Kristi  en Hens succeeds in weaving together experien  ce of both people with auti  sm and their parents, scienti  fi  c insights and ethics, and does so with great passion and aff  ection for people with auti  sm (with or without mental or other disabiliti  es). In this book she not only asks perti  nent questi  ons, but also cr  itically examines established claims that fail to take into account the cr  iticism and experiences of people with auti  sm.

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What does it mean to say that someone is au�  s�  c? Dynamics of Auti  sm explores this ques  on and many more. Kr  istine Hens conducts a thou  ghtful, wide-ranging exa  mina  on of psychiatric, biological, and philoso phical perspec  ves on au�  sm, as well as its meanings to those who experience it, diagnose it, and research it. Hens delves into the history of au�  sm to inform a contemporary ethical analysis of the models we use to understand au�  sm and explores the various impacts of a diagnosi  on au�  s�  c people and their families, the relevance of disability studies, the need to include au�  s�  c people fully in discussions about (and research on) au�  sm, and the signifi  cance of epigeneti  cs to future work on au�  sm.

Rich, accessible, and mul  -layered, this essen  tial reading for philosophers, educa  onal scien  sts, and psychologists who are interested in philoso phical-ethical ques  ons related to au�  sm, but it also has much to off  er to teachers, allied health professionals, and au�  s�  c people themselves.
Until now, I have talked about the different meanings of autism and about the importance of incorporating stories of people’s experiences into the study of autism. In what follows, I will give the account of a talk that I gave in 2017 at a symposium on time, organized by Hipposocrates, a Flemish organization of medicine and philosophy. I write this as an interlude: those readers who would like to skip its more speculative content may do so without losing this book’s main thread.

The idea for the talk arose from a fascination that I had had for some time: the experience of time and the handling of time by autistic people. It may look as though I am falling into the same trap I have been warning about: that I take a particular consequence of autism, that of experiencing time differently, as absolute. That is not at all the intention. A different perception of time is something that autistic people often talk about when talking about their own experiences. Therefore it makes sense to say something about time and autism without assuming that this is the same experience for all autistic people, or that a changed perception of time is the ultimate explanatory model of autism. Moreover, time is, just like autism, a layered and complex concept. It is not my idea here to tell a consistent story about time itself, but perhaps I can say something about the relevance of time for the philosophy and ethics of autism.

It is helpful to start this account with an acknowledgement that there is no simple answer to the question of what time is. For example, the space-time concept of the physicist, for example, Albert Einstein’s theory of relativity, whether it is the special or general variant, is not very useful when we think about the challenges of a sense of time. We can even wonder whether there is such a thing as the past, present, and future.
Perhaps there is only a simultaneity — a point on the axis from which one has an experience of (linear) time. Alternatively, maybe it is the case, as Belgian chemist Ilya Prigogine suggests, that the irreversibility of time is foundational for our reality. In what follows, we shall consider the experience of time rather than a correct definition of time.

In one way or another, at least according to evolutionary psychologists, our ‘neurological wiring’ evolved to experience time the way we do now: as past, present, and future. We name occurrences in our universe in an orderly manner. We experience time as progressive: after the sun, there is rain. After summer comes autumn. We live on a planet with a circadian rhythm, and perhaps, therefore, evolution has taken care that this rhythm is the basis of our sense of time. Time is also linked with our biology. Indeed, it seems to be the case that the smaller an animal is, or the briefer the time it lives, the slower it experiences time. For a fly, it seems, time goes by very slowly. Moreover, that is useful to her, because if you tried to kill her, she sees your hand moving very slowly, and she can fly away before you can blink an eye. Perhaps we might even say that the past-present-future complex is a mere construction of our brain. If so, the ‘now’ is all present sensory impressions, and the past is the most relevant of these in the banks of our memory, and the future is that which we can imagine but not predict definitely. In any case, it is essential to realize that a sense of time, like language, is also a shared experience. If time turns out to be an illusion, it is at least a shared illusion, one in which we are, to some extent, synchronized. It would be difficult to live in a community with others in which everyone had their own idiosyncratic sense of time. It would be challenging to maintain a discussion with a fly.

I have already extensively discussed the question of what autism is. In one sense, autism is a diagnostic category, or — to put it more succinctly — a diagnosis. Since 2013, and the advent of DSM-5, you are

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autistic if a psychiatrist, in collaboration with a multidisciplinary team, thinks that you have social or communicative problems, exhibit sufficient repetitive behaviours or restricted interests, and that these challenges affect your everyday life to a certain extent. A sense of time is not part of the diagnostic criteria. In chapter three, we saw how different theories explain why this cluster of behaviours that we call autism occur together. The most well-known explanatory model is that of a deficient Theory of Mind. Besides that, there is the theory that autistic people have Weak Central Coherence. Alternatively, they may experience difficulties with planning because of a problem with their executive functions. More recent views are based on first-person experiences of autistic people and suggest that those with autism have a superior visual intelligence. Some suggest that autistic people cannot filter out the stimuli of their senses sufficiently, so the world is too intense for them. Other researchers have suggested that the predictive models by which our brain functions and allows us to experience the world efficiently do not work in a typical way in autistic people, who continuously see the world as it is, at great intensity. Little is said about time in these models, although sometimes a link is made between, for example, an atypical sense of time and weak executive functioning, or a different way of dealing with predictions.

