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Time-related aspects of commute well-being

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ABSTRACT

Commute well-being is a multidimensional concept. However, existing research on commuting has focused mainly on hedonic well-being, whereas eudaimonic well-being has been given very little consideration. Furthermore, even though the time-related aspects of commute well-being have been acknowledged in conceptual studies, empirical studies have not yet explored them. The aim of this study is to understand both hedonic and eudaimonic dimensions of commute well-being and how these are shaped by time-related aspects relating to the past, present and future. An exploratory qualitative study was conducted using semi-structured interviews with 108 individuals representing commuters from three different working environments. Data was coded inductively, and the analysis revealed reflections on past commuting, rewards from present-day commuting and long-term justifications of commuting decisions. The study shows how issues related to eudaimonic well-being establish the long-term base of commuting behaviour and how past hedonic commute well-being impacts commuting behaviour. Acknowledging the temporal dimension is important, because inducing long-lasting behavioural changes requires an understanding of the past and present hedonic commute well-being experiences that impact commuting behaviour in the future. Eudaimonic well-being affects commuters over a longer timescale and enables them to live contently with their choices in the long term.

1. Introduction

Subjectively experienced well-being in the context of daily commuting to work (that is, commute well-being) is of growing interest as pressures to create more sustainable transport systems are highlighted because of challenges brought about by rapid urbanisation and problems with congestion, climate change, resource use and public health (e.g., Abou-Zeid & Ben-Akiva, 2011; Smith, 2017). Travel to work plays an important role in the everyday lives of individuals and it shapes their overall subjective well-being (Zhu & Fan, 2018; Smith, 2017). This is becoming increasingly emphasised alongside longer commutes caused by growing cities and expanding suburban areas (Lorenz, 2018; Zhu et al., 2019).

The concept of subjective well-being can be defined as 'good mental states, including all of the various evaluations, positive and negative, that people make of their lives, and the affective reactions of people to their experiences' (OECD, 2013, p. 10). It is based on

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the view that individuals themselves are in the best position to evaluate their own lives (Diener et al., 1998). Overall subjective well-being is influenced by experiences in different life domains, such as an individual's working life and commuting (see Dolan et al., 2008), and we can analyse these individual domains of well-being separately (e.g., Abou-Zeid & Ben-Akiva, 2011; Soh et al., 2016).

Subjective well-being is typically divided into hedonic and eudaimonic well-being. Hedonic experiences of well-being encompass both experiential well-being (the presence of positive emotions versus the presence of negative emotions) and evaluative well-being (satisfaction with life) (Chatterjee et al., 2020; Diener, 2009; Tinkler & Hicks, 2011). Eudaimonic experiences of well-being stem from the acknowledgement that individuals have deeper psychological needs, such as self-acceptance, self-actualisation, positive relations with others, personal growth, life purpose, environmental mastery, autonomy, control and competence (Ryan & Deci, 2000; Ryff, 1989; Tinkler & Hicks, 2011). Past research (Liu et al., 2021; Singleton & Clifton, 2021) indicates that travel-related eudaimonic well-being is often directly associated with the needs of relatedness, autonomy and competence. Relatedness highlights interpersonal relations, close connections and identification with others (Baumeister & Leary, 1995; Ryff & Singer, 2008). The autonomy dimension includes features of independence, self-determination and the regulation of behaviour from within (Ryff & Singer, 2008), whereas competence refers to mastering outcomes and showing ability (Harter, 1978; Singleton & Clifton, 2021).

Consequently, subjectively experienced commute well-being is a multidimensional concept integrating physical, mental and social constituents as well as experiences and expectations. Studies that consider its different dimensions and the interplay between them are rare. Extant reviews (e.g., Schwanen, 2021; De Vos et al., 2013) show that research on commuting has mainly focused on hedonic well-being, whereas eudaimonic well-being has been given very little consideration (Chatterjee et al., 2020). Hence, the studies by Singleton (2019) and Liu et al. (2021) can be regarded as pioneering works in exploring commuting and considering both hedonic and eudaimonic well-being. Singleton (2019) empirically measured these dimensions of commute well-being, and Liu et al. (2021) detected a strong positive correlation between hedonic and eudaimonic well-being. However, the detailed interplay of these dimensions has not yet been thoroughly explored. Thus, to understand the subjective well-being related to commuting, there is a clear need for empirical research on commuting that considers both the hedonic and eudaimonic aspects of commute well-being and analyses their interplay in commuting behaviour.

