Doing everything you did last year, on repeat, is often seen as stagnation and should motivate you to act in order to create change.

The basic orientation in the life of repeated activities corresponds by and large with the more "primitive" cyclic societies you come across in anthropological accounts. This in itself holds the potential for reflecting on time and temporality as a homogeneous cultural doxa in a modern state. Such a cyclically organized life holds the potential for reflecting on time and temporality, but within the

world of mountain activities there are some moments that stand out as enlightening quirks as far as linear temporality goes. I would like to present one such exceptional and thought-provoking experience of time. How could we understand an experience of the non-experiencing of time or matter, a time- and space deprivation in the midst of an activity? Albeit the spacial dimension of the experience is interesting as such, and in many ways interconnected with the non-linear time experience, I will here concentrate on the latter. My example relates to snowboarding, one of the central elements in my own life for quite a number of years.

To be clear, I must admit that this life in and for the mountains is a bygone era, hence this is a historical account from a middle aged academic. As others of those who wasted a great number of potentially career-building years for a life of the seasons, "real life" caught up with me eventually. I would however argue that the many years spent circling around seasonal activities have influenced my life profoundly. Not least it has influenced my thinking and understanding of temporality.

Setting Off and Disappearing

The mountain is covered in white, powder-like snow, after days of intense downfall. It is the first day with clear skies and sunshine; in itself a semi religious experience for anyone hooked on off-piste skiing. The mountain has been prepared by the heavy snowfall. Now, it is presenting itself for use; it is the perfect canvas for the painting of our inventive lines. The jittering anticipation and excitement you feel on a day like this is hard to explain for someone outside of the communion of dedicated off-piste skiers. These days are rare, at least the perfect ones like this, and you never know when they will come along. All sounds are muffled by the sound absorbing qualities of meter-deep powder-snow incapsulating everything around you. It is much like the aural experience of a recording studio, only on a grander scale. As a native to the village, you know everyone who works in the ski-lifts, hence knowledge of when the lift opens for transport is available. You can also negotiate a pre-opening ride to the top, under the excuse of testing the mechanics of the lift. The latter is a scripted play aimed at the possible bystanders without this local affiliation. Thus, we get to the top before the canvas is scarred by "city-folks," and get to pick the best places for a free-ride experience par excellence, without any immediate competitors.

It is a ten-minute traverse to one of our favourite drop-sites, the mountain below presents itself as an enormous wall of glittering snow. As you stand on the top, you do not see most of the actual terrain you are going to take on, apart from

last part of the slope, where the vertical drop decreases. You check your helmet, the bindings and the clamps on your back-pack, and feel the excitement and anticipation as you project your forthcoming ride down to the valley below. You look for lines, possible windswept cliffs and rocks, and anticipate the best angle at which to set off. You drop over the edge, and off you go. Immediately the softness and floating capacity of the snow hits you, and within seconds you disappear. There is no snow, no board, no you, and no conscious or decision-making instantaneous presence. It is as if you entered a void, without sense of self, surroundings and time. When the mountainside flattens out somewhat, you pop out of the void and consciously carve through the snow in accordance with deliberate and conscious decisions of the instant. You remember nothing exact from the main part of the run down, apart from an overwhelming feeling of joy at the bed of the valley. It is as if you were suspended in time, transcending the conscious "you," and somehow thrown into a timeless immersion with the surroundings. This world- and time-transcending experience covers what is usually the most memorable part of the ride, then the intensity of the ride supersedes this, and you come out of the void. There is only the feeling of overwhelming joy, but at the same time an immediate question of "what was that?" presents itself. The main action that would normally trigger the feeling is blocked from memory, and just as you get out of the void you realize this. It is an instantaneous realization of a lack of memory. The ride is a continuous temporal extension, but with a non-discrete section of your undoubted presence throughout the activity. It is important to emphasize that it is not an experience of time stopping, like a frozen image. This is also a peculiar experience, but altogether different from this experience. Nothing froze, nothing altered (from normal to "other," but still possible to recollect as such), it just disappeared. As far as temporality goes, it is an abnormality in light of many explanations of conscious and continuous action. During the duration of the ride, there is a significant time-interval where you lack conscious recollections of "nows." "Time-interval" here refers to the chronological time measured by an external observer. You look back and see the tracks, unable to "recognize" or retrieve a memory of any turn or line except for the start and end, but now you can connect the feeling of a great ride to the visible confirmation of your own actions. You have no internal recollection, only the external tracks can connect the "you there" to the "you here."

Taking experience seriously, we must admit that temporality is a multifaceted and complex phenomenon. There is no doubt that our everyday lives, at least for most of us, toddle along in a phase and manner that conforms to the constant, temporal flow much like Husserl's description of phenomenological time. At the same time, there are experiences like the one described above, that definitely do not conform to this flux of presence connected to the past and projecting the fu-

ture (retention, protention). Drug-induced encounters with time, and disappearance from temporality could possibly offer a somewhat similar experience, but without the compressed timespan and immediate point of entrance/exit. Also, the connection between the intense feeling of joy, induced "as if" you consciously experienced it all, and the observable track, is created by the "reading" of that track. The track is a written statement connected to the excitement you feel, but it is a text you cannot recall writing. It is as if you carry with you a residue from the action, but it is only the drop and the lazy turns in high speed after the presumably intense action you can recall being actively involved in. Looking at the track opens up a secondary feeling of excitement. It is like seeing someone's track in advance of your own ride down, and getting goosebumps thinking about your forthcoming chance to do and experience what is promised in that text. The question is, how can we explain or at least make some sense of such unruly experiences of temporal alterations?

Untangling Temporal Abnormalities with Bachelard via Bergson

An experience such as this would not present a problem, or be of any relevance, to a "scientific," chronological, externally established quantified time. The experience related above could be a psychological case of some kind, and possibly relevant for abnormal experiences related to emotionally loaded situations. As far as externalized, chronological time goes, it is totally irrelevant. Time is not related to our internal and intuitive experience, it is externally anchored in discrete, rationally founded and mathematically expressed connections of objects in space. But as mentioned earlier, this time is not giving us any answers when confronting the temporal imbedded lives of humans. Even though we speak, and to a certain extent act, as if time was more a quantity than a quality, we cannot get past the qualitative temporality of life. This of course is what Bergson pointed out, manifesting in what we could understand as his general, over-arching driver of time, *elan vital*, and the lived and living time through durée. The latter is stretching out in a constant movement, a constant flow. Time is hence something we are constantly immersed in, and we cannot escape or think outside of the temporality of life. This is of course an assumption finding its parallel, with different twists, in many positions on temporality:

> We have no atemporal fragments out of which to build; no ground to stand on while we try to get a sense of a non-temporal way of being. So temporality lies deep in our thought because it

> spreads wide in our experience. We cannot think our way down to a level where time does not apply, because no parts of our experience, however small or odd, lie outside time.[9]

The idea of our being in time as an uninterrupted, and structurally homogenous flow, captured and bound together in the past, now, and future, presents a challenging frame for extraordinary time-experiences. Bachelard opposes this constant and homogeneous flow in favour of a dialectical view on duration, and admits a privilege to instantaneous breaks and discontinuity. Whereas Bergson sees time as a constant, uninterrupted (by breaks or voids) gliding transition, a succession without separation, Bachelard sees time as a "construction" of instants into a whole, or perceived stream of interlocked instants. The former insists upon the enlightening access to a pre-reflective consciousness, through the "method" of intuition, as the only way to access the true nature of time. Intuition sets us in a primordial contact with a time that is unspoiled by the limitations set by language; it is an insight beyond, or more correctly above, the possible articulated conceptualization of time. Both epistemologically and methodically this of course stands in opposition to the natural sciences, and arguably represents an antiscientific position. Bachelard sees experienced time as a constructed unity, where instants separated by non-instants or lacunae are actively formed into a "life history." Instants are set together or set apart in a dialectical process. We fit instants together as relating to one another, thus making new instants applicable into a coherent whole. We can, and do, rearrange and redefine the positioning and "content" of instants, based on present needs and situations, both in relation to individual histories and the making (and writing) of history as such. This is a process rooted in intellect and knowledge, and Bachelard does not admit consciousness a privileged status through which we can gain access to a more profound understanding of reality, nor intuition (as Bergson presents it) as a superior or even feasible methodological alternative for either scientific or philosophical arguments.

My question is how a recollection of a void or lapse of time as described can be possible, except as a psychological abnormality? How can there be a reasonable explanation, or at least a theoretical framework that could incorporate this seemingly unintelligible experience, and at the same time avoid reverting to temporal insanity?

I have earlier worked on Bergson's time conception in an attempt to develop a framework for understanding improvisation.[10] I will initially turn to his philosophy of intuition and duration, or durée. One obstacle is of course Bergson's above-mentioned basic assumption regarding durée: time flows in an unbroken

9 Jonathan Bennett, "Time in Human Experience," *Philosophy* 79, no. 308 (2004): 172.
10 Jørgensen, *Improvisasjonens potensiale*.

movement, a homogeneous flow from which evolution and life itself can be understood. This is understood as an obvious insight presented to us through intuition, and much aligned with the above quote from Bennett.[11] The past and present are one; they are not ontologically separated or distinguishable, and the past coexists with the present in each "now." This is of course the point illustrated by Bergson's famous "time-cone," where the present is the most "intense" temporality, placed at the tip of the cone. As the "now" is but an extension of the fullness and totality of durée, the "now" operates in a flowing connectedness and unbroken continuity with the "past." There is no "point" in time, and no breaks or void. This is how time presents itself to us through intuition, and it is through human life and intuitive understanding that we can realize the prerequisite of duration. Bergson takes a definite anthropic stance, and argues against scientific method and scientific understanding in favour of intuition. Science can never grasp the fullness and richness of life and the complexity of the world, but will always be partial and positivistically oriented towards observations and experiments. This is of course an important and central claim of vitalism, and the famous debate between Bergson and Einstein could arguably be seen as one of the major reasons why Bergson and vitalism lost momentum and faded out of both the public and intellectual realm.[12]

Bergson understood time as a phenomenon to be comprehensible in its fullness only through human intuition.[13] Instants and mental states cannot be understood as separate or individual, "They continue each other in an endless flow."[14] Hence he would disclaim the relativity of time in Einsteins theory as giving any insight into to what time really was. Bergson understands time to be stretched out in a constant flow of temporal unity, as an unbreakable chain, opposed to a series of atomistic "incidents." The past, as necessarily incorporated in durée, is in the "now" and future, as we glide through the undivided duration of our lives. Apart from its unconditional anthropocentric and "anti-scientific" stance, Bergson's understanding of temporality could be said to favour and be focused on the past. The past, my experience of continuity and extension through a timespan, opens for the true insight into time as such through intuition. Very simply put we could say that for Bergson we are "set in time" with a focus on the past, and as

11 Bennett, "Human Experience."

12 Jimena Canales, "Einstein, Bergson, and the Experiment That Failed: Intellectual Cooperation at the League of Nations," *MLN* 120, no. 5 (2005): 1168–1191.

13 My quotes and main points regarding Bergson are taken from "Creative Evolution" (1911), although I also rely on former work with his publications ([the author], *Improvisasjonens potensiale*) as well as "Tiden og den frie vilje" (Time and Free Will) (1998) and "Key Writings" (2002).

14 Bergson, *Creative Evolution*, 3.

such on the other side of the present from Heidegger who sees us as "cast into time" with a focus on the future. The past, and our lives, move in a continuous line, and the intuitive experience of durée is a basic framework for perceiving and being in the world. Time as a continuous flow, and the homogeneity of actions set in this flow, is what leads to our intuition of time as such. In an illustrative sentence there even is an opening for the flowing time of creative evolution to reach the point where man overcomes death:

> The animal takes its stand on the plant, man bestrides animality, and the whole of humanity, in space and in time, is one immense army galloping beside and before and behind each of us in an overwhelming charge able to beat down every resistance and clear the most formidable obstacles, perhaps even death.[15]

The accessible fullness, and homogeneity of experiencing time, is hard to connect to my experience. This is why I turned to one of the fiercest critics of vitalism and Bergson's understanding of intuition and time, Gaston Bachelard. He stands in total opposition to Bergson's understanding of time, evolution, intuition, wholeness, and actually everything central to Bergson's philosophy. If Bergson was right, then "in each of our acts, in the least of our gestures, we should be able to grasp the completeness of what is just unfolding: the end in the beginning, being in all its becoming within the thrust (élan) of the seed."[16] In his two books explicitly attacking Bergson he argues rather convincingly, that Bergson was wrong. These two books, *Intuition of the Instant* (2013) and *The Dialectic of Duration* (2016), whose titles alone are polemic statements against Bergson, form the basis for an attempt to make some sense from my experience.

As would be obvious in my presented case, perceptions and physical responses tied to these occurred – otherwise I would not have ended up at the bottom of the valley, gazing up on my tracks, but most likely in a helicopter on-route to the hospital. It is also obvious that the void stretched in time, as observed and measured with a clock from the outside. It is also, as argued above, a prerequisite for survival that I in some way was consciously performing an activity. An "automated" habitual established mastery of snowboarding could not alone account for the performance. High speed, observations of rocks, cliffs, and possible lines (to a certain degree, the main line is set as you take off from the top) would have required responses according to perceptual input. I remember looking in awe at the tracks, but at the same time being unable to recollect anything distinguishable from the

15 Bergson, *Creative Evolution*, 271.

16 Gaston Bachelard, *Intuition of the Instant* (Evanston: Northwestern University Press 2013 [1932]), 9.

first few seconds after dropping from the top, and the re-entering into temporality when the run flattened somewhat. As such, I always remember this as a mysterious void, a meta-experience of not experiencing, a ride into a temporal abnormality. It does not compute with what I take to be a necessary prerequisite for the nature of temporality in Bergson. Hence the intuitive access to time and our being in it as Bergson understands it, is counter-intuitive to my experience.

I do not take my experience as proof of anything, but as an opening, a break, an intuition of a particular instant. Through my work on improvisation, I have encountered other experiences corresponding somewhat to this one, hence it is likely that they are more common than one would immediately think. Albeit not proving anything, nor leading to a theory of temporality, it can underline the temporal diversities we encounter during the course of a lifetime. As humans in a very organized and chronological world, reflecting on time is in itself important in order to critically address *how*, *why* and for *what* we spend our time.

Bachelard polemically sums up his critique of Bergson as follows: "Of Bergsonism we accept everything but continuity."[17] This of course is a total rejection of Bergson, as continuity is the essence of his philosophy. As for his adherence and incorporation of modern physics in his criticism, it is very clearly stated in the expressed necessity of establishing a correspondence between duration and "the quantum characteristics of reality."[18] It is obvious that Bachelard rejects the very essence of Bergson's position, and seeks support for this in the discoveries made in modern physics. The latter is in itself a critique against Bergson's insistent separation between physics and philosophy, admitting the latter precedence and independent access to the understanding of time. For Bergson, the natural sciences, where Einsteins theory of relativity would represent a paramount example, relate to external phenomena and connections between inert objects. We observe, experiment and calculate, using our intelligence. But this knowledge of things and matter will not open up any understanding of human life nor the deep driving-forces of the universe:

> [I]ntelligence and instinct are turned in opposite directions, the former towards inert matter, the latter towards life. . . . it is to the very inwardness of life that *intuition* leads us – by intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and of enlarging it indefinitely.[19]

17 Gaston Bachelard, *The Dialectic of Duration* (Lanham, MD: Rowman & Littlefield International 2016 [1936]): 20.

18 Bachelard, *Dialectic*, 20.

19 Bergson, *Creative Evolution*, 176.

Bachelard seeks to demolish Bergsonian intuition. The latter holds intuition as the true method for grasping the universal truth, and places his understanding of time as the generative force of man and life. Bachelard does not grant personal intuition an immediate and direct access to a superior and separate insight. Elementary and absolute truths gained by epistemological revelation (intuition), stand opposed to an informed epistemology. For Bachelard, Intuition cannot be epistemologically privileged, as every idea stands alongside complementary and opposing truths. Philosophical insights cannot hide behind the claim of individual intuition opening a truth that cannot be fully articulated, explained, nor examined by others. Bachelard hence claims a dialectical development of philosophical ideas, alongside scientific explorations and theories. Claiming individual intuition, on the model of a genius' revelation, as the impenetrable ground for philosophical investigations, is in line with alchemic claims of a universal substance. The advancement of knowledge proceeds dialectically, be it in philosophy or physics.