If little is said (or known) about autism and sense of time, why dedicate an entire chapter to it? Based on stories by and about autistic

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people, there seems to be something atypical in the autistic sense of time. To grasp what this could be, I will give some examples from fiction and from my research.\textsuperscript{11} My first example is \textit{Martian Time-Slip}, a novel from 1964 by Philip K. Dick.\textsuperscript{12} The story deals with a colony on Mars and is an allegory of the colonisation of America. The situation of the bleekmen (the native Martians) is very similar to that of the original inhabitants of the American continent. On the planet, there is Camp Ben-Gurion, an institute for children with developmental disorders. At the institute, there is an autistic boy, Manfred Steiner. Manfred’s father is convinced that his son’s autism is due to his wife’s lack of motherly talents, as she earned a master degree (sic) at the university. Manfred’s psychiatrist is of a different opinion: to him, autism is innate and hence biological. This latter explanation is very modern and reminds us of the theories discussed earlier in the book. Dick describes it as follows:

\begin{quote}
It assumes a derangement in the sense of time in the autistic individual, so that the environment around him is so accelerated that he cannot cope with it, in fact, he is unable to perceive it properly precisely as we would be if we faced a speeded-up television program, so that object whizzed by so fast as to be invisible, and sound was gobblegook.\textsuperscript{13}
\end{quote}

The main character, Jack Bohlen, had decided to emigrate to the vast plains of Mars because the urbanized environment of his home planet caused him to experience psychotic episodes. He has another relatively modern theory about autism:

\begin{quote}
It was a battle, Jack realized, between the composite psyche of the school and the individual psyches of the children, and the former held all the key cards. A child who did not properly respond was assumed to be autistic, — that is, oriented according to a subjective factor that took precedence over his sense of objective reality. And that child wound up by being expelled from the school.\textsuperscript{14}
\end{quote}

Manfred Steiner is a non-verbal child who will only speak at the end of the novel when he is already living amongst the bleekmen. He indeed suffers from a distorted sense of time: the future and the present are

\textsuperscript{11} Kristien Hens and Raymond Langenberg, \textit{Experiences of Adults Following an Autism Diagnosis} (Cham: Palgrave Macmillan, 2018).
\textsuperscript{13} Dick, \textit{Martian Time-Slip}, p. 46.
\textsuperscript{14} Ibid., p. 75.
simultaneous for him. This paralyses him. His experience is of the simultaneousness of time, but also of not being able to come to terms with the progression of time. In another novel, written before his readers would have conceived of autism as a disorder of normal neurological development, the author describes a similar experience, albeit in a less science-fiction-like setting.

The first chapter of *The Sound and the Fury* (1929), by William Faulkner, narrates the experience of Benji Compson, a thirty-three-year-old man with an intellectual disability.\(^{15}\) It is evident in the story that in his experience, present and past are intermixed. He does not distinguish between events that happened when he was a young child and events in the present, which eventually has tragic consequences. Both novels are refreshing because they describe the experiences of non-verbal people. They both depict an atypical sense of time, an experience that does not distinguish between present, past, and future. This atypical sense of time leads to the immediacy of experience, an immediacy that the rest of the environment does not share.

In my research into the experience of adults with a diagnosis of autism, people often talked about a different sense of time.\(^{16}\) For example, one of the respondents said the following:

> What’s typically me is that I’m never spontaneous and can’t deal with unexpected issues. It’s as if all stimuli first must pass through my brain and must be processed there. Everything has to be reasoned first. Because of this, my reactions can be delayed for a few seconds to a couple of minutes but are almost never spontaneous and uncontrolled. I also very often worry about the same thing for hours, months even.\(^{17}\)

Experiences arrive slowly, but are then very intense. Another example is by Tatiana, who talks about a phone call she received when she was in Sardinia in a restaurant: her adult daughter had had a car accident. She survived, so Tatiana was told on the phone, and that reassured Tatiana. Only when she got home did she realise the seriousness of the situation, and she experienced very intense emotions. Only then did she call the hospital back. Another participant, Baukis, stated the following:

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\(^{16}\) Hens and Langenberg, *Experiences of Adults Following an Autism Diagnosis*.

\(^{17}\) Ibid., p. 30.
'For me, that is the essence of autism: that you need much more time and energy to connect all loose particles of information and come to the right conclusion.'\textsuperscript{18} Another autistic person told me in a personal communication:

I have a terrible short term memory but an excellent long term memory. Years can be mixed, and I remember casual conversations as if they happened yesterday.