Furthermore, even though commuting is essentially a time-bound process rather than an isolated act, empirical studies on subjective well-being tend to largely neglect time-related aspects of commute well-being (Chatterjee et al., 2020). In addition, even the mere experiences of hedonic and eudaimonic well-being seem to be related to different timeframes. Hedonic well-being is argued to be connected to shorter timeframes than eudaimonic well-being (Chatterjee et al., 2020; De Vos et al., 2013). Even though these temporal aspects of subjective well-being in commuting have been acknowledged (e.g., Chatterjee et al., 2020; Mokhtarian, 2019; Schwanen, 2021), empirical studies have not yet addressed them.

Consequently, *this research aims to understand both hedonic and eudaimonic dimensions of commute well-being and how these are shaped by time-related aspects relating to the past, present and future.* We approach the phenomenon by first providing a concise overview of the scarce existing research on the manifestations and time-related aspects of hedonic and eudaimonic well-being in commuting. In the methodology section, we describe the qualitative data gathering and analysis. We then continue by presenting the findings, providing detailed analyses and following up with a discussion and conclusion section where we discuss hedonic and eudaimonic dimensions of commute well-being and the time-related aspects.

2. Literature review

2.1. Hedonic and eudaimonic well-being in commuting

Hedonic and eudaimonic well-being are based on different philosophical traditions, with positive emotions forming the basic elements of the former and the development of the individual's potential being the core of the latter (Delle Fave, 2014; Thorsteinsen & Vittersø, 2018). Furthermore, eudaimonic well-being sparks and sustains the individual's effortful goal pursuits, whereas hedonic well-being acts as a reward for goal achievement (Straume & Vittersø, 2012; Thorsteinsen & Vittersø, 2018). Previous empirical studies have also shown that these two types of subjective well-being are related but distinct concepts (Fowers et al., 2010; Joshanloo et al., 2021). Thus, their interrelatedness should also be acknowledged in research on commute well-being.

The existing research on the effects of commuting on subjective well-being shows somewhat contradictory results. For example, when studying hedonic well-being, Kahneman et al. (2004) found that commuting received the highest negative emotion scores and the lowest positive emotion scores among the emotions felt during the day, whereas Olsson et al. (2013) and Morris and Guerra (2015) demonstrated that emotions during commutes were predominantly positive or neutral.

The importance of the transport mode for commute well-being is widely acknowledged. When considering hedonic experiential well-being, physically active commute modes (walking and biking) have been found to evoke more positive emotions and increase the quality of the journey experience more than commuting by car (Gatersleben & Uzzell, 2007; Liu et al., 2021; Singleton, 2019; Smith, 2017). Likewise, walking and biking seem to create more satisfaction and hedonic evaluative well-being than when using cars or public transport (Abou-Zeid & Ben-Akiva, 2011; Chng et al., 2016; Liu et al., 2021; Olsson et al., 2013; St-Louis et al., 2014). However, Zhu et al. (2019) found the opposite: those who commute by walking or cycling were likelier to have lower levels of commute well-being than those using other travel modes. Some studies (e.g., Friman et al., 2017) also note that using a car creates more satisfaction, whereas some (e.g., Abou-Zeid, 2009) argue that the use of public transport increases satisfaction. Research also indicates that complicated trips, such as public transport, including transfers, decrease satisfaction (Wener et al., 2003). Thus, the impact of the commute mode on hedonic commute well-being is not straightforward.

In addition, the relationship between the commute mode and eudaimonic well-being may be multifaceted. Walking and cycling, in

particular, seem to enhance the eudaimonic well-being of commuters (Liu et al., 2021; Singleton, 2019). However, for some, the private car may enhance social status, self-esteem and self-expression, and evoke feelings of freedom (Ellaway et al., 2003; Steg, 2005), whereas for others, avoiding the use of private cars can be used to express their environmental values (Nordlund & Garvill, 2003).

Furthermore, commuters may also experience travel as a gift that allows them to escape their obligations in a personal space provided by a private car, to relax and to have the time to mentally prepare for the demands of work or home life (Jain & Lyons, 2008). The commute environment and time have been connected to hedonic commute well-being. Existing research indicates that exposure to certain environments or scenic beauty may motivate individuals to undertake excess travel, even in the context of commuting (Mokhtarian & Salomon, 2001). On the other hand, it has been shown that longer commute times are associated with decreased happiness (Choi et al., 2013; Nie & Sousa-Poza, 2018).

2.2. Time-related aspects of hedonic and eudaimonic commute well-being

It is important to examine the time-related aspects of subjective well-being in commuting, because in commuting, an individual's short-term time perspective connects to the workplace's collective time rhythm taking place on a daily, weekly, annual and even decennial time horizon, giving rise to a potential temporal desynchronisation and increasing the likelihood of tensions (cf., Spiegelberg, 1994; Vogel et al., 2020).