This approach is central to Bachelard's understanding of epistemology. Knowledge is generated in accordance with, or opposition to, other ideas and truths – but never given as indisputable insight. This is also guiding his understanding of temporality, as his claim is that experienced time is not a uniform, constant flow, but contains intense as well as dormant instants. ". . . phenomena (do) not all have the same *duration*: the conception of one single time carrying our soul away for ever and ever along with things can only correspond to an overview which offers an inadequate summary of the temporal diversity of phenomena."[20] Duration is not a single, flowing movement, but a diverse multiplicity of events with intervals between them. Duration is split and interrupted by lacunae; it is fractured in a series of something/nothing. Duration is hence a dialectical movement between "somethings" and "nothings," and we compose and rearrange "somethings" to create our lives and histories. History, and memory, are fluid and creative compositions. In this respect Bachelard is a "modern" philosopher, placing interpretive choice and perspective as active forces in the production of knowledge. For Bachelard it is indisputable that Bergson's direct, supreme and total knowledge given by intuition is epistemologically flawed. The latter presents us with a perspective alongside others, and holds no divine insight acquired through metaphysical alchemy. Knowledge established through divine intervention would leave philosophy in a realm of dogmatic belief, and exclude it from development and interdisciplinary exploration.

My example referred to a situation most definitively classifiable as "action," initiated by a decisive will and a physical movement in accordance with that. For

20 Bachelard, *Dialectic*, xii.

Bachelard we must understand action as a discontinuous flow. It exhibits the nature of the wave-motion of quantum mechanics, and as such it is dialectic and not a continuum within a uniform, constant durée: "Once action has been willed, once it is a continuous action and one that draws on reserves of psychic energy, it cannot flow continuously."[21] The binding together of all instants and breaks within an action as described, is a construct, hence creating unity and a memory of "the action." This explains the mistaken sense of unity through duration, but it also opens up to allow for fundamental and explainable disorder. In a reality where a dialectical movement between "intense instants/nothingness" is the character of duration, there must be a plurality of durations. The succession of instants is characterized by breaks and voids; there is no uniform continuum ordering duration, no Bergsonian durée. It is the work of the mind that creates the retrospective unity, and as such it must also be possible for extraordinary breaks to open the mind for the realization of a void. That is, a process of the mind geared at forming a certain, and chosen, continuity in action and duration, can also focus and make apparent a temporal void. A constant experience of this nature would cause too much "chaos and disorientation," hence we organize experiences according to the connection of instants in a gliding movement. This is also how we create our history, as well as history as such. As for the nature of temporality and duration, this admitted insertion in my memory of a void is just an operation that is more in tune with the nature of action. A void is not just possible, but a necessity bound to action, and we create unity through the active connecting of "points." Given a particular void, or rupture, that is in itself more intensely given and more immediate and separate as a distinctive point within the action, this disruption of the unifying movement would be explainable. It would also be in accordance with the reality of our movement in time. The experienced void would be a recorded account for the actual nature of action, a disconnected break admitted into the construction of unity we create from extracted instants. Hence, my experience of riding out of time is but a particular instructive experience, revealing more clearly how we get exposed to the true nature of temporality through every action and life itself.

We create duration, from instants put together by our organizing mind, "Time endures only through invention."[22] Bachelard performs a deconstruction of Bergson's philosophy of fullness, unity and flowing progression, and in accordance the intuitive access to homogeneous duration. Intuition is of course Bergson's method for unveiling the true nature of time, the method of discovering a

21 Bachelard, *Dialectic*, 29.
22 Bachelard, *Intuiton*, 49.

truth not accessible to the sciences of things. Following Bachelard, we cannot gain access to a continuous time through intuition, first and foremost because time does not exist as such. Intuition does not serve as a method for formal insights into a totality regarding time, but it is prone by the constructed memories of continuous time that we mistakenly take to be time's true nature. Hence it is not the constant flow of time that feeds our memory, but the operation goes the other way around, "directly formal intuition is a total impossibility. Indeed, the prediction of a flow of time is based on the lessons of memory."[23] What the intuition of a unified and constantly flowing time actually proves is a preconceived assumption. We have multiplied so many events in memory, as this is what memory does, that instants and hence time itself is understood as pure duration. This rich and full duration is for Bergson open for inspection and "discovery" through intuition. Pasting events together in a string of time-coded memories obliterates the events as instantaneous and separate, which is a necessary prerequisite for making time an underlying stream of movement, event-free time, in its own right. This is, of course, Bergson's duration, which for Bachelard is a construct and no formal order*:* "the only way we ourselves can feel time is by multiplying conscious instants. . . . The only truly uniform duration is, in our view, a uniformly varied duration, a progressive duration."[24]

My experience of the instant, with its intuition of temporal nothingness, does not fit into Bergson's conception of duration. It would merely be an anomaly with a probable ad-hoc explanation subsumed under the constant flow of time. Following Bachelard it is possible to encompass this void in temporality as a "valid" experience of the heterogenous nature of temporality. As a dialectical theory of duration, it can encompass "un-flowing" time. My experience could also pose as an example of how intuition relates to an instant, and how the reflective potential in the particularities of instants opens for a methodological exploration of the new and unexpected.

Bachelor's duration is dialectical, and the flow of time is an active process connected to and grounded in instants. It opposes a homogenous forever flowing and encompassing duration, which is but a metaphysical creation, referring to a habitually established secondary ordering of instants. The sources of dialectical duration are singular acts, instants, not a pre-existing driving force for continuous action: "Duration is a dust cloud of instants or, better yet, a group of points organized more or less coherently by a phenomenon of perspective."[25]

23 Bachelard, *Dialectic*, 33.
24 Bachelard, *Intuition*, 50.
25 Bachelard, *Dialectic*, 19.

An experience such as the one described in this chapter, is obviously strange and easily ignored or omitted. In Bachelard there is a place for the strange and provocatively different incidents, and in accordance with this an admitted possibility for them to open up new insights and understandings; there will always be new instants, and always something to be gained from them, but we can never claim an absolute and indisputable understanding or knowledge based on them. As I have tried to bring forward by my example, and through Bachelard's philosophy, it is not an absolute necessity or natural movement that holds us captive in an accelerated temporality. Being constantly caught up in seemingly perpetual chains of actions, like a log being drifted relentlessly by the stream of a river, is a result of ideology, not the nature of time.

Bachelard regarded his philosophy on time to be just as much a pedagogic of a true rhythm in life. Sentral in this pedagogy is the insistence on an interplay between presence and absence, the energetic and repose. Our constant on-line, high-phased and administrated lives, always fighting a lack of time, is contradictory to a true rhythm of life. There is a dialectic necessity for "time-off" and "time-on," intellectual work and imaginative repose. A life in the fast line, controlling and planning time as a means of being effective, is not optimizing efficiency nor creativity. The mind is overloaded with knowledge and facts it cannot assimilate, and we end up just being busy, and misunderstand this for being a value in itself. Distance, breaks and repose, the necessity of forgetting in order to remember, the oscillation between "on" and "off," is the key to a true and "effective" rhythm in life. It is important for our well-being, and essential for the development of our intellectual capacity. These are thoughts that invite us to reflect upon the times of our time, and how we spend our time. Above the personal reflections, it also offers a perspective on the organization of our modern society. Bachelard speaks of rhythm, and relates this to studies in "Rhythmanalysis."[26] I will end with a reference to music: In a musical work, there is an obvious necessity for breaks in order to perfect the parts, and as for the quality of the music, less can be more.

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26 Bachelard, *Dialectic*, 123–139.

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Therese Thuv

13 Escaping Timelessness: Jehovah's Witnesses' Perception of Time and Former Members Transition to Temporality

Introduction

Perception of time in a religious context encompasses both existential questions concerning life and death as well as directing individual life choices of believers. Doctrines and guidelines on how to live your life to please a divine authority is a characteristic feature of most religions, often in combination with the hope of an eternal (after)life as a reward. This chapter will highlight the perception of time upheld and promoted by the Christian religious group of Jehovah's Witnesses, and former members' shift to a new understanding of time after their withdrawal from the sect.

Jehovah's Witnesses are known for their zealous evangelisation, where they preach an imminent paradise on earth under God's rule, with eternal life as the reward for being faithful to God. Their perception of time is one of the central hallmarks of their core beliefs and influences all aspects of their lives, both in the religious sense and in the mundane, everyday life. Jehovah's Witnesses believe that the entire world system is on the verge of ending due to the imminent action of God and his son Jesus Christ, manifested as "Armageddon," with a cleansed earth freed from all evil, ready for hosting the true worshippers of God. In effect, this means that eternal life without ever experiencing death is not only a hope, as in hoping it *might* happen, but it is a vivid, realistic, and certain conviction the members hold.

Eternal life, and the idea of never experiencing death are concepts that are a part of how they imagine their imminent future, and are subjects for discussion both formally at their meetings and conventions, as well as in private spheres. This belief manifests itself in their life choices on all levels. Although not immune to the increased compression of time, since they live and interact as members of the society on different levels, they strive towards a higher end. To Jehovah's Witnesses, life isn't something ephemeral or limited to today's perception of time and use of time, as long as one remains faithful to the teachings and beliefs of the sect. The ultimate goal is everlasting life, and that transcends any other adjustment to time.

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I have interviewed six former members of Jehovah's Witnesses, all of whom were exposed to such teachings from early childhood but who left the sect in their adulthood. The experiences and reflections of those interviewees reveal that certain implications apply to the lives of those who choose to leave a sect that has such an alternative and centrally embedded way of perceiving time. I have sought to give the respondents a voice by including multiple direct quotes. I have then analysed the narratives in order to highlight the challenges the informants have faced when dealing with the transition from the belief in the existence of unlimited amounts of time (in the sense of eternal life), to adapting to a new understanding of time as a limited thing.

Firstly, I will detail the method used for gathering and analysing the data material along with the theoretical approach for this study, and will provide a brief outline of previous research that has been done on this issue in relation to Jehovah's Witnesses. Further, I will contrast the commonly-held modern-day perception of time with that of the Jehovah's Witnesses, and will also outline the teachings of the sect. The latter part will consist of the analysis of the interviews.

Method and Theoretical Framework

This study applies a reflective and analytic approach to the research question, based on qualitative data collection. The interviews were designed with a view to exploring how the interviewees were affected by the perception of time growing up as Jehovah's Witnesses (JW),[1] and through the transition towards becoming non-believers without an eternal life-perspective, and how it affects them today.

The interviews were conducted by me in the capacity of a researcher and with a background as a former JW. Herein lies a methodological dilemma in balancing both the pros and cons of having the same background as the interviewees; being a former member of JW in this context is beneficial because I know the system of belief, the world view, the terminology, the social settings, norms, and rules that exists within the JW sect. At the same time, remaining unbiased and dispassionate was a challenge. I had to take care that I did not let my focus drift so as to let the researcher's approach morph into a personal one. This starting point for doing research and collecting data challenges the objectivity that a case study such as this acquires, and throughout the entire process I have been continuously aware of this methodological challenge.

1 Hereafter, the abbreviation "JW" will be used.

The interviews are analysed using a narrative analysis approach inspired by interpretive phenomenological analysis (IPA). Studies using IPA focus on examining how individuals construct meaning from their life experiences, and researchers who apply IPA attempt to understand what it is like to stand in the shoes of their subject so that they can interpret this meaning.[2] With origins in hermeneutics and idiographic, IPA typically draws on narratives from a small number of people, focusing on the specifics and not the general and universal.

The interviewees in this case study have presented their experiences in their own words, from their own perspective and with their own emotional emphasis. Analysing their narratives involves examining and understanding how their actions are related to the social context in which they present themselves and to observe how and where they occur through growth.[3] Caution is needed in working with narratives, as retrospective narratives will always be in danger of being "tainted." In other words, their stories can be influenced by many factors outside of the narrator's own consciousness and/or by events in life that have happened at a later date. The narrator might have been influenced by opposite forces that makes the memories change, or by forces that enhance the narrator's feelings and experiences on the given subject.[4] Nevertheless, a person's recollections and how these manifest themselves in a narrative is not up to the researcher to question, but rather, to acknowledge and understand within a given framework.[5]

This study seeks to investigate the research questions using a sociological approach, influenced by symbolic interactionism. Symbolic interactionism is a much-used perspective in both microsociology and social psychology, and is a micro-level orientation focusing on human interaction in various situations.[6] JW describe themselves as a united people, not a part of this common world, and can be viewed as a sub-culture or even an independent society, with its hierarchy, brotherhood, norms and rules, a strong belief system and sanctions towards members who violate the rules. Therefore, theories about identity, symbolic inter-

2 Igor Pietkiewicz and Jonathan A. Smith, "A Practical Guide to Using Interpretive Phenomenological Analysis in Qualitative Research Psychology," *Czasopismo Psychologiczne – Psychological Journal* 20, no. 1 (2014): 8, accessed October 10, 2022, doi:10.14691/CPPJ.20.1.7.

3 Torill Moen, "Reflections on the Narrative Research Approach," *International Journal of Qualitative Methods* 5, no. 4 (2006): 59.

4 Jill Sinclair Bell, "Narrative Inquiry: More Than Just Telling Stories," *TESOL Quarterly* 36, no. 2 (2002): 208.

5 A more detailed description of elements used in this study, see Allison J. Pugh, "What Good Are Interviews for Thinking about Culture? Demystifying Interpretive Analysis," *American Journal of Cultural Sociology* 1 (2013): 42–68.

6 Alex Dennis, "Symbolic Interactionism and Ethnomethodology," *Symbolic Interaction* 34, no. 3 (2011): 349, and 352–353.

actionism and how culture arises and affects people in a society, might prove to be successfully applied with regards to JW.

In addition to drawing inspiration from symbolic interactionism, this study is also influenced by phenomenology, this being applied alongside my use of IPA as a methodological tool of analysis. Phenomenology can be said to seek to interpret the meaning of phenomena the way the actors themselves understand them to be.[7] In the context of religiosity, W. B. Kristensen argues that phenomenology is not complete in grouping or classifying the phenomena according to their meaning, but rather in the act of understanding it, stating that "Phenomenology has as its objects to come as far as possible into contact with and to understand the extremely varied and divergent religious data."[8] The aim is to uncover the meaning in the religious phenomenon of a doctrine that teaches the worshippers to believe in everlasting life on earth, and how the phenomenon of ostracising members affects the world view of the ones being excluded. This theoretical approach, as well as a method in analysing the data, will be a tool to uncover how former members created a meaning in their cognitive system, both when they were worshippers and afterwards.

Research on Jehovah's Witnesses

Despite JW' history as being a fast-growing religious movement, there is a deficiency of academic literature on the organization as a whole. The research on the implications of being members of, and leaving, Jehovah's Witnesses is limited, but an increasing interest in this field is notable. A recent qualitative study has been made in this field by Heather J. Ransom, Rebecca L. Monk, and Derek Heim.[9] In this study the researchers have used a social identity approach, and analyse interviews of former members of Jehovah's Witnesses on their transition towards a post-JW life, experiences of ostracism, and their self-identity. Closely related to my approach in this chapter, this study has provided me with insight in both methodology and how to approach a sensitive subject such as this.