What can we conclude from these testimonials? In the case of the people I interviewed, we can clearly see that the world is too fast for them, that their brains need more time to process information, either because the information is absorbed at a very high intensity or because people get stuck on details. One of our respondents stated he would have preferred to go back to the seventeenth century, because everything was slower then. Instead of social media and its encouragement of immediate reactions, he wanted to go back to writing letters, where you take the time to respond. In the case of those fictional non-verbal characters mentioned above, they seem to make no distinction between present, past, and future. Perhaps all these experiences cannot be brought back to a single explanation. It seems that a sense of time is a function of the brain, and an atypically functioning brain can cause a conflict with a typical or ‘normal’ sense of time. In this respect, it is interesting that the people we interviewed also talked about disturbances in their circadian rhythm and challenges in estimating how long things will take. We may wonder whether it is an atypical sense of time that causes autistic behaviour and experiences or whether autism causes an atypical sense of time—although perhaps that question is nonsensical.

In ADHD, another developmental disorder, disturbances in one’s sense of time have been discussed in more detail.\textsuperscript{19} In thinking about ADHD, a specific term has been invented because people with this diagnosis often seem not to live according to the same timescale as people without ADHD: time blindness. People with ADHD, so it is

\textsuperscript{18} Ibid., p. 32.
stated, live in the now and are driven by the now. Neurologists suggest that this may be related to some dysfunction of the frontal cortex: these people cannot organise their behaviour in relation to the future. Autistic people also sometimes describe the impossibility of imagining the future. Interestingly, this is not the only thing that autistic people and people with ADHD have in common. Both for ADHD and autism, people have explored visual thinking in the context of challenges in executive functioning and hypersensitivity. Perhaps this overlap in phenotype is an explanation for similar challenges related to a sense of time. We might wonder whether it is the more intense (or more visual) way people with ADHD and autistic people experience the world that causes a disturbance in their sense of time. It could be the case that neurodivergent people experience difficulties in sensing the flow of time that neurotypicals have implicitly agreed upon and are therefore less able to meet the requirements of a ‘normal’ sense of time. This book is not the right place to tackle these very fundamental questions. I will therefore end my speculation here and proceed to the ethical part of this chapter.

My earlier reflections might suggest that autistic people are confronted with significant difficulties because of their sense of time. If the world revolves too fast, how can one connect with a neurotypical person? Are autistic people permanently out of sync with neurotypical people? I do not think so. On the one hand, from my research, it is clear that autistic adults sometimes face significant challenges. However, these challenges do not have to lead to unintelligibility. Many of us have experienced our brain reacting too slowly to input, or receiving too much input simultaneously, and becoming overloaded. Consider the following scenario: your friends have convinced you to have a drink after work; although you are exhausted, you agree and try to follow the discussion. However, you can only think about how tired you are and how you want to be alone. In such moments, your experience of time seems to progress more slowly than that of your friends. Think of the hundreds of work-related emails, Facebook messages, and texts you receive, so that you are always busy but do not manage to finish anything.

because your brain cannot process it all. I think this comes close to what autistic people experience regularly. Even when we concede that there is a cognitive basis to these challenges, it does not automatically mean that autistic people are fundamentally different or impossible to understand.

These observations should not lead to deterministic or reductionist thinking. Just because we might, in the future, know the biological or cognitive causes of an atypical sense of time, it does not mean that these challenges are insurmountable, a kind of lifelong punishment. It is indeed a risk rooted in assuming a biological cause of atypicality that it becomes a tragedy that you cannot avoid. There are no solutions besides learning to live with it. Our respondents told me that they appreciated concrete solutions to concrete challenges. If there is a need during social interactions to have a faster reaction time in relation to other people, what could a practical solution be?

On the one hand, we need an appreciation that some people need more time than others and that others who do not experience these challenges should accommodate this and make more time. On the other hand, this might not be possible in all circumstances. In searching for the cause of such challenges, for example, searching for the gene for our circadian rhythm, we tend to forget that it is also relevant and necessary to find ways to transcend these challenges. For example, someone I talked to who had severe sleeping problems told me that her autocoach advised her to shower before going to bed and to put a pile of blankets on top of her, something she found very useful. There is a vast area of unknown terrain covering how executive functioning can be improved with tips and tricks, even if we consider the cause of the challenges as a genetic or brain atypicality. Even for those with conditions such as ADHD and dyslexia, who often find planning difficult, such training is hard to access or not made available. Moreover, trying to find ways in which neurodivergent people can tackle specific challenges they experience, and investigating and researching such approaches, is vastly different from ‘curing autism’. I am vehemently opposed to suggestions that autism might or must be cured or trained away with invasive behavioural therapies. However, autistic people often point out that

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embracing an autistic identity does not mean that one does not want help with certain aspects of functioning. Some of these challenges, such as sleeping problems, are difficult to tackle with support or acceptance alone. Respecting one other’s vulnerability is a question of adapting one’s own behaviour to accommodate another person, and recognizing a joint basis from which that person can be understood, to help them tackle challenges in such a way that they feel comfortable.