Researchers on time-related aspects acknowledge that the subjective present is not an isolated moment in time (e.g., Gallagher, 2009; Montemayor & Wittmann, 2014). Thus, commuting experiences also take place in a temporal context. What commuters experience as 'now' and how they interpret it takes place in relation to their past experiences, and often, their expectations of future events (cf. Chatterjee et al., 2020).

Chatterjee et al. (2020) argue that both short and long time horizons are present in all types of subjective well-being, but De Vos et al. (2013) consider hedonic well-being as a short-term phenomenon and eudaimonic well-being as having a longer perspective. In accordance with this, Stevens et al. (2021) characterise hedonic well-being as having a rear-view and rather short-term perspective compared to eudaimonic well-being, which has a forward-looking and long-term perspective. Furthermore, when considering the temporal aspects, it is important to acknowledge the role of commuting as a means to an end. For instance, commuting may cause stress and negative emotions (i.e., a decrease in hedonic well-being) but it may also provide access to activities that directly create eudaimonic well-being, such as career fulfilment or time with the family (cf. Mokhtarian, 2019).

This review highlights how our knowledge of the interrelations between different types of commuting well-being is scattered, and the existing research on the characteristics of commuting contributing to commuting well-being offers somewhat contradictory results. Furthermore, although the time-related aspects of commuting have been acknowledged, there is a lack of empirical studies exploring them. Thus, there is a need for further research into the different types of commute well-being and temporal aspects, which led to the aim of our research: to understand how the different types of commute well-being occur and to analyse both hedonic and eudaimonic dimensions of commute well-being through time-related aspects. Our study contributes to the research on commuting behaviour by clarifying the role of time-related aspects in commute well-being and by providing a complementary understanding of the drivers for selecting the travel mode for a commute trip. For policymakers, our study offers a new well-being perspective on future transport policies beyond the common goals of facilitating commuting and decreasing negative effects, such as pollution, accidents, stress and

Table 1
Demographics of the informants.

	n	Total	School	Hyper-market	Hospital campus
Gender:					
Female	90	83%	17	40	33
Male	18	17%	7	10	1
Age:					
18–34	44	41%	3	35	6
35–51	36	33%	16	8	12
52–68	28	26%	5	7	16
Number of cars in the household:					
0	22	20%	1	17	4
1	54	50%	13	19	22
2	26	24%	8	10	8
3 or more	6	6%	2	4	–
Distance between home and work (kilometres):					
$\leq$ 1 km	6	6%	1	4	1
1–5 km	42	39%	10	21	11
$>$ 5–10 km	25	23%	8	12	5
$>$ 10–20 km	24	22%	2	8	14
$>$ 20 km	11	10%	3	5	3
Primary mode of commuting					
Car	39	36%	13	19	7
Public transport	22	20%	2	8	12
Cycling	9	8%	2	4	3
Walking	26	24%	3	16	7
Cannot be specified	12	11%	4	3	5

other health problems.

3. Method

We utilise an exploratory qualitative approach to study the time-related aspects of commute well-being. We conducted semi-structured interviews with 108 individuals representing three different types of workplaces in a Finnish city, Tampere. With around 250,000 inhabitants, it is the third largest city in Finland. It is one of the most rapidly developing regions in Finland, and in recent years, it has been investing heavily in internal traffic routes and connections, supporting both active commuting and private car commuting, as well as building tram commuting infrastructure. The interviewees consisted of 1) comprehensive schoolteachers who worked during office hours, 2) hypermarket employees who worked shifts, and 3) employees from a hospital campus who worked both shifts and during office hours. This variation enabled us to collect rich data from commuters representing different kinds of temporal settings (workplace collective time rhythms) and thus to form a broader understanding of the time-related aspects of commute well-being. All the workplaces were situated a few kilometres away from the city centre within reach of various public and private, active and inactive commuting modes. The demographics of the interviewees are presented in Table 1. The under-representation of men was due to the predominantly female workplaces (especially the hospital campus and school), but also to the unwillingness of men to participate in the interviews. This bias needs to be acknowledged when analysing the results of this exploratory study.

The interviews were performed individually face-to-face in the interviewees' work premises and had an average duration of 29 min. The interviews started with demographic questions, followed by open-ended questions related to commuting practices, commuting incentives and obstacles, and emotions and attitudes linked to commuting. The interview topics and selected questions from the interview guide can be seen in Table 2.