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7 George James, *Interpreting Religion: The Phenomenological Approaches of Pierre Daniël Chantepie de la Saussaye, W. Brede Kristensen, and Gerardus van der Leeuw* (Washington: Catholic University of America Press, 1995), 144. See also Alfred Schütz, "Some Leading Concepts of Phenomenology," *Social Research* 12, no. 1 (1945): 77–97.

8 William B. Kristensen, *The Meaning of Religion: Lectures in the Phenomenology of Religion*, transl. By John B. Carman (The Hague: Martinus Nijhoff, 1971), 11.

9 Heather J. Ransom, Rebecca L. Monk, and Derek Heim, "Grieving the Living: The Social Death of Former Jehovah's Witnesses," *Journal of Religion and Health* 61 (2022): 2458–2480.

Earlier scholarly studies have been made on JWs, with the 1975 book by James A. Beckford being one of the first.[10] In their 1984 book, Gary Botting and Heather Botting examine the history of JWs, the ways in which history itself has been interpreted in the light of bible prophecy, the basic beliefs that form a central part of the faith, and the dynamics of conversion and indoctrination.[11] Jerry Bergman offers a useful compilation consisting not only of lists and facts, but also commentaries on the history, doctrines and activities of JWs, as well as information relating to criticism of various theological and organizational aspects of the organisation.[12] M. James Penton has contributed to this field of research in the capacity of a scholar with an insight of an insider as a previous member of the movement.[13] His book presents Jehovah's Witnesses through different contexts: historical, doctrinal, and sociological.

More recent works include qualitative studies of former witnesses with different approaches, such as Andrew Holden, who analyses how the JW movement promotes its millenarian message to non-JW's, and how they can hold futuristic beliefs while simultaneously living a present-day life.[14] Nicholas S. Hookway and Daphne Habibis investigate how a group of young JW's who were born into the religion, make the shift from being members to dissents, investigating the roots of the experienced disaffiliation.[15] With this chapter I seek to contribute to this field of research by highlighting how the JW doctrines and perspectives on time have shaped former members' lives, both as JW and now as non-believers.

Contrasting Perceptions of Time

How to define time is a puzzle known to have been investigated and debated from the antiquity to present day across various disciplines including philosophy,

10 James A. Beckford, *The Trumpet of Prophecy. A Sociological Study of Jehovah's Witnesses* (New York: John Wiley & Sons, 1975).

11 Heather Botting and Gary Botting, *The Orwellian World of Jehovah's Witnesses* (Toronto: University of Toronto Press, 1984).

12 Jerry Bergman, *Jehovah's Witnesses and Kindred Groups: A Historical Compendium and Bibliography* (New York: Garland Publishing, 1984).

13 James M. Penton, *Apocalypse Delayed: The Story of Jehovah's Witnesses* (Toronto: University of Toronto Press, 1985).

14 Andrew Holden, "Returning to Eden: Futuristic Symbolism and its Effects on Jehovah's Witnesses," *The Department of Sociology, Lancaster University,* accessed October 1, 2022, http://www.comp.lancs.ac.uk/sociology/papers/Holden-Returning-To-Eden.pdf.

15 Nicholas Samuel Hookway and Daphne Habibi, "Losing My Religion: Managing Identity in a Post-Jehovah's Witness World," *Journal of Sociology* 51, no. 4 (2013): 1–14.

social sciences, studies of physics and more. Inevitably, such fascination with the concept of time has led to the construction of countless theories on the subject. Despite all efforts, it is safe to say that the term "time" encompasses such vast structures and dimensions of the human consciousness, so many experiences and circumstances, that it proves to be an impossible task to formulate them into an overarching perception of time in its essence.[16]

However, a society shares a sense of common understanding of time given its structures and organisation. When a certain understanding of time has been embodied in the sense that it becomes invisible, natural and as a matter of course, it exists more or less as a undercurrent in the society and is rarely problematised.[17] In relation to this, the modern generic view of time holds that it is linear and that we have a limited set of days, weeks, months and years from birth to death. Moreover, this acts as a way of measuring our lives, where the purpose is to fill these pockets of time with meaning and value.[18]

Realising that death is an inevitable and natural part of life is a fact that most people agree upon. What happens after death is another question and prompts countless variations of belief; but the fact that life must end, death must occur, and the time you have as a human being must stop is widely acknowledged and agreed upon regardless of what beliefs one holds. Birth and death are time-markers and mirror the world as a whole; everything and everyone has a beginning and an end. This in its turn shapes the way we understand the world around us, the life choices we make and how we adjust and adapt to the society. Also, it shapes our personal views on what is important in life and what the time we have available to us should be spent on. To a large degree it also shapes our perception of reality.

JW's strong belief that the members living today will never experience the sting of death contrasts strongly with the commonly held view on time and lifespan. They hold the belief that the destruction of this world order is imminent, and if they abide in God and the sect's teachings, they will survive Armageddon and live forever as perfect humans like Adam and Eve before the Fall in Eden. This view of time and its impact on its members has proved to be extremely hard to comprehend for outsiders. To better understand JW's view of time and lifespan it is helpful to provide a short overview of the origins of the sect and its doctrines.

16 Thomas Krogh, *Virkelighetens tid: Et essay i tidsmetafysikk* (Oslo: Scandianvian Academic Press/Spartacus forlag, 2006), 8.

17 Jonas Frykman and Orvar Löfgren, *Det kultiverte mennesket* (Oslo: Pax forlag, 1994), 41.

18 Jiří Subrt, *The Sociology of Time: A Critical Overview* (Cham: Palgrave Macmillan, 2021), 12.

The Jehovah's Witnesses' Movement

JW is a denomination widespread across the globe, with close to 8.6 million members, and with an evangelistic profile.[19] This movement can be traced back to Charles Taze Russell (1852–1916) from Pennsylvania in the United States.[20] Russell was an eager student of the Scriptures and various Bible commentaries and ideas closely linked to much of the millenarian Protestantism[21] that was prevalent in the 19th century, and soon he developed his own doctrines.[22] In July 1879, Russell began publishing *Zion's Watch Tower* and *Herald of Christ's Presence,* and *The Watch Tower Bible and Tract Society* was established.[23] After Russell's demise in 1916 he was followed by Joseph F. Rutherford as the president of *The Watch Tower Bible and Tract Society*, and in 1931 The Bible Students took the name Jehovah's Witnesses. The doctrines related to eternal life on earth were cemented as a core belief of the JW during the 1930s and thus removed the movement further away from other religious groups that shared the same starting point within the wave of millenarian Protestantism. The work and teachings of the religious group are now led by the "Governing Body," a group of men residing at the JW world headquarters in Wallkill, New York, USA.[24]

The JW sect fulfils the characteristics of a Christian fundamentalist movement[25] and is known to hold strict conservative views on gender roles, sexuality

19 "Watchtower Bible and Tract Society Grand Totals," accessed January 10, 2023, https://www.jw.org/en/library/books/2022-Service-Year-Report-of-Jehovahs-Witnesses-Worldwide/2022-Grand-Totals/.

20 Watchtower Bible and Tract Society, *Jehovah's Witnesses-Proclaimers of God's Kingdom* (New York: Watchtower Bible and Tract Society, 1993), 43.

21 Millennialism is a belief that a Paradise on Earth will occur prior to God's final judgement, over a thousand-year period. Various millenarian movements have existed from the beginning of Christianity and to our modern times, where Jehovah's Witnesses is one of the best-known groups advocating this specific religious belief.

22 Penton, *Apocalypse Delayed*, 22–23, 25, 27 and 32.

23 William Sims Bainbridge, *The Sociology of Religious Movements* (New York: Routledge, 1997), 48.

24 As of today, the members of the Governing Body are Kenneth Cook Jr., Gage Fleegle, Samuel Herd, Geoffrey Jackson, Stephen Lett, Gerrit Lösch, Mark Sanderson, David Splane, and Jeffrey Winder. Jehovah's Witnesses website, accessed March 22, 2023, doi:wol.jw.org/en/wol/d/r1/lp-e/502015165.

25 In 1910, the General Assembly of the Presbyterian Church identified what became known as *the five fundamentals*, the core teachings of the Christian faith: 1. Biblical inspiration and the infallibility of scripture because of this 2. Virgin birth of Jesus 3. Belief that Christ's death was the atonement for sin 4. Bodily resurrection of Jesus 5. Historical reality of the miracles of Jesus. JW firmly believes in all five. George M. Marsden, *Fundamentalism and American Culture: The Shap-*

and family life.[26] No woman has a leading responsibility based on the belief that God has given man the role as leader, both in family life and in all matters concerning the faith.[27] JWs are not allowed to participate in politics, to celebrate traditional holidays, or to accept intake of blood in any form, neither in food nor blood transfusions.[28] Although the teachings instruct the members to have minimal social interaction with non-Witnesses, they also assign them with a responsibility to be good neighbours and law-abiding citizens.[29] The JW sect practices ostracism of baptised members who transgress the sect's requirements.

Another feature of the JW sect, perhaps the one that they're mostly known for, is the proclaiming of their doctrines with a view to reaching as many as possible with their bible teachings.[30] They believe that the destruction of the present world system in Armageddon is imminent, and that the establishment of God's kingdom upon earth is the only solution for all problems faced by humanity. After Armageddon, Christ will rule Paradise on earth in a thousand-year period (a millennium) where his faithful followers will lead their lives as God intended humanity to do in the Garden of Eden before sin entered the world. Their hope of an eternal life here on earth is determined by their faithfulness to the rules and instructions of the sect. After the Millennium, Satan will be released for the ultimate battle against Jesus Christ, and those who keep their faith in Jehovah and Jesus through this tribulation will continue to live for all eternity in a paradise on earth.

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ing of Twentieth Century Evangelicalism, 1870–1925 (New York: Oxford University Press, 1980), 117.

26 Watchtower Bible and Tract Society, "Do Not Be Fooled by 'the Wisdom of This World'," *The Watchtower – Study edition* May 2019, 21–24, accessed March 22, 2023, Do Not Be Fooled by "the Wisdom of This World"| Watchtower Study (jw.org). See also Watchtower Bible and Tract Society, *The Secret of Family Happiness* (New York: Watchtower Bible and Tract Society, 1996), accessed March 22, 2023, The Secret of Family Happiness (jw.org).

27 Watchtower Bible and Tract Society, "Man and Woman – A Dignified Role for Each," *The Watchtower – Study edition.* January 2007, 4–7, accessed March 22, 2023, Man and Woman – A Dignified Role for Each (jw.org)

28 Watchtower Bible and Tract Society, Why Do Jehovah's Witnesses Maintain Political Neutrality? | FAQ (jw.org), What Does the Bible Say About Blood Transfusions? | Bible Questions (jw.org), Holidays and Celebrations | Bible Questions & Answers | JW.ORG, all accessed March 22, 2023.

29 Carolyn R. Wah, "An Introduction to Research and Analysis of Jehovah's Witnesses: A View from the Watchtower," *Review of Religious Research* 43, no. 2 (2001): 164, 171.

30 Bainbridge, *Religious Movements*, 570. Watchtower Bible and Tract Society, *Come Be My Follower,* (New York: Watchtower Bible and Tract Society, 2007), chapter 9, accessed March 22, 2023, "Go . . . and Make Disciples" (jw.org).

This teaching is a major feature of JW doctrine that differs from that of other Christian denominations. Where the belief in an immortal soul that wanders to heaven or hell after death is a core belief in the Christian faith in general, with variations, JWs believes in a physical resurrection of the worthy to an eternal life in paradise on earth alongside those who survive Armageddon. A small group of individuals is invited to reign in heaven alongside Jesus Christ. This number is 144,000 and is found in the Book of Revelations, the apocalyptical final book in the bible.[31]

The following extracts from their literature used both at meetings and in their evangelisation illustrates how real and vivid this specific concept of time is for the believers, and equally how different it is to the perception of time and reality to the common world outside the sect:

> The Bible reliably helps us to see where we are in the stream of time. It shows us that we are in 'the last days' of the present system of things.[32]
>
> With endless life before us, the potential for creative achievement in the coming earthly Paradise will be limitless![33]
>
> Regardless of our physical age then [in the earthly paradise], whether we are 80, 800, or even older, our bodies will remain in radiant health.[34]
>
> "Imagine! People will continue to grow in wisdom and experience. But as centuries pass, the physical vitality of their youth will never fade."[35] "Our short and troubled existence is not 'the real life,' for it is far inferior to what Jehovah has in mind. 'The real life' that God wants for us is 'everlasting life' under perfect conditions."[36]

31 Watchtower Bible and Tract Society, Who Goes to Heaven? | Bible Questions (jw.org), accessed March 22, 2023.

32 Watchtower Bible and Tract Society, *Knowledge That Leads to Everlasting Life* (New York: Watchtower Bible and Tract Society, 2006), chap. 11, paragraph 1, accessed June 5, 2023, doi:wol.jw.org/en/wol/d/r1/lp-e/1101995022

33 Watchtower Bible and Tract Society, "The Only Way to Everlasting Life," *The Watchtower Announcing Jehovah's Kingdom,* April 15, 1999, paragraph 17, accessed June 5, 2023,The Only Way to Everlasting Life – Watchtower ONLINE LIBRARY (jw.org)

34 Watchtower Bible and Tract Society, "The Only Way to Everlasting Life," *The Watchtower Announcing Jehovah's Kingdom,* April 15, 1999, paragraph 16, accessed June 5, 2023, The Only Way to Everlasting Life – Watchtower ONLINE LIBRARY (jw.org)

35 Watchtower Bible and Tract Society, "How Long Can You Live?," *Awake!,* April 2006, 9, accessed June 5, 2023, doi:wol.jw.org/en/wol/d/r1/lp-e/102006163#h=15:0-21:263

36 Watchtower Bible and Tract Society, *Knowledge,* chap. 19, paragraph 3, accessed June 5, 2023, When the Knowledge of God Fills the Earth – Watchtower ONLINE LIBRARY (jw.org)

> Jehovah God will soon destroy the present wicked system of things. The world is rapidly approaching what the Bible calls Har–Magedon, or Armageddon. . . . The outcome is absolutely sure. All who oppose God's Kingdom and who are a part of Satan's wicked system will be eliminated. Only those loyal to Jehovah will survive . . . There will be plenty of enjoyable work to be done by Armageddon survivors. They will transform the earth into a paradise. . . . Eternity will stretch out before those who love Jehovah God and dwell in the Paradise earth. . . . Music, art, crafts – why, perfect mankind's achievements will surpass the finest works of the greatest masters in the old world! After all, humans will be perfect and will have limitless time before them.[37]

The following part will detail some of the life choices that this perception of time inspires believers to make.

Life Choices within the JW Timescale

To members of the JW sect, the belief in the imminent destruction of this world system as the starting point to an everlasting life is a founding part of how they shape their own identity, and a driving force to live their lives in accordance to doctrines that make them in many ways estranged from common society. Identities has a reflexive aspect which can clearly be seen in the JW social structures: commitment affects salience, which in turn reinforces commitment.[38] This process can be understood in light of theory influenced by symbolic interactionism: violation of religious norms will result in undesirable sanctions, whereas obedience to norms will produce desirable awards.[39]

With the undebatable conviction that time is not limited by death if one stays faithful to Jehovah and his organisation, recommendations and instructions are given to the members on how to be a good servant of God. A repeated feature in their teachings is the warning that believers should not enter higher education. It's not forbidden, but the dangers of critical thinking and human philosophy are stressed. In addition, given the imminent onset of Armageddon then it is advocated that the time left to believers should be used in the service of God and the

37 Watchtower Bible and Tract Society, *Knowledge,* chap. 19, accessed June 5, 2023, When the Knowledge of God Fills the Earth – Watchtower ONLINE LIBRARY (jw.org).

38 Linda E. Francis and Richard E. Adams, "Two Faces of Self and Emotion in Symbolic Interactionism: From Process to Structure and Culture – And Back," *Symbolic Interaction* 42, no. 2 (2019): 254, accessed June 11, 2023, https://www.jstor.org/stable/26629980.

39 Dale W. Wimberley, "Religion and Role-Identity: A Structural Symbolic Interactionist Conceptualization of Religiosity," *The Sociological Quarterly* 30, no. 1 (1989): 130, accessed June 11, 2023, https://www.jstor.org/stable/4121456.

organisation, instead of pursuing a career in a world that's about to end. Why risk an eternal life for a brief period of success in this world?

Furthermore, becoming romantically involved with a non-JW is strongly discouraged because of the danger of the witness being encouraged to give up the faith. On top of this there is the future sorrow of losing a non-believing spouse in Armageddon.[40] Marriages at an early age, often in the late teens, is common because of the prohibition against all forms of non-marital sex. Another major time-related life choice open to married couples is the option not to have children until after Armageddon, when the earth is cleansed and free from the challenges of today's world. A hope of a world that soon will be free from crime, sickness, pollution, wars and so forth, and with endless time to take care of yourself and your children, has convinced many JWs to abstain from having children. These are merely a few of many examples where their perception of time plays a substantial part in the lives of JWs.

JWs have strong ties with each other, sharing a sense of family connection within the congregation. For most JWs, every aspect of life revolves around the worship of their God and the sect's different activities. Members are encouraged to have minimal social contact outside the sect, whether that be with work colleagues, schoolmates, or neighbours.[41] Instead, they are encouraged to form strong bonds inside the congregation, which is perceived by many as a positive thing. For many, being a JW and a member of a congregation provides a social network where they feel recognized and included.

However, this does pose difficulties for those who no longer wish to be a part of the sect, or who want to be but are not able to follow the rules, and thus no longer are accepted as members. Due to the strict practice of ostracizing such persons, those being ostracized find often find themselves to be lonely and deprived. In the process of losing faith and struggling with the existential problems that this can pose, being shunned and left alone in a world outside the congregation that feels alien and disconcerting, adds to the personal crisis.

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40 Watchtower Bible and Tract Society, "What If I Fall For an Unbeliever?," *Awake!*, May 22, 1994, 18, accessed June 14, 2023, What If I Fall For an Unbeliever? – Watchtower ONLINE LIBRARY (jw.org).

41 Watchtower Bible and Tract Society, "Help Bible Students to Avoid Bad Associations," *Life and Ministry Meeting Workbook,* January–February 2022, accessed March 22, 2023, Help Bible Students to Avoid Bad Associations (jw.org); "The Tragic Results of Bad Association," *Life and Ministry Meeting Workbook,* April 2020, accessed March 22, 2023, The Tragic Results of Bad Association (jw.org); "Spend Time With Those Who Love Jehovah," *Life and Ministry Meeting Workbook,* August 2019, accessed March 22, 2023, Spend Time With Those Who Love Jehovah (jw.org)

To non-believers, the concept of unlimited time as immortals is mostly found in fiction and fantasy and is not a part of reality, simply because it is physically impossible. The gap between these contrasting perceptions of time and reality is vast, and consequently, former JW's find themselves struggling to adapt to a life outside the sect and to form a new world view, and to adjust to the belief in a "normal" lifespan on earth instead of unlimited time on earth. Given the deep contrast between the opposing perceptions of time, former Witnesses can experience a strong sense of not being understood while struggling to be a part of mainstream society as non-believers. There is a general impression that many former JWs struggle with their mental health as a result of these implications. The respondents in this case study have all felt these implications following ostracization and loss of faith. The following part will address this further.

Respondents

The following table introduces this study's respondents. They are six former members of the sect, and all of them were born and raised as JWs. Although their family backgrounds are slightly different, their upbringings as JWs are similar when it comes to the doctrines of time perception, level of participation in the sect's activities, as well as leaving the sect of their own free will. All, except from one, have married young with a fellow worshipper and went through a divorce in the period of the withdrawal from the sect. Pseudonyms have been used, and other details that can identify them has been omitted.

Table 13.1: Presentation of interviewees.

"Anne," 30s	Grew up with her JW mother and was baptized at 18. Not formally excluded, but "faded" out over the last decade. She considers herself as a non-witness and gradually stopped believing in the doctrines during the "fading" process. She no longer believes in the doctrines. Her closest network is non-JWs. She did not finish her education in early age due do health issues combined with devoting her energy to worship. Currently she is studying Science of Religion.
"Robert," 30s	From a family very invested in the congregation (his father a part of the leading group, "elders," and his mother a "pioneer," a full-time evangelist). He left the JW sect a couple of years ago by choice after having issues with the doctrines over a longer period. He experienced mental breakdown with subsequent hospitalization after leaving the sect but considers life much better now.

Table 13.1 (continued)

"Maria," 50s	When she was little, her mother became a JW. She was baptized before turning 16, and left the JW sect in her early 30s after a process that lasted several years and included divorce from a JW husband. She does not mind occasionally going to a non-JW church service, but she doesn't have any specific Christian faith.
"Susanne," 20s	Her family moved to another part of the country where the congregation needed more members. They encouraged her to be a more active JW instead of finishing her education. She was baptized as a young teenager but excluded at 18 years old due to a norm breach. Her experiences from the JW sect have led to the diagnosis PTSD because of religious trauma, but she feels her life is much better now. Her closest social network is non-JWs and former JWs. Her goal is to get an education not influenced by the rules of the JW doctrines.
"John," 40s	He describes his parents as liberal, but believers in the doctrines. He left the sect a few years ago, after gradually having doubts with the JW teachings for 5–6 years. Having parents who supported higher education, he considers himself as a non-confirmative JW and felt during his upbringing and adolescent years that he and his family was never fully accepted as true zealous members of the congregation. He has no belief in the doctrines and expresses strong resentment towards the JW sect.
"Lisa," 50s	She left the JW sect in adulthood after being inactive for several years. She experienced domestic violence and moved from her JW husband to another city, which contributed to her "fading" out. As a teenager, she was urged to abandon her wish for a higher education in favour for a 2-year high school. A few years ago, she got a BA in child welfare and now works in the child protection service.

The following section will emphasise these respondents' answers relating to how JWs view time and how this influenced their childhood and certain life choices. It also looks at how they experienced the transition from believing in unlimited time an all that it entails, to being non-believers, and reflects on how they think about their present life, this being adjusted according to a time that does not involve eternity.

How the JWs view on time influenced their childhood

Elements of the teachings of everlasting life in a paradise on earth was to some extent appealing to all informants. To live on earth forever, playing with animals, being healthy and safe are the key concepts that prompt positive memories. Robert, who suffered from health issues in his childhood, found it to be a comfort: "It

was a conviction that everything would eventually be fixed . . . I can go out and play with my friends and all the animals in the forest forever and it would all be good!" Maria says that "I remember it felt enticing . . . A future where we could cuddle with wild animals, it was idyllic and, in many ways, great." The other respondents express similar feelings, as dreams of something wonderful in contrast to this "evil" world.

A common feature that can be recognised from the respondents' responses is the difficulty they had in comprehending the concept "eternity" and "eternal life" when they were children, combined with fear of not being good enough to survive Armageddon. Maria didn't understand the time perspective as a child, explaining it as "I think I've had some sort of an eternal-life-perspective, but I don't think I recognised it as much as a child, it became more apparent as I grew up . . . I have always felt that I wasn't good enough to experience the paradise." Robert struggled with the concept of eternal life versus death, the stopping of time. "As a child, I didn't understand the idea about humans and death and the requirements you needed to fulfil to be allowed in the paradise . . . Why shouldn't every person be allowed, if they were nice people?" John never believed in eternal life for himself: "I was afraid of Armageddon; of all the bad things I might have done . . . I had no expectations of surviving Armageddon. So, I didn't have any plans or dreams of what I wanted to do."

Susanne had a lot of anxiety and was equally afraid of Armageddon: "I was very scared of Armageddon . . . I never felt good enough to be able to live in the paradise, I was very afraid of dying, or my parents and brothers dying. I was always afraid of losing someone." She also found the concept of eternity frightening: "I never found the concept of eternal life to be logical; I wondered what to fill my time with. It scared me actually more, to live forever, than the time we have on earth, which is to be old and die." Anne, who also suffered from health issues, says that as a child she had detailed plans for her life in paradise, and found comfort in the idea. But upon giving the notion of eternity closer consideration, she found it disturbing: "When you start to think about time and existence and that Jehovah always had existed and always will, it became so big, and it was so scary!" As a concept, eternal life can be said to be difficult for the respondents in their childhood. The idyllic visions of paradise were appealing and comforting, but the fear of Armageddon and fear of not being good enough is something all the respondents recollect from their childhood.

How the JWs View of Time Influenced Their Choice of Education

The comparison between the people who were annihilated in the biblical story of the Flood and humans of today is a core teaching of the JW sect, where the focus on how they chose to spend their time is key in this context:

> To the world, the lifestyle of Jehovah's Witnesses may seem strange in some ways – even ridiculous. (2 Peter 3:3, 4) Like those living before the Flood, most people today are preoccupied with the routine of daily life. They may view as unbalanced anyone who refuses to live a lifestyle that society considers to be normal. But from the perspective of those who have faith in God's promises, a life centered on serving God is truly balanced.[42]

To refuse a "normal" lifestyle is stressed as something that is necessary in order to have a chance of surviving Armageddon and achieving eternal life in accordance with their perception of time. How has this doctrine affected the respondents in this study?

Susanne's family focused on being "pioneers" (full-time evangelists) and her father especially wanted her to be a pioneer. "He told me that education wasn't really important. He said that I needn't attend high school, because he would provide for me so that I could save lives 100%, as he put it." Susanne struggled a lot with anxiety and did not like the door-to-door evangelisation, so the thought of doing it full time induced her anxiety. She decided to attend high school but was not allowed to enter the programme that she wished to join because it was male dominated. "It wasn't popular at home, because . . . well, it was the opposite sex and being surrounded by boys could pose a temptation for me to get a boyfriend who wasn't a member of the congregation." Susanne chose a different programme, but never completed it.

Anne was sick with depression and fatigue for lengthy periods from her early teens which made high school difficult. After three attempts at high school she stopped trying, simultaneously with her illness becoming chronic. She didn't entirely give up her dream of being accepted by an art school, but her family didn't support her dream, warning her against the peril's that higher education poses: philosophy and critical thinking as well as mixing with non-believers. As the years passed by and her health did not improve, she wished that the paradise would soon come; at the same time she struggled with her faith:

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42 Watchtower Bible and Tract Society, "Do Your Plans Harmonize With God's Purpose?," *The Watchtower,* July 2008, 13, accessed April 20, 2023, Do Your Plans Harmonize With God's Purpose? (jw.org).

> It was like, OK now I can't do the right things any longer so . . . I will either die in Armageddon or I'll end it myself. At a point I was convinced that I wouldn't survive my 30s, I didn't visualise a life longer than that really . . . In the beginning of my 20s I was pretty sure that I would die in Armageddon . . . In the end, I came to the conclusion that I wouldn't survive, but that it would still be right to continue to be a witness, so even if I didn't deserve to be allowed into the new world I would still keep believing in Jehovah and do what was right.

John has a university degree, having been encouraged by his JW parents to study for it. This choice made him feel unpopular within the congregation, since a higher education is not encouraged in the JW teachings. He never felt that he and his family were fully accepted in the congregation, but he believed in Jehovah and that Armageddon was imminent. "Even though I have not done anything particularly wrong, I had no expectations of surviving Armageddon. So, I had no dreams or made no plans for an eternity to come. I just tried to do what was right."

Maria went to high school for one year when she was 16 and started to work full time after that year in order to support herself. She wished she could have received more support and encouragement when choosing an education and line of work. "Maybe if we weren't JW's, my parents might have been more interested in me having an education, I imagine so . . . One doesn't get any encouragement to do so at all from the congregation, quite the opposite. I was almost frowned upon because I got a full-time job. You weren't supposed to do that. You were supposed to be a pioneer."

Robert had the same experience as Maria when it comes to support and encouragement in education. He likes his work but feels that he was prevented from pursuing higher education even though he strongly believes that he would be more fitted for an academic career. At the time he chose his education willingly, because, as he states: "You live in a social bubble; the social hierarchy is built on how much time you spend in the ministry, what position you have in the congregation . . . All these things play a much bigger part for your social status than what your profession is."

Lisa had a strong wish to work with children but was urged to abandon her wish on account of the higher education that it entailed. "I begged for permission to start higher education, but I had to quit after four months. The studies took too much time for me to fully participate in the meetings and evangelisation as a proper JW." She chose another course and became an office worker, but still she struggled with the feeling of not spending enough time participating in evangelisation.

Based on this, choosing an education and finding a job isn't what JWs regards as important, as long as it provides for you and your family and doesn't interfere with the worship. For most JWs this is a deliberate choice that makes their life meaningful. As long as they have a strong faith their focus will be on the worship,

not on a career in this world, in accordance with their perception of time: when they have the eternity ahead of them, it is futile to spend years on an education that you might not even be able to use in the new world. Such sacrifices can seem relatively easy to make when limitless time is offered as a reward for fully focusing on the JW's teachings. In the case of Anne, there is a need to stress that her serious illness made it difficult for her to finish her education and not only the JW focus that advises against entering higher education. Nevertheless, she maintains that the latter reason, along with the feeling that she was not being a good enough servant of Jehovah, contributed to her health issues in a major way.

Deviant Time Perception and Relations to Others

The implications of an extremely divergent perception of time manifests themselves in various forms, adding to the feeling of estrangement that being a member of a group with beliefs that differ from the society already creates. Robert gives expression to the inner struggle, stating that:

> It was very weird, I had a duality in the way I thought, that it prevented me from connecting with other people . . . Because as a child you don't understand the concept of death, to be killed by something, to be gone, it was this strange thing that I felt I didn't understand at the time, but at the same time I understood that as a human being I couldn't have a . . . fully-fledged relationship with others, if you know what I mean? To be fully connected with them, in a complete way.

John points to a similar experience in saying "I had non-JW 'friends,' but it was challenging . . . living in a parallel reality . . . and to hide the belief that they were soon to die in Armageddon and hopefully not me, to maintain some sort of friendship, to balance the whole 'what to say what not to say'." In having a construction of reality and a perception of time that deviates from the majority, it is natural to seek companionship and form close bonds with the ones who share the same views. For John, who made a choice of education that is not directly prohibited, but advised against, he didn't feel a full kinship within the congregation. At the same time, he felt estranged from non-witnesses, and thus experienced loneliness on both sides.

Susanne experienced a sense of unity with the congregation as she grew up. She was allowed to play with her non-JW friends no more than once a week, and at the same time was encouraged to form bonds within the sect. It was easier to form relations with those who had the same views, in this context, views on how to perceive time, than with outsiders who were destined to die in Armageddon. This changed during adolescence when she moved towards breaking away from

the sect, but she still feels the effects of her upbringing on account of the fact that it is difficult for her to adjust in social groups, feeling unsecure on how to position herself. This is a feeling all respondents in this study express to some extent.

The Transition to Temporality

According to the theory of symbolic interactionism, our identities, or "the self," needs both a sense of personal uniqueness as well as a sense of belonging and social kinship.[43] The strong sense of belonging and social kinship in the JW sect is closely linked with the mutual understanding of time, where the emphasis on kinship to the sect as a group by following the rules and guidelines takes precedence over the personal uniqueness. Sharing a perception of time so deviant from the general norm serves to form a bond between the members of the JW sect, and proves to be a powerful conviction in order to be able to maintain a distance from the world outside the sect. When this bond is broken, the aftereffects tend to become manifold. Simultaneously with losing the social kinship as well as family bonds when leaving the sect, the loss of *eternity* is a factor that proves to be complicated to manage.