The transcribed data were analysed in three phases. First, the researchers read the transcripts several times to produce an overview of subjective well-being in commuting arising from the data. Based on this initial analysis, a loose frame of analysis was exploratorily determined, including the concepts of the commuting trip, time and temporality, commuting mode, commuting setting, emotions related to commuting and reasons for commuting behaviour. Second, the data were imported into NVivo, where they were coded using the above-mentioned concepts.

Inductive coding was used to allow novel interpretations to emerge from the data. We applied the established Gioia approach (Gioia et al., 2013) to detect upper-level categories for empirical subcategories and to integrate them into more theoretical aggregate themes. This was enabled by several iteration cycles, where the codes (based on quotations) were merged, and the interpretations discussed and finally theorised by the researchers. This resulted in an understanding of time-related aspects of commute well-being, which manifested as past hedonic well-being experiences in commuting, present hedonic well-being experiences in commuting and long-term eudaimonic well-being in commuting. The inductive analysis process and the progression from data to themes are presented in Fig. 1, and the text in the Findings section is organised based on this logic. The figure follows the Gioia approach, but as we consider it important to show both second- and third-order themes in the figure for the transparency of the analysis, the first-order themes (more detailed illustrations of pseudonymised quotations) are integrated into the text and into the tables included in the Findings section. Third-order themes are also described in the Findings section.

4. Findings

The analysis of the time-related aspects of commute well-being took into account the time horizons of the experience and revealed past hedonic well-being experiences in commuting, present hedonic well-being experiences in commuting and long-term eudaimonic well-being in commuting. These are presented in the following sections.

Table 2
Interview topics and questions.

Interview topics	Examples of the interview questions
Commuting practices	What is the distance between your home and work?
	How do you travel to work and back (door to door)? How long does it take?
	Which route do you take? Why?
	What do you do during the commute (e.g., listen to music, talk with someone, watch the scenery)?
	What alternatives would you have for the commute?
Commuting incentives and obstacles	Why do you commute that way?
	Would you consider the alternatives? Why? Why not?
	What influences your commuting mode (e.g., work shift, weather, season, family members)?
	Have you previously commuted differently? Why? Why did you change your commuting mode?
	Do you have plans to change something in your commuting behaviour? What? Why?
Emotions and attitudes linked to commuting	How does the commuting feel? (distinct emotions)
	What kinds of emotions do active modes of commuting (e.g., walking, cycling)evoke in you?
	What kinds of emotions do new modes of commuting (e.g., e-scooters, tram) evoke in you?
	What kinds of emotions do different commuting environments (e.g., city centre, suburban district, countryside)evoke in you?
	What is important to you in life? How is mobility connected to these things?

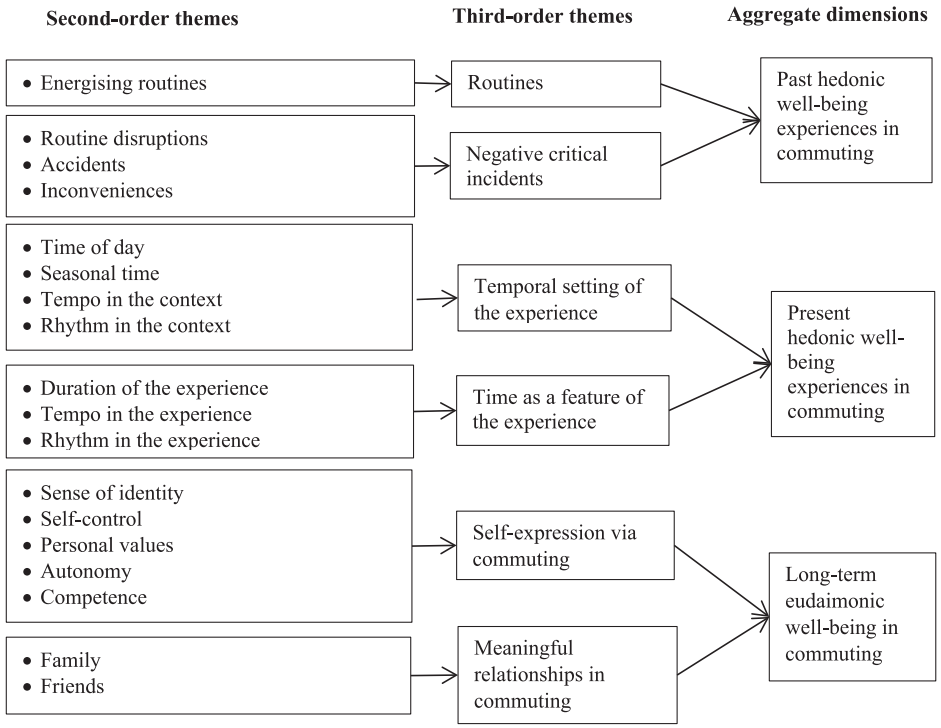

Fig. 1. Data structure.