Robert experienced the transition as being traumatic. He felt a sense of meaningless and hopelessness in losing his time perspective along with his faith:

> The awareness of me having lived my life completely pointlessly was an enormous thing that washed over me, because you live your life with an understanding that what you do here and now doesn't really matter, like, things will end up fine in the future and all you have to do is to wait a little longer. Just evangelise, watch Netflix, do your job until the paradise arrives so that you finally can have a good life. . . . I have changed my personality greatly because much of it was built on a wrong perspective, my idea was that things were bad now, but it will be ok, I just have to wait. Just have to play by the rules and then we'll reach perfection in the future.

Maria spent many years in the process of leaving the sect. She states that it was after she left that the awareness of the perspective of eternal life became something she analysed in more depth. Beforehand it had just been there in her consciousness, from her upbringing with the idyllic scenes of eternal life in an earthly paradise, constructed to help children look forward to it, and more elaborate descriptions of it as the children grow up and enter adolescence and adult-

43 Dominik D. Coates, "Disaffiliation from a New Religious Movement: The Importance of Self and Others in Exit," *Symbolic Interaction* 36, no. 3 (2013): 315.

hood. She realises that her perception changed as she grew older and more distanced from the sect, but more in the sense of her feeling not qualified to be granted eternity. After the withdrawal from the sect, the altered time perspective made its impact:

> [T]he fact that I have a limited life, it was a very frightening thought . . . It did something to me. Thoughts about life and death . . . At the same time, a sadness that I have spent so much of my life on something I otherwise would not have. Half of my life has gone by to be a part of a system where bad choices has been made. . . . What should one do with the limited amount of time left? I felt very immature compared to others at my age, I thought that they had lived a life and I in a way have not, it was very strange to feel and see that I hadn't done anything with my abilities and opportunities. . . . I used to think that I had such a long life ahead of me, so many years, that I need not focus on, or be aware of, what I wanted or what choices to make. It would all work out in the end. And suddenly you realise that you don't have all that time after all.

When it comes to the time perspective, for Lisa the transition period was not a lengthy one: "I closed that door and never opened it again." Although she feels more content with her life now with an adjusted time perspective, she finds it difficult to be enthusiastic and joyful. She also finds social interaction hard. She describes it as being in "Limbo," a state of in-between, being in a void.

Anne also uses the term "Limbo" to describe her physical and mental transition from the sect and its belief system. She was exhausted from trying to be a "good" JW, and was alone with her thoughts and feelings for a long time, struggling with establishing a way of handling the new perspectives that began to take shape. "Suddenly I've unlocked a new perspective of time, where I realise that *'shit*, I can actually become *old*!,' really old with wrinkles and stuff!"

Anxious thoughts about death and a fear of missing out on more of life, mixed with sorrow over what they have lost by living greater parts of their life adhering to a belief system they no longer identify with, are prevalent among the respondents. John expresses a great relief, like a weight has been lifted off his shoulders after leaving behind the perception of eternity and life in the sect; simultaneously as he expresses grief: "It's difficult to escape a sense of bitterness over the lost years through the sacrifices I've made during life . . . To come to terms with that half of my life has been in a way useless."

Both Maria, Anne and Lisa express the same grief in similar words, feeling that they have spent half their lives in vain, with the result that they feel socially inexperienced and insecure. Anne, who suffered from health issues, says: "I grieve a lot over all the time I've missed. For example, I wonder if I might have recovered sooner if I didn't have that imminent stress hanging over me on account of being a Witness. The fear of not being good enough, you try and try and get so mentally exhausted." Maria describes it thus:

> I have become more scared of death, more afraid of things, scared that something sudden will happen so that I can't live a full life. Thoughts about how long I may live. . . . When someone died, I used to think that I will see them again someday, but now . . . I get more affected by losing someone, it is so very final in a way, and it creates another dimension in relations to others, on life . . . The grief is more profound, because you will never meet that person again. . . . Witnesses do feel strongly when someone dies, but at the same time they have this in-built hope that makes them view death as not particularly terrible. Now death is so final.

The respondents hold contrasting views concerning the fear of death. John clearly states that he is less afraid of death now, and Susanne has removed herself from her anxiety of Armageddon:

> To me it was a relief to not believe in anything, because then I did not have to stress with the anxieties of not being good enough . . . To me it was important to live in the here and now. And then I got this amazing spark of life, I will live in the here and now and do my best, for the first time I felt alive for real. It was an incredibly good feeling.

No Longer Believers: What Now?

The respondents express both relief and grief over the sacrifices they feel they have made, and they also harbour a feeling of estrangement. Robert describes it as feeling like being from another planet because of the different perception of reality he's grown up with. Finding a new social platform proves to be challenging: "It's difficult to fit in anywhere, to build a new network isn't easy. Most people at my age have their networks and have their place in the world. . . . And when you add the time perspective, it makes it more difficult."

Lisa finds interpersonal relationships difficult, mostly because she feels she has "a stamp in the forehead that I've been a JW," as she puts it. At the same time, she draws satisfaction from the fact that she is learning new things every day; about people, the society, the world, as if she has burst forth from a bubble and finally can learn new things.

Anne had to work consciously with not panicking when no longer believing in a god that will repair all evil in the world. She states that she's less afraid now than before, and more positive. She forces herself not to close her eyes to the problems in the world, while simultaneously she tries to actively search for things to be positive about. She says that "You have to realise that you have one life, and at one point it will end, and if you want to get anything out of it, you have to do it yourself." Maria has the same thoughts when it comes to being more diligent:

> I am more active in my own life. . . . I used to be more passive and uncommitted, but I think by gaining another perspective on the future you stop being passive; you want to do something for the future, for your children, because you realise that it's we human beings who must do something, not God. . . . I never thought about these things before, it was all in God's hands and he'll fix everything, but you take more responsibility now.

The respondents commonly reflect on the fact there is sharp contrast between the passive and active periods of their lives. Now that they have an alternative view of time and no longer hold the belief that eternity is ever present, they feel more engaged in their own lives and in society as a whole. Instead of waiting for a god to repair all ailments in the world, they have the urge to do their part by becoming more engaged in the world around them, and by exploring possibilities for realising their full potential. This can, for example, take the form of participating in elections or caring more actively about environmental issue. The transition from one social group to finding a place in another seems, in this context, to involve an active interest in the community as a way to establish an identity that gives both a feeling of uniqueness as well as a feeling of belonging and social affinity.

In spite of challenges in adapting to a new life on many levels, all the respondents share a feeling of happiness at having escaped timelessness and engaging in a temporal life. Susanne expresses joy in living in the moment: "The fact that you can live in the here and now . . . gives you a will to fight. And a feeling of gratitude for having this life. It's so stressful *not* to live the here and now, not to relate to this common world, while living in it."

After struggling with mental breakdown as a result of the strain from leaving the JW sect, Robert expresses his eagerness to live a full life:

> I am feeling good now. . . . Because my time perspective is that I'll of course die one day. But that isn't necessarily a bad thing . . . I have went through a transition from not seeing a meaning in anything, to a point where I can marvel at the wonders of existence; that me being here, our entire existence, it's all so incredible and amazing . . . and I want to celebrate this wonderful thing as much as I can, until it's over, and try to share this with others . . . It's perhaps a foolish thing to say, but I want to do as much good as I can with my time so that someone would want to put my picture on their mantelpiece.

He continues expressing his thoughts, in line with the rest of the respondents, by saying; "We only have this time. There is a future out there, and I want to, on some level, do something to contribute to that future so it can be a good one, that it can be celebrated, and celebrate the fact that we exist in the here and now."

Conclusion

I have strived to highlight some aspects of the perception of time that relates to JW beliefs, and specifically how former members of the sect have handled the transition from adhering to those beliefs to living in a world that has a far different perspective on such matters. I recognise that there are many layers to this research that still have to be explored, but my aim with this chapter has been to reflect upon how the contrasting understanding of time in the lives of former JWs has manifested itself, and to draw attention to the plentiful directions research on religious sects can provide.

In a controlled social environment such as the JW sect, it is safe to say that their perception of time is a core factor determining how they perceive themselves and their own identity, and how they fit within their social surroundings.

The sense of insecurity that the respondents feel in relation to the concept of an eternal life manifests itself in various forms. It is something that induces anxiety, and feelings of not being worthy, or not seeing oneself as an Armageddon survivor, or struggling with the concept of eternity. This can be a foundation for suggesting that a lingering doubt of the JW's perception of time in one sense or another can be an essential factor that leads to a breakout from the sect. If your perception of time does not align with the doctrines that the rest of the social group adheres to, the foundation for being a JW is rocked.

The structures within the sect are constructed to benefit those who are visibly dedicated. No material riches are offered for this dedication, so the time perspective is crucial for maintaining these structures; a promise of eternal life and everlasting happiness in an earthly paradise is the ultimate reward for the devout life the doctrines of JW leaders lay down. As a JW, you "trade" the present for the promise of everlasting life, a conviction that demands a full commitment to the faith and involves sacrifices. Despite living in the present as members of the society and adjusting to it, life is not something evanescent or limited to today's perception of time and use of time, as long as one remains a loyal and devout JW. As shown in the respondents in this study, they all had issues with the doctrines of everlasting life in various ways. The fact that they reveal difficulties to adjusting to the new time perspective as non-JW, underlines the interesting fact that perception of time can vary greatly even between members of the same overarching society. There are other factors at play as well, but I will underline the thought that when the belief in everlasting life is not sufficiently strong, the incentives for continuing a life as a JW are greatly compromised. If your perception of time deviates from the rest of the social group, then the sacrifices become meaningless, and your sense of social kinship is rendered vulnerable.

This study has shown that the perception of time has a strong influence on individuals when it forms a core part of an authoritative religious belief system and thus shapes its members' identities. I will argue that the perception of time in the form of believing in everlasting life with the prospects of never facing death, goes deeper than a cognitive sense of understanding time; it is an identity marker, a prominent factor in shaping a person's personality and self-consciousness. Therefore, in the context of JW doctrines, the belief in everlasting life goes deeper than perception alone; it is a phenomenon that impacts the consciousness and the senses and thus gives them both a place in their social environment as well as meaning to their lives within those frameworks.[44] When leaving the sect, a person leaves behind more than a social environment and rules of behaviour. They also leave behind a sense of identity. Their sense of "self" is deconstructed and is in need of reworking. It is not an overstatement to assert that removing oneself from eternity to temporality is a transition with major repercussions, something I have endeavoured to highlight in this study.

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44 Francis and Adams, "Two Faces," 253.

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Astrid Marie Holand

14 Time as the Great Revealer: Conclusive Reflections

There is a crack in everything.
That's how the light gets in.
Leonard Cohen, 1992

What factor turns uncertainty of the unseen and unknown into knowing of the foregone? Time – and consciously experiencing it, containing it as memory, and comparing one's own previous time to new cycles of its elapsing. In this regard, it is similarly the descendants' gaze, back at past events, that will decide whether an endeavour turned out to be a success or failure. They may also see how predecessors' decisions affect descendants more. And further, when time and pace are placed in focus, this raises important questions: In a world where time is perceived as ever-accelerating, how do we spend our time? Do we spend time in ways that feed acceleration, even if acceleration is perceived as stressful? What *is* time to us when we perceive it as being a scarce commodity, is it predominantly treated as a *social* or an *economic* resource? To answer such questions, we might need to investigate time both more *philosophically* and more *practically*. That is what we have aimed to do here.

The purpose of this anthology is to present a diversity of unconventional insights about time; challenges and opportunities regarding aspects of time, as seen from our own historical and geographical standpoint. We have shown that something is indeed happening to perceptions of time, durability, and reality in the 21st century. Time does seem increasingly accelerated and compressed, and thus we have reinforced similar findings from numerous other studies. Further, we have found evidence of a social expectancy which urges members of society to keep up with the pace – for efficiency's own sake, it seems, or for the sake *of not wasting time*. A timely question now, is what this speedrun eventually produces.

The first chapter points to the need for greater ability to be *conscious* of time. The following chapters have demonstrated several aspects of collective, individual, social, physical, and even geological time which are essential to be aware of if one is to achieve a more conscious awareness of time. Challenges addressed in these chapters show that not only do we need to grasp what signifies our contemporary mainstream timestyle, we also need to sort out our relationship with the future. This is particularly worth noting, if one is to take seriously the message in chapters 5 and 6, that action for sustainability is now associated with a considerable time pressure to act before it is too late to uphold the more optimistic scenarios. So let that be the starting point for this concluding chapter.

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Let us investigate the timestyle first. Throughout, we have touched upon at least four different *constructs* regarding how time 'moves' or 'changes'. Historically spoken, through work-life and religious experiences, mankind is familiar with several different timestyles or understandings of time, like the *cyclical time* of agrarian society, the *circular religious time* of karma, the *linear religious time* directed at a divine solution, *linear industrial time* based on productivity progress, and *branching time* associated with both scenario thinking and computer programming. The different ways of *constructing* time will impact directly on our individual and collective *perception* of time, and what we will regard as adequate methods for *regulating* time. Development over time could then for instance be constructed as *linear* with or without end, *circular/cyclic/oscillating*, or *branching* (Fig. 14.1). Such constructs are of course philosophical and theoretical, but still, they do influence practical life and life choices. The way we picture ourselves at any given point in our own life history, is directly influenced by which of the different time constructs we use when thinking about such matters. Just imagine that Fig. 14.2 is the menu of roadmaps for your life, and see for yourself.

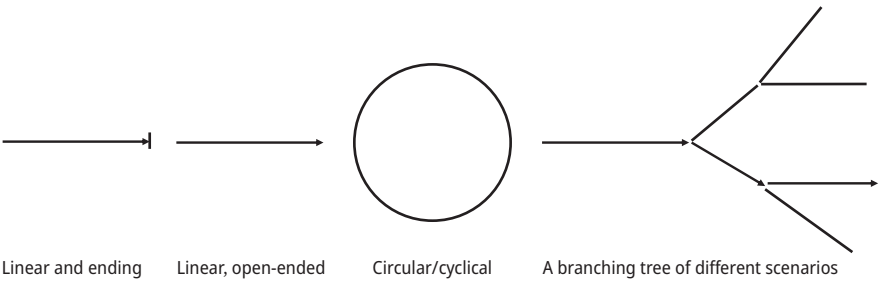

Fig. 14.1: Simple sketch of the constructs of time movement. Other constructs are possible, these merely serve as examples.

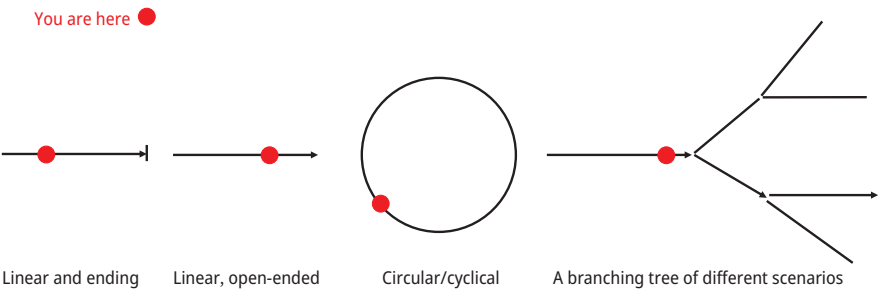

Fig. 14.2: Simple sketch of how the different constructs of time movement will induce different perceptions of our place in time.

Using scenario thinking, could we also imagine different *past* scenarios (Fig. 14.3)? After all, what is history writing, archaeology, and palaeontology, but attempts to construct a plausible past, as seen from our present perspective? The further away the future is in time, the less certain it becomes. Similarly, the more distant something is in the past, the more unrecognisable and less 'knowable' it seems. It should be added that while the aim of constructing the past is to uncover and weigh up the factors that brought society to where it is today – not to mention contrafactual history which explores possible pasts that did *not* evolve – this is an epistemological view, more than an ontological approach. However, in the attempt to reconstruct past scenarios, this is always done from a contemporary perspective. Likewise, when historians – or geologists for that matter – periodise the past into chunks called 'eras', that is in itself a construction (Fig. 14.4), and a way of organising or 'mastering' past time, built in hindsight.

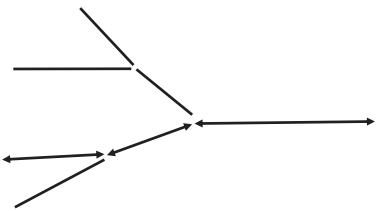

Fig. 14.3: Simple sketch of the concept branching past time, especially relevant for the work of reconstructing an unseen past.

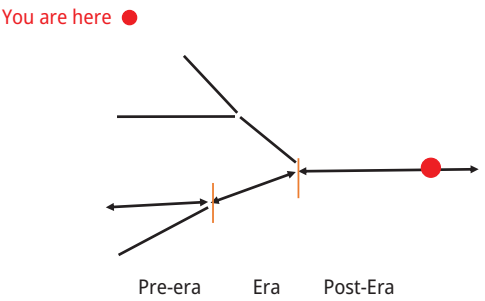

Fig. 14.4: Illustration of how periodising is central to the work of re-constructing an unseen past.

If we take it upon ourselves to attach a label to our contemporary era, the point in time where/when we deem this era to have commenced is of paramount importance. Taking on the longest perspective of the geosciences, we have lived in

the Anthropocene for some 10–12,000 years, and we still do. Other labels are more short-term, encompassing only the few most recent decades; 'the information age,' 'the post-industrial age' and even 'the post-truth' age are widespread suggestions. What will be most accurate? It all depends on what features of previous social orders we seek to compare with the present (Whenever was there a "truth-age"?[1]). The point here is to illustrate how common depictions of time and of stages in societal change will influence the common perception of a) how time proceeds (Fig. 14.1), b) our own being-in-time (Figs. 14.2 and 14.4), c) what past events brought us to where we are (Fig. 14.3), and eventually d) which measures will be needed for mastering time at present and in the future. This, in turn, influences a series of choices made at an individual and collective level in a society. Being *time conscious* implies an attentive attitude towards these contexts. We might also conclude that none of these roadmaps on the menu captures the time that emerges in our times.

In the macroscopic perspective, working life has had three main timestyles or understandings of time which humanity has lived by, which we could call *cyclical seasonal time, linear industrial time,* and contemporary time, for which we seemingly need a new label.[2] In agrarian society, working effort was task-driven, place-based and adapted to the rhythm of the seasons (more predictable) and weather conditions (less predictable). For those working in agriculture or fisheries, this is still the case. Industrial society introduced a timestyle of its own, disciplined by the clock and promoting the assembly line logic. Freeing production from the whims of nature was an aim, or rather a means to the end of productivity progress, but production would still be place-based. The linear understanding of time resonates well with this timestyle, and so do a lot of today's time management policies, although the world has moved on. Jiří Šubrt refers to "a global 'time grid'" of 24 time zones being the present phase in historical development of time measurement, created by the raising social demands for coordinating and synchronising.[3] The global, digital market society has transformed our sense of time, task, and place to a degree that it deserves a new name. Standing claims that we "must develop a concept for 'tertiary time', a way of looking at how we allocate time that is suitable for a tertiary society, not an industrial or an agrarian

1 For a discussion of 'The Post-Truth Age', see Jayson Harsin, "Regimes of Posttruth, Postpolitics, and Attention Economies", *Communication, Culture & Critique* 8, no. 2 (June 2015): 327–333, https://doi.org/10.1111/cccr.12097.

2 See Holand, "Conscious of Time?" in this book; Jiří Šubrt, *The Sociology of Time: A Critical Overview* (Cham: Palgrave Macmillan, 2021); Guy Standing, *The Precariat: The New Dangerous Class* (London: I.B. Tauris, 2021).

3 Šubrt, *The Sociology of Time*, 10.

one."[4] We suggest *multiplicity time* to encompass the myriad of time demands and options across roles, sectors, places and time zones, the frenetic multitasking characteristic of 24/7 society, and also the layering time seemingly typical of our era. Rather than a line or circle, time is here conceptualised as a landscape which we move through. This is illustrated in Fig. 14.5, where the idea is to capture the complex experience of multi-linearity, of interrupted and layered time. One can imagine how a hurried lifestyle in such a complicated timestyle produces a craving for something different, a pause or stillness of some kind, e.g. the experience of meditative timeless time (Fig. 14.6).

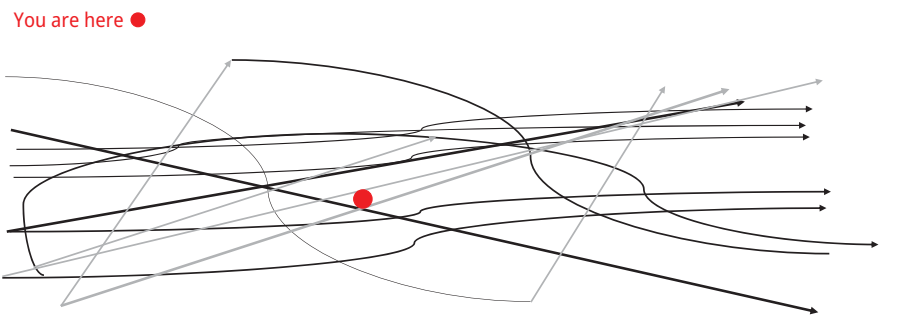

Fig. 14.5: Conceptual sketch of a multiplicity time landscape, where the aim is to show that manoeuvring is in fact complicated. Try to envision this in 3D.

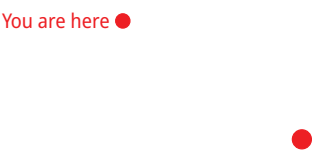

Fig. 14.6: Illustration of the experience of meditative timeless time, in contrast to Fig. 14.5.

Obviously, the relationship between the red dot and its future would be very different in each of these conceptual situations. In both the simple linear and the cyclic way of understanding time, knowing where to go is easy, as the direction is predestined. Starting from a model of branching time or multiplicity time, the direction is less certain, and thus ideally there is more room for and need to reflect upon where one is going. The past and future can be envisioned to be present in the same landscape, barely out of present sight, but impossible to escape from.

4 Standing, *The Precariat*, 137.

Starting from such models, one could reflect over the practical consequences of seeing the future as something *separate from us*, in contrast to seeing the future as something *enacted by us*, or in contrast to something being *predetermined for us*. These different standpoints would in turn greatly influence the emphasis put on 1) *long-term* effects of today's practices and on the *accumulated* effects of how our time is collectively spent, and 2) the room for choice within large collective trends, here described as social rhythms or social patterning processes. In this anthology, we have set out on a quest to explore the *multiplicity time landscape*.

A Macro-Meso-Micro Time Travel towards Conscious Time

Our Time Travel started from a universal time perspective, *In search of a deeper theory of time*, evoking large philosophical and moral questions on constructing and defining time (past, present, and future) but also constructing and defining when it is the *time to act* – thus time *for something*. Envisioning different scenarios, and the actions these might require, was central in this part.

First we saw that during A. N. Prior's work with what would become the *branching time* concept, his own understanding of time and choice was altered. He turned away from his previous religious-deterministic viewpoint, and discarded the belief that there was only one, pre-destined future. Instead, he argued that whenever we reach a bifurcation point, we are free to continue our journey into the future along any of the available continuations. Further, "in a certain sense, the Now includes everything that has been, will be, could be true, or could have been."[5] This is not far from the writings of St. Augustine of Hippo (354–430), where the Now to him is a "knife edge without thickness" separating the no longer existing past from the not yet existing future.[6] And please note that the notion *'now is all there is'* appears in several chapters here, sometimes as a means to escape from stress and pressure, at other times a curse – in the tyranny of the moment, or of the mind rush. Yet, this does not rule out the possibility that "complete new and now-inconceivable possibilities may arise," as Øhrstrøm concludes.[7]

Next, we saw that the myriad of choices made will eventually shape our collective future, regarding technology usage and behaviour in cyberity (Johannes-

5 This book, 49.
6 St Augustine, *The Confessions* (Oxford: Oxford University Press, 2008).
7 This book, 50.

sen, chapter 3). Further, we saw that a revolutionary *tipping point* (Jacob, chapter 4) is a potential bifurcation, and thus that branching time can be a fruitful approach for grasping the "simultaneity of the non-simultaneous" that exists in revolutionary moments of time.[8] That is because it is again the myriad of choices that determine the future trajectory, and thus whether an attempted revolution will create the intended historical discontinuum. Both upheaval and status quo require a critical mass of supporters. The same goes for disruptive technological revolutions: no supporters, no technological breakthrough. Finally, we saw that a myriad of choices also determines the future living conditions in the Anthropocene (chapter 5). Here, both the *long-term* and the *accumulated* effects of today's practices are addressed, when Hessen, Milkoreit and Nadeau measure common planning horizons and resource use up against geological time and future biodiversity. The authors also assert that the time to counteract unwanted development is running out, but this knowledge does not seem to notably speed up measures taken. Chapters 2 to 5 all invite philosophical perspectives on understanding and spending time, with moral and political implications.

Next, in chapters 6 to 13, we took a more practical approach, highlighting social and individual human consequences of enacting what is best described as an economic understanding of time, thus a *clock-time* versus *task-time* approach, in Thompson's terms.[9] This could also be seen as a time-is-money approach weighed up against other kinds of value that time might represent. Moral and political implications apply, and more so at an accumulated level.

Taking on a societal-time perspective, investigating *time as social expectancy*, we encountered some examples of strategies for dealing with the so-called tyranny of the clock and *commodification of time*. In a scenario where the 'best' use of time is understood as that which is *most profitable* or *most efficient*, the measures taken will be different from those taken in a scenario where 'best' is understood as *most conscious.* To Franklin, these understandings seemingly were equivalent to each other (and indeed they can be, especially if the notions *most profitable* or *most efficient* are expanded).[10] But while *most profitable* or *most efficient* traditionally is concerned with economic sustainability, *most conscious* will also have to consider social and ecological sustainability – just as John Elkington reasoned when he

8 This book, 83, 94, 96

9 Edward P. Thompson, "Time, Work-discipline, and Industrial Capitalism," *Past & Present* 38 (1967): 56–97.

10 Benjamin Franklin, "Advice to a Young Tradesman," National Archives, accessed May 9, 2023, https://founders.archives.gov/documents/Franklin/01-03-02-0130.

coined the concept *triple bottom line* in 1994.[11] This is precisely why the success of the time regulatory regimes presented can be contested when it comes to what is the 'best' use of time.

Firstly, we discussed time shortage as a constraint in cross-sectoral work for achieving the UN sustainability goals (chapter 6). Lack of *institutional* time specifically prioritised for this kind of work was identified as a hinderance. If this is a widespread tendency, it represents a potentially ominous hindrance for the achievement of the goals by 2030. On the other hand, employees who felt personally engaged prioritised the work, and offered up their own spare time in order to reach some desired results. In other words, the experience of deep engagement made fulfilling the task more important to them than counting the hours. Concurrently, we saw reported a lack of institutional time specifically prioritised for unhurried student contact and development of thought in the accelerating academia (chapter 7). As with the previous case, we found that engaged individual employees offered their own free time in order to reach some desired results. Thus, in both cases, individual employees insisted on practicing a task-time approach within a clock-time system, because a satisfactory fulfilment of the tasks resonated with their own value system. In a sense this represented an escape from clock-time. *Timeless time* is felt when individuals are allowed to structure their work to their own temporal rhythm and simply let the task absorb them.[12] This phenomenon is referred to namely as the *flow* further discussed in chapter 11. However satisfying in the moment, these practices mean that individuals allow their personal time to become the institution's time, for free. To what extent institutions should rely on this time resource remains unspecified, but such a development is fostered when the institutionally budgeted time for a task is downgraded, as we saw specified in the academia case (chapter 7). However tangible that is in this workplace, academia is not the only, and not even the most typical example of this development. In the healthcare sector, time pressure and the individual employee's sense of responsibility for still striving to keep up with public expectations to welfare institutions has been an issue for decades.[13]

11 John Elkington, "Enter The Triple Bottom Line," in *The Triple Bottom Line: Does It All Add Up?*, eds. Adrian Henriques and Julie Richardson (London: Routledge, 2004), 1–16.

12 Oili-Helena Ylijoki, "Boundary-Work between Work and Life in the High-Speed University," *Studies in Higher Education* 38, no. 2 (2013): 62.

13 NSF, *Statusrapport* (Oslo: Norwegian Nurses' Association, 2002); Halvard Vike et al., *Maktens samvittighet: Om politikk, styring og dilemmaer i velferdsstaten* (Oslo: Gyldendal, 2002); AAD, *NOU 2004:5 Arbeidslivslovutvalget – Et arbeidsliv for trygghet, inkludering og vekst* (Oslo: Arbeids- og administrasjonsdepartementet, 2004), 23, 63, and 273–276.

To measure contemporary society's pulse in popular culture (chapter 8), we use a sports event in need of adapting to *information society*'s demands. This reflects the observation that the style once known as MTV style, a restless and compressed form of communication, has become a characteristic style of our time.[14] With the smartphone, digital and social media, people's attention span is said to shrink even more.[15] There is no "off time" in information society. *S*low time is threatened by the number of tasks that must be accomplished quickly. Pauses or "downtime," which previously used to allow for contemplation, are filled with fast time.[16] Taking industrial society's logic (time saved = money earned) one notch further, the creators of today's popular culture seem to reason that time saved is attention gained. Accordingly, sports events arrangers use *compression of time* as a means to create content that is believed to attract spectators, thus adapting to "the pace of our times." However, this trend is not likely to go on without end. The theory of the *tyranny of the moment* holds that the more that highlights are compressed, the less value is attached to each moment, and the less each moment stands out compared to the next. 'Now' is in this sense *not* all there is, as the experience of the moment relies on the expectation of the previous 'now' and loses some of its value if there is no time for anticipation.

Tom Bratrud (chapter 9) meets individuals counteracting the sort of life described by the overworked academics in the previous case, and that of the restless information society with its expectations to always be digitally connected and available, a phenomenon known as "technostress."[17] He points out that many have experienced a dichotomy between fast, linear work time (with its relentless forward motion) versus the more flexible, anti-linear home time (with its emphasis on family and staying put).[18] His informants were in search for opportunities to "disconnect" from the demands of everyday life, and so decided to move to a place which they felt allowed for a calmer pace. In a way this amounts to a pronounced protest against the accelerating lifestyle. These individuals represent a privileged group of socially, economically, and digitally competent people who

14 Thomas H. Eriksen, *Tyranny of the Moment: Fast and Slow Time in the Information Age* (London: Pluto Press, 2001), 84.

15 Kalpathy Subramanian, "Myth and Mystery of Shrinking Attention Span," *International Journal of Trend in Research and Development* 5, no. 3 (2018): 1–6; Johann Hari, *Stolen Focus: The Surprising Reason You Can't Pay Attention* (London: Bloomsbury, 2022).

16 Eriksen, *Tyranny of the Moment*, 34.

17 Giorgia Bondanini et al., "Technostress Dark Side of Technology in the Workplace: A Scientometric Analysis," *International Journal of Environmental Research and Public Health* 17, no. 21 (2020): 1–23.

18 Jenny Shaw, "'Winning Territory': Changing Place to Change Pace," in *Timespace: Geographes of Temporality*, eds. Jon May and Nigel Thrift (London/New York: Routledge, 2011), 126.

are in the best position to master time in our times, with the challenges that may include.

In turn, this type of migration creates a potential comparative advantage for rural places in terms of attracting resourceful inhabitants of working age. When researching these issues, Bratrud, as well as this author, found communities advertising their tranquility and picturesque nature as a means of attracting new potential inhabitants.[19]

In the third part, we examined some very different perspectives on the individual's time or '*being-in-time.*' Escaping time – by entering a state of timelessness – can happen in diametrically different manners. Still, all these cases raise serious questions about belonging, health and well-being. And yet, to some, leaving behind a community that believes in a very particular conception of eternity, escaping timelessness and entering temporality becomes a lifechanging experience, influencing their perspective on other major choices in life as well.

The meditative effects of swimming in nature as a method of experiencing an extended, timeless 'now' (chapter 11) may even be a small glimpse of Augustinian eternity – where one big Now is all there is.[20] And, when you think of it, isn't there a built-in warning against the cons of time pressure in Buddhist teachings when they encourage mindfulness in the moment? Dagmar Dahl notes that escaping a stressful everyday life by diving into wild waters has gained popularity after Covid-19 lockdown. This was evidently a period which saw an increase in technostress.[21] Such ways of putting life on a temporary hold can be understood as a personal counteraction against the accelerating time; a need to put the brakes on. Jørgensen (chapter 12) examines similar instances where time seems to stand still for individuals who undertake focus-demanding nature-based activities. Based on this, he contends that the idea of time as an uninterrupted, linear, and structurally homogenous stream, captured and bound together in the past, now, and future, simply does not encompass these extraordinary time-experiences.

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19 Examples of ads inviting new inhabitants: Kongsberg.no, "Kort vei til alt. Mer tid. Mer plass. Velkommen hjem til Kongsberg!," accessed May 9, 2023, www.kongsberg.no/bo/flytte-til-kongsberg/; flyttilåseral.no, "Noregs sørlegaste fjellparadis," accessed February 28, 2024, https://xn–flyttilseral-wfb.no/; thisishamaroy.no, "Forelsk deg i Hábmer – Hamarøy," accessed February 28, 2024, https://thisishamaroy.no/. The campaigns are seemingly designed to tempt people living in cities but dreaming of rural and outdoor pleasures. Bratrud encountered a version of the first advert in his Instagram feed. Holand encountered the two latter in her smartphone newsfeed. Algorithms have detected our interest in the matter.

20 Augustine, *Confessions*.

21 Hari, *Stolen Focus*; Xi Wen Chan et al., "Work, Life and COVID-19: A Rapid Review and Practical Recommendations for the Post-pandemic Workplace," *Asia Pacific Journal of Human Resources* 61, no. 2 (2023): 257–276.

But then there are those who search for breaks from the hamster-wheel aspects of life, and there are those who bypass such a lifestyle altogether. The thing that can be learnt from people who from a young age live outside the mainstream timestyle with its time-based cultural norms, is that once one has fallen out, it is very challenging to get (back) into it. Incompatible conceptions of time seem to be one reason for this. A main takeaway from chapter 10, is that even the maintenance of a personal daily rhythm requires effort and an ability to keep track of time. This functionality is something commonly taken for granted in the busy modern world, but it is not for everybody. In cases where serious illness or trauma has been a factor, or where drug-related flashbacks have proved debilitating, time often takes on a non-linear, fragmented quality for individuals. Time appears lost in a massive train of thought. When coping with one day at the time is barely bearable, thinking about how today's actions have consequences for tomorrow, is just too much. As Thommesen (chapter 10) puts it, "The future will fade, and the here and now is all there is. Time is no longer a continuous process."[22] The problems which this group of people are facing, are augmenting with the demands for keeping up with an increasing pace, tightly knit to digitalisation. The contrast between their situation, and the situation of the well-coping individuals of chapter 9 is hard to really grasp.

As long as it is the case that the people who cannot keep the "pace of our times" are in the minority, they will continue to be seen as the outliers of society, and their problems will be seen as being individual problems. But if such cases accumulate, at some point this will become a societal issue. What would happen to mainstream timestyle in such a case? Since this book has an overall approach where envisioning diverse possible future scenarios is feasible, we might as well ask: *What would be the accumulated effects on society if keeping up with the accelerating pace becomes impossible for a rapidly growing share of people?* How likely is that scenario? Well, firstly, the average population is ageing; this is evident, and the individual's ability to keep pace tends to decrease as we grow older. In the accelerating world of modern working life, however, retirement ages are going up.[23] Secondly, a new pandemic, natural disaster, or other crisis is bound to come along sooner or later. So, sadly, more people are expected to experience illness or trauma, thus potentially challenging their ability to keep up and stay connected. On top of that, what if Hari's scholar-interviewees are right, and the accelerating pace of information society *itself* wears us out, cognitively and mentally?[24] Even with a less gloomy framing than this, overall trends described in the previous chapters on

22 This book, 233.

23 OECD, *Pensions at a Glance 2021: OECD and G20 Indicators* (2021), accessed July 15, 2023, https://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2021_ca401ebd-en.

24 Hari, *Stolen Focus.*

working life (chapters 1, 6, 7, 9), politics (5), technology (3) and popular culture (8) suggest that we are already moving so fast that we can't see where we're going. A main takeaway from this could simply be that it for several reasons would be better to slow down the lifestyle – or timestyle – of our times.

And why, then, does *that* seem so unlikely? Is it not due to the same overall trends, and the widespread belief that there is no choice but to adapt to the speed? We should also not forget that there are those who take advantages of acceleration, who are able to step up and realise the potential that is in it for them. A large part of the reason why acceleration continues is then to be found in the deeply accustomed western industrial timestyle in finance and business life worldwide, in workplaces across sectors, in political systems, accompanied by an equally established opinion that this is the only (reasonable) way of managing time. In his search of time, Jacob Dahl identified the conveyor belt, global supply chains, quarterly earnings reports, annual cycles reporting, and high-frequency trading in finance among the drivers for continued time-optimisation. More in general he points to short-termism in both business and politics, and an inclination in working life to treat labour hours as an expensive commodity that needs to be minimised. But he also asks the question whether our generation has the chance to correct some of the unhealthy time habits that have been built over the last centuries.[25] As Time, the great revealer, is already starting to show, speed has its limits. However, the overall answer to why an intentional slow-down seems so unlikely, is that time in today's practical everyday life is predominantly treated as an *economic* resource rather than a social one. Only that kind of reasoning can make money count for more than human health, the health of the planet and all life that lives here. Combining this problem with the call for action highlighted in chapter 5, where does that lead us to? What will the collective future look like if a growing number of people are incapable of thinking about how today's actions have consequences for tomorrow, let alone for life on Earth a hundred years from now? Meanwhile, let us now make use of the past to investigate our relation to the future.

Travelling Back to Past Events and Choices

Maybe future scenarios of the years 2100, 2200 or 2500 seem incomprehensibly far away today. To address the potentially lengthy consequences of human actions, we need to look back into the past in order to consider such issues over a

25 Jacob Dahl, *In Search of Time: Understanding the Nature and Experience of Time for a Better Life* (London: LID Publishing, 2022), chapters 7, 12, 13 and 15.

correspondingly long historic timeframe. In doing so, we can ask ourselves: What do we know about people who lived back then? What can we say about choices they made for the future, based on what they knew then? Do these choices affect us today, if we see them in terms of past enactments in temporal horizons of time and space? Where is the balance between free choice at present and the determinism implicit in chronicles of past events, and how might this balance influence contemporary choices in relation to both a near and far-off future?

A journey through time comparable to that from the here and now (2023) through to 2100 only takes us back to 1946. For most of us, that would be like opening an old family photo album, seeing the young version of ourselves, our parents, or grandparents. We know a whole lot about those days. In this year, the first baby boomers were born. The Second World War had just ended, and the Western world was charged with optimism and a belief in the future. Do choices made then affect us today? Indeed! The trajectory leading to today's situation easily traces itself back to 1946. Back then, future projected scenarios were often based on a strong belief in technology, modernity, industry, and in consumerist-based economic growth, all of which is commonly reflected in contemporary policy documents.[26] This is a maximiser's trajectory. Numerous young people from the boomer generations would in some 20–30 years' time set up and create numerous new families and businesses, all of them more or less accustomed to a maximiser's trajectory. Again, the myriad of uncoordinated choices, all relating to the same prospects – aiming for a better material life – shaped a common future; the one in which we live today.

A common 1946 lifestyle could by no means compare to that of 2023 and our early *annual overshoot day* (chapter 5), but the sum of the many choices made back then and in the following years, inevitably fuelled consumerism. The development that eventually materialised was the sum of large and small decisions made, in national assemblies, in local boards, in businesses, and in families and homes over time. As Stig O. Johannessen (chapter 3) puts it, this is a generally observed pattern, confirmed by history time and again; the reality of human interaction is that no single person, group, or organisation can control how the totality of life and society moves and which accumulated forms it takes. Instead, most people just behave in similar ways, without knowing each other or having to agree on how to behave, and further: "When no single person or group can exert

26 Typical contemporary examples are the policy documents for rebuilding Europe after WWII, for Norwegian examples see Astrid Marie Holand, "Dykk i arkivet etter Finnmarkskontorets presse- og opplysningstjeneste," *Indhome: Indigenous Homemaking as Survivance*, August 8, 2022, accessed August 23, 2023. https://site.nord.no/ihas/2022/08/23/dykk-i-arkivet-etter-finnmarkskontorets-presse-og-opplysningstjeneste/.

control in emergent organisational processes, it is because experiences of control also are experiences of the emergent self-organising patterns of interaction. Experiences of control can emerge and become present in one moment, only to disappear in the next."[27]

A similar kind of development, that which looks organised and coordinated, but is not, leads to the *tragedy of the commons dilemma*, addressed by Hessen, Milkoreit and Nadeau (chapter 5). When everybody maximises their use of common resources, and no one estimates the total pressure on that resource, the cumulative effect over time is a negative one.[28] This has been a growing challenge that has accompanied post-war technological and industrial development. For example, the world's fisheries account for several instances of over-exploitation, making the *1982 UN Convention* and *1995 FAO Code of Conduct for Responsible Fisheries* a highly necessary development in public policy.[29]

A comparative historic distance from now until 2200 takes us back to 1846. What do we know about people who lived back then? Well, that was about the time when industrial society really took flight into today's trajectory. Both technological and economic development had come a long way since the industrial revolution; industry was spreading and maturing, and was increasing in size. 1846 was also the time when Karl Marx and Friedrich Engels were working on a profound criticism of the capitalist economic model that went hand-in-hand with this industrial society. Perhaps they were anticipating that a revolution would soon take place and change the dominant economic system, but as Frank Jacob (chapter 4) puts it, such eventual outcomes are determined by events beyond the control of active revolutionaries. Any revolution or reform movement needs a critical mass of supporters, and it is hard to tell in advance which power will be stronger, that of those supporting change or resisting it. Proletarian revolutions in France, Belgium, Germany in 1848 were subdued by the established state authorities. Thus, the break with the existing system, or the historical discontinuum – which the revolutions were supposed to create – did not take place. The revolutionary spirit did not spread with the speed and force that Marx tried to encourage through his writings. Instead, the economic system based on capital-driven industrial development consolidated. This system is labelled liberalism because of its lasting breach with a previous system based on privileged monop-

27 This book, 66.

28 Garrett Hardin, "The Tragedy of the Commons," *Science*, New Series, 162, no. 3859 (1968): 1243–1248.

29 Nils Kolle et al., *Fish, Coast and Communities: A History of Norway* (Bergen: Fagbokforlaget, 2017).

oly.[30] On the other hand, throughout the 19th century, labour movements established themselves as a powerful political force which duly secured better pay and conditions for workers. The trajectory leading to today's situation thus easily traces back to 1846, too.

But then – what if the technological trajectory from 1846 onwards had been different? Let us consider fossils versus other energy sources in the mid-19th century. If the British had not seen the transition from wood to coal as such a progress, but instead considered the continuous pollution from the coal-driven industry to be a problem large enough to engage in, *and* a potential other energy source was available, then what? What if, say, a leading businessman or investor decided that the expenses of building ever-taller factory chimneys were intolerable? Or what if a leading politician – maybe even Queen Victoria herself – had found the polluting smog itself unbearable? All it would have taken, was that influential and resourceful persons had defined it as a problem worth solving, and actively sought a solution. If also the Welsh coal industry had developed more slowly, while Michael Faraday (1791–1867) had developed what would become the chemical battery and the electric motor faster, then what? What if Victoria's spouse Albert had been impressed by talks of some battery-driven machinery presented by Faraday, as the two were preparing the Great Exhibition in Chrystal Palace, 1851? Maybe we could have had a "green shift" from coal to batteries some 170 years ago? Maybe the Welsh coalmines would instead fuel local macro battery production, so that large batteries instead of raw coal would travel by train to other British industrial towns, setting higher standards for air quality there.

And what if large-scale hydro-electrical power had been developed earlier? Prototype water turbines were in progress in the 1830s and 40s. With Scandinavia, Central Europe or the US leading on in the second phase of the industrial revolution, this would likely have been the preferred energy source for heavy industry at an earlier stage. If so, what would our world today have been like? What would our nature and climate be like? And what would the political world order look like with less focus on securing access to fossil fuels? In a branching time perspective, where would we stand today if industrial development had taken a different branch of direction back then?

Finally, let's consider how the distance from now until 2500 compares with the distance from now back to 1546. This was after the protestant reformations. It was actually the year when Martin Luther died, knowing that he had made a difference. What is interesting in our context here, is the potential influence that events back

30 Henry W. Spiegel, *The Growth of Economic Thought* (Durham, NC: Duke University Press, 1991).

then may have on our situation today. The protestant reformations detached the Church from secular politics, and a gradually more business-friendly theology developed, allowing more financial freedoms than before – thus preparing grounds for today's situation where a secular economic system operates, liberated from the previous ties to religious systems.[31] Several historians, sociologists and social scientists have discussed the significance of the protestant reformations for the later capitalist economic system, the very system that Marx and Engels criticised so fiercely.[32] What could be said more generally, was that in Luther's days there was a clear demand for religious and economic reform over large parts of Europe, especially among those more likely to gain from a more independent trading ethos, like the British, the German, the Dutch and the Scandinavians. So perhaps the reformations served more as game changers, or *interruptors*, as Frank Jacob (chapter 4) puts it.[33] Because the main point here is that societal patterns were then changed, and moved into the direction leading to where we stand today.

Like other reformers, Martin Luther and Jean Calvin had their own focus of interest. They could not have anticipated the consequences their mainly theological critique against the Catholic church would have on economic systems. In England, however, king Henry VIII had more strictly economic reasons for secularising his state.[34] In the case of medieval Europe, the Catholic church was greatly involved in economic matters, instituting the economic norms for society at large. Its monopoly was strongest in areas where it was supported by civil authorities that actively punished and silenced critics as *heretics*.[35] Remarkably, the Lutheran reformation was not silenced in its early phase in that manner. Instead, it rapidly spread, and thereby ignited embers waiting to be lit.

When a new situation of this kind emerges, several actors step up to explore what might be in it for them, and, again, self-organising patterns of a myriad of similar interactions emerge, shaping the new modus operandi, confirming that this *is* a new situation with new options, if not for all, then at least for them, and for several more members of society. In hindsight, then, this will of course become a millennial event in our historical chronicle.

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31 Spiegel, *The Growth*.

32 Max Weber, *The Protestant Ethic and the 'Spirit' of Capitalism* (New York: Penguin, 2002); Richard H. Tawney, *Religion and the Rise of Capitalism* (New York: Mentor, 1954); Kurt Samuelsson, *Religion and Economic Action: A Critique of Max Weber* (Toronto: University of Toronto Press, 1957).

33 This book, 79.

34 John Merriman, *A History of Modern Europe: From the Renaissance to the Present* (New York: W. Norton Co., 2009).

35 Sascha Becker, Steven Pfaff and Jared Rubin, *Causes and Consequences of the Protestant Reformation* (Orange: Chapman University, 2016).

Travelling with the Determined Pack Movement

Does this amount to determinism? By no means. Of course, things could have turned out differently. We all know that. Some might even ask whether it is relevant to discuss determinism today, after postmodernism and relativism entered the discourse. But how about contemporary prospects for the future? How wide is the scope of free choice, really? When passing time sheds its revealing light on developing events, we might discover that these are not straightforward issues.

As Peter Øhrstrøm (chapter 2) demonstrates with Prior's Big Y, the potential for different possible trajectories of future development is always present.[36] The only thing that is certain, is that the sum of the myriad of past events, actions and choices *did* lead to where we stand today. If we return to his illustration of branching time (Fig. 14.7), we can visualise that both the success of the Lutheran reformation and the failure of the 1848 revolutions *did* take place on the trajectory that we're on. We can also imagine that none of this would be known in the year 1400, which could be represented by m_1. At that point, the future would have been open regarding these matters. So then, at m_2 in 1521, Luther could either have escaped safely as he did (~*p*), or he could have been arrested (*p*) and executed (*q*). That would have led to a different situation, where he was less likely to be ascribed responsibility for an eventual later reformation. Similarly, at m_2 in 1848, conditions could have been riper (*p*) for a series of proletarian revolutions which would then create a historical discontinuum (*q*), and thus the political history of Europe would have been different. The narratives or *chronicles* emerging from these events would have been different.

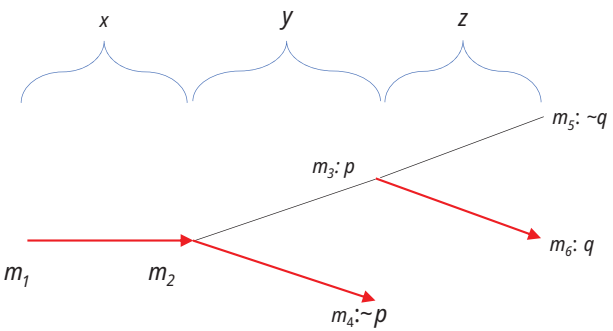

Fig. 14.7: A branching time model based on a thin red line function from the set of moments to the set of chronicles, close to the approach to future contingency as shown by Øhrstrøm in chapter 2.

36 This book, 37–38.

As historical evidence also shows, it is namely the chronicles – the stories and narratives of past events, organised in hindsight – that shape notions of inevitability, that something was bound to happen. Furthermore, chronicles and narratives of inevitability shape and limit the scope of possible contemporary actions, deciding what is natural or necessary to choose for today and tomorrow, based on what we know of yesterday. And, indeed, a previously more likely cause of events was interrupted in both the abovementioned cases: As an answer to the protestant reformations, the Catholic church had its own reform process. And from the mid-1800s, the labour movements gained reputation as more of a political power to be taken account of.

But even if the chronicles are often narratives of the deeds of prominent figures, like Luther or Marx, the choices of the masses and their habits over time is what shapes even the history of our planet in the Anthropocene. This includes their use of natural resources, technology, digital solutions, compliance to governmental politics and support for political movements. Governments may change, and ministers may come and go, but those who stay on and experience the consequences of policymaking are ordinary people, and they adapt to new situations as well as they can. Primarily, thus, social anticipation shapes human history, even the discontinuums.

Over time, the results of past enactments become visible, including the accumulated effects from the many, probably unintentional and unexpected side effects. In his discussion of *unintended consequences of human action*, Merton categorised these into a) consequences for the actor(s), and b) consequences for other persons mediated through (1) the social structure, (2) the culture and (3) the civilization.[37] The development which looks organised and coordinated, but is not, leads to entangled and so-called wicked problems, and there is no single person or group that is responsible. As pointed out in chapter 6, many of the issues of inequality we see in society today can be understood as unintended consequences of many small and large measures taken over time across sectors.[38] Regarding the historical evidence relating to human use of natural resources, Time, the great revealer, discloses a sad picture: Collectively, we tend to behave like a reckless creature with billions of hands and feet, but no head.

One aspect of this phenomenon holds that we are pack animals, a consideration which can fall outside the space of attention if the distinction between na-

37 Robert K. Merton, "The Unanticipated Consequences of Purposive Social Action," *American Sociological Review* 1, no. 6 (1936), 895.

38 NHA (Norwegian Health Association), "Høringssvar NOU 2021:4 Norge mot 2025," accessed June 16, 2023. https://www.regjeringen.no/no/dokumenter/utvalget-norge-mot-2025-horingsbrev/id2841475/?expand=horingssvar&lastvisited=undefined.

ture and culture/society is ubiquitous. As social herd animals, mimicking others is part of our social behaviour. So, partly, this can be understood as being a more advanced/less graceful version of flocks of birds and schools of fish that appear to act spontaneously as one large organism. Mead contends that it happens because each person imagines, observes, learns, and generalizes what others do.[39] Public social behaviour is thus regulated, coordinated, and, in a way, self-organized. This could serve to explain how widespread perceptions of something being necessary, natural, or even determined, arise.

This anthology seeks to deal with the phenomenon of determinism in an indeterministic way. When the point of departure is to scrutinise what something looks like, as seen from our time in history, what is contemporarily perceived as *necessary* is only so as seen from the here and now. Having said that, some things tend to be perceived as necessary as seen from rather wide 'heres' and durable 'nows', and we address some of these. One example is the universal social expectancy that members of society comply to their society's expectancies. But even so, following Prior's logic, only that which has actually come true can be seen as true, and (in his opinion) we depend on tenses in order to grasp this:

> One of the big differences between the past and the future is that once something has become past, it is, as it were, out of our reach – once a thing has happened, nothing we can do can make it not to have happened. But the future is to some extent, even though it is only to a very small extent, something we can make for ourselves. And this is a distinction which a tenseless logic is unable to express.[40]

In contrast to the realms of social-scientific relativism, there might actually be something liberating in the language of formal logic or computer science, where something either *is* (true) or *is not* (false). In computing, this is determined by choices made by programmers. In real life, the passage of time reveals what *is* and what *is not*. Starting from Chapter 2, where Peter Øhrstrøm discusses determinism on a theoretical level, we encounter several arenas where deterministic constructs potentially limit a wider scope of possible actions. *Technology optimism* is one such rather deterministic construct that has been with us for quite some time. Technological determinism can represent a challenge to freedom of choice, not just regarding choice of technology once a system or standard has be-

39 George H. Mead, *Mind, Self and Society*, edited and introduced by Charles W. Morris (Chicago, IL: Chicago University Press, 1977 [1934]).

40 Arthur N. Prior, "Some Free Thinking about Time," in *The Nachlass of A.N. Prior*, ed. Peter Øhrstrøm (Aalborg: Aalborg University, undated), 2, accessed July 10, 2023, https://nachlass.prior.aau.dk/paper/some-free-thinking-about-time.

come dominant and has gained momentum.[41] When a new potentially disruptive technology is introduced, it is commonly claimed that this is 'here to stay'. But, except from the fireplace and the wheel, how likely is that? Who believes that there will ever be a technology so complete that it will not be replaced someday? Imagining a teleological end to a fulfilled technological development would indeed be a deterministic stance.

However, technological determinism also gains momentum when it comes down to what *pace* of development deserves general acceptance. Stig O. Johannessen (chapter 3) holds that cyberity has its own time horizon and rhythm – a social and technological patterning process which moves extremely fast. Therein lies also the limitation; the rhythms, in which time horizons are created and recreated, represent the limits of imagination of action, and restrain how flexible anyone can be in relation to other individuals, groups, activities and other forms of rhythms.[42] He suggests a complexity theory approach in order to better understand stabilisation and change of everyday practices. Thinking along the lines of somehow preconditioned scenarios might imply the construction of what future options are the more likely. A myriad of choices will then be made in order to prepare for this future, which makes this future even more likely to materialise; and if speed is anticipated, speed becomes a quality in its own respect. So, when things are expected to move fast, they must.[43]

Adhering to impatience seems to be another deterministic construct regarding flock movements seeking to cope with time in contemporary society. The perceived need to cater to a shrinking attention range has first and foremost gained momentum in popular culture, where everyone competes for the individual's fleeing attention, as discussed in chapter 8. Current culture is restless, claims Eriksen.[44] In all aspects, people are busy finishing things rather than dwelling on things for a prolonged period of time.[45] The same tendency is experienced in academia (chapter 7), where we identified sociocultural temporal patterns described as a rhetoric of hurriedness, and a need for "immediate impact."[46] Also, since it is anticipated that students have shorter attention spans (due to the type of popular

41 Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, eds. Wiebke Bijker, Thomas P. Hughes and Trevor Pinch (Cambridge, MA: MIT Press, 2012), 45–76; Everett M. Rogers, *Diffusion of Innovations*, 5th edition (New York/London: Free Press, 2003).

42 This book, 68.

43 Jonathan Taplin, *Move Fast and Break Things: How Facebook, Google, and Amazon Cornered Culture and Undermined Democracy* (Boston: Little, Brown and Company, 2017); Lena Lindgren, *Ekko* (Oslo: Gyldendal, 2021).

44 Eriksen, *Tyranny of the Moment.*

45 This book, 187.

46 This book, 160.

culture they consume), lecturers are advised to adapt their teaching accordingly. Young people in today's information age are simply not culturally attuned to the idea of sitting through a long lecture or reading a printed book. This key point has been extensively discussed and examined by educators.[47] Again, flock anticipation is a key to perceived necessity.[48]

In sum, in a world where time is perceived as an ever-*accelerating* entity, rather than ever-*lasting*, cf. Sorokin, it seems as though this happens mainly because we collectively expect it to, and so we arrange our time accordingly. As per usual, historically speaking, several actors step up to explore what might be in it for them, and once again self-organising patterns of a myriad of similar interactions emerge, shaping a modus operandi confirming that this *is* in fact the age of acceleration. Thus, as Time, the great revealer, will show, not time itself but the social expectancies feed the acceleration so typical of contemporary social time.

Travelling without Thought?

As pointed out in chapter 1, if the social sciences wish to be conscious of time, namely analysing the timestyle of any society in focus would be prerequisite. Understanding a society could start from exploring how it understands time, and its norms for how to spend time.

What is time, then? Throughout this book we have seen some characteristics of the contemporary social timestyle, and we have seen that there are different timestyles, timescales and rhythms. Time itself, though, encompasses even more. It is everywhere, but remains unspecified, although we do our best to specify it with all our measurements.

To paraphrase Augustine and Husserl: we all know what it is – but then we can't express it clearly.[49] This does not seem to have changed over the centuries, although the dominant timestyle has changed. Sorokin reminds us that any socio-cultural understanding of time corresponds to – and changes with – the given socio-cultural conditions. 80 years ago, he observed that the dominant timestyle of the last two centuries has become increasingly focused on what is dynamic,

47 An article serving to spark such discussions was Marc Prensky's "Digital Natives Digital Immigrants," *On the Horizon* 9, no. 5 (2001): 1–6.

48 Peter Self, *Rolling Back the Market: Economic Dogma and Political Choice* (New York: St Martin's Press, 2000).

49 Augustine, *Confessions*; Edmund Husserl, *Vorlesungen zur Phänomenologie des inneren Zeitbewußtseins* (Tübingen: Niemeyer, 1928).

fleeting, and passing – instead of on what was eternal or lasting – and more 'mathematised.'[50] As our cases reveal, this tendency continues. Our cases also show that a simplistic quantitative and linear understanding of time falls short of mastering time in our times.

Thus, some more contemplation is needed, especially with regards to how time and pace is said to best be measured (quantified), how time is said to best be spent (qualitatively), and which processes inform such norms. If time is mere money, then it must be accounted for, particularly given that we still mostly adhere to industrial clock time in the 'modern' world. This is a central premise of our timestyle, discussed in several of the chapters. If short-term efforts to squeeze maximum productivity out of each unit of time remains a main focus in our times, this will continue distracting us from the long-term gains of time well spent, as well as the long-term costs of time ill spent. Lack of time resources at present and in the expected future spurs attempts to get more out of less. But then paradoxes appear when a time-consuming working method is launched with a view to managing scarce resources (chapter 6), or when time schedules are unrealistic (chapter 7). In both cases, finding time for doing the slow processing work or nurturing interpersonal relations was a real challenge. Social time acceleration is believed to persist, but as chapters 5 – 13 all show, typically unaccounted costs are rising. While some of the informants just need pauses from the speedrun, others are incapable of keeping pace. Some tweak to adapt, and yet others observe that there is not enough time to get necessary work done properly or in time. As shown, the existence of differing ways of understanding and spending time raises serious questions of belonging, of health and well-being, of taking action. Several of these issues might amount to structural problems, but as long as the issues are commonly understood as individuals' problems, they remain unaddressed at a structural level. Since these may be slow-burning problems, they risk continuously being deprioritised during times when key organisations and institutions experience time pressure (chapter 6), and both political and economic systems practice short-termism (chapter 5).

So, if the 'best' use of time is to be understood as the *most conscious* use, some widespread conceptions of time – and practices of spending time – in our times are immediately challenged. A timestyle, and a time concept suitable for our times should better enable humanity to do what we need to, that is, if we wish to uphold social resilience and natural biodiversity. Here, we have joined

50 Pitrim A. Sorokin, *Sociocultural Causality, Space, Time: A Study of Referential Principles of Sociology and Social Science* (New York: Russel-Russel, 1964 [1943]).

forces of philosophy, formal logics, complexity theory, history, life sciences, geology, sociology, and phenomenology in search for such a deeper understanding.

During these chapters, we have discussed time as (non-)*passing*, time as *duration*, time as *measure*, and time as *change* in both pace, space, and place, in our search for new intakes to understanding the interrelation between social time and social reality. We have landed on suggesting a conceptual understanding of time as a complex landscape which we move through, to capture the multiplicity timestyle of our times. Hopefully, this landscape gives more room for contemplating choices made.

Building on this theory, while envisioning time as a multiplicity landscape where one cannot escape the past nor the future, we can discern that the landscape over time becomes increasingly inhabited by consequences of previous actions. These are factors that limit the number of *realistic* future scenarios. Thus, all the old enactments of a then-imagined future leave less place for brand new options. When looking back like we have done here, tracing long-term development, we may discover that the past is not so far away when measured in the weight of past choices on the scope of present choices. Likewise, we may discover that the *future* is not so far away either, when measured in the influence present choices have on the scope of future choices, willingly or not. Regarding our relationship to the future, we need to fully embrace that we shape the success or failure of any given technological innovation, of any political or military movement, or of any environmental clean-up action. And we decide the pace. Just by the way we spend our time.

Being *time conscious* then requires a timestyle that allows for reflection and awareness of the entanglement of past, present, and future options, actions, and responsibilities. The main takeaway from this travel through the multiplicity time landscape is that this very understanding of time seems more feasible to enable us navigating the time of our times, and handling the challenges of our times.

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What is happening to perceptions of time, durability, and reality in the twenty-first century – and how do we deal with it? This anthology explores a diversity of uncommon insights about time, as seen from our historical and geographical standpoint.

All contributions discuss how time can be seen, and how these views relate to changes in nature, technology, economy, working life, politics, religion, or philosophy specific to our own time. Findings are discussed within three themed sections; *In Search of a Deeper Theory of Time*, *Time as Social Expectancy*, and *Time as Lived Experience*.

Chapters in this volume span from classical theory on branching time to personal experiences of drug-addicts' time. Together, these diverse contributions shed new light on how *construction*, *perception* and *regulation* of time influences a person's whole being in the world, collectively and individually, in the short and very long run, from the beginning of the Anthropocene to future cybertime.

The series **Nord Studies in Reality Formations** is Nord University's official outlet of transdisciplinary research. Each volume addresses understandings of reality in our time and what the societal implications could be, discussed from various perspectives.