4.1. *Past hedonic well-being experiences in commuting*

The interview data indicated that past hedonic well-being experiences in commuting can be divided into routines and negative critical incidents (Table 3). *Routines* consisted of energising routines related to active commuting, and they were seen to contribute to commute well-being, as commented on by Lily, who cycled almost 20 km daily when commuting: 'It is essential to exercise. When it has become a daily habit, you realise that you need the activation, even if it's holiday time…It maintains the small active feeling throughout the day when there is some small activeness in the morning. And also, it makes it easier to come home from work, as you get reinvigorated on the way home' (Lily).

Furthermore, energising routines facilitated commuting, which became evident when the informants discussed the stress caused by routine disruptions. For instance, the construction of city infrastructure forced many bikers to search for alternative routes, and the

Table 3
Data supporting interpretations of past hedonic well-being experiences in commuting.

	Examples of citations
ROUTINES	
Energising routines	The [physical activity] has the power to…sometimes when you're really pissed off after work and you take a bike over there, it relaxes you. It's one kind of a way of life; there's no need for a 'Friday bottle' [alcohol after the work week] if you take a ride with the bike. It's that sort of elixir. – Lynn
	Of course, when you're used to exercising, I like it when I get fresh air while commuting by bike. – Susan
NEGATIVE CRITICAL INCIDENTS	
Disrupted routines	At the moment, we live at [a residential part of the town] and the bus stop where you were able to easily take a bus without any transit was within sight. Now, you cannot hop on from there. – Veronica
	The [street construction] worksite has been awful. At times. Like when you don't know which way to go. If you can take one route one day, it may be closed the next day, and there may be holes in the road and all that. At times, those roads have been in very bad condition. – Daniel
Accidents	I have a fear towards cycling. It has been very close, a real crash […] I came, really, sliding down a slope. Nothing happened, but it left me with a funny feeling that I should probably go and cycle just on very quiet roads, because I notice that it doesn't tempt me at all to go cycling over there, in the middle of the traffic. – Louise
	Once, when there were the first slippery roads [of the winter], I fell with the bike right on the roadway. Luckily, there was no bus or any other [vehicle] right there to drive over me. It kind of halted me a bit, like it made me think that riding a bike is dangerous, after all. – Julia
Inconveniencies	Sometimes in the wintertime the lock of the bike got frozen, so that was the end of my wintertime cycling. […] Also, the gears have sometimes frozen, so that made me think that one should only do it when the weather is good, when you know that it's not slidy or icy. – Veronica
	Sometimes, before I used to go by bike, until these road works began, over there at my neighbourhood at first and all of a sudden there was crushed stone on the cycleways etc. and when once my tyre got punctured, I figured that it didn't tempt me to cycle anymore. – Marion

reorganisation of local bus routes changed the fast and easy commuting into a time-consuming and complicated effort. Routine disruptions were regarded as difficult even in situations when the benefits of new behaviour were clearly recognised: 'But when I come by bike, it's always a nice experience. I don't remember ever thinking like, "Why did I take a bike; why didn't I just take the car?" But the decision to leave is difficult, so those decisions [to come by bike] could be made more often. […] It makes the decision difficult because I wouldn't want to take a shower and change my clothes [at the worksite]. You always need to check the weather' (Eric).

In addition to disrupted routines, other *negative critical incidents* consisted of accidents and inconveniences encountered. The following citation describes how Janice decided to use the bus instead of cycling after one embarrassing experience: 'For some years, I also went by bike. But then, once, I got lost when I came… It took me so long. I just kept on thinking that I would find home. But it didn't quite go like that' (Janice). In fact, when discussing past critical incidents, the informants did not mention any positive incidents, but certain single negative critical incidents were so powerful that they reflected on their further commuting behaviour.

4.2. Present hedonic well-being experiences in commuting

Based on the interview data, we found that hedonic well-being experiences can be divided based on how time as a concept is present in and impacting the experience. For some experiences, time formed the setting of the experience, whereas for others, time acted as a feature of the experience (Table 4). This line of thought follows the research on temporal experiences that sees time as both a frame within which the experience takes place and as an inherent feature of the experience itself (e.g., Woermann & Rokka, 2015) and that sees experiences as characterised by a certain tempo and rhythm (e.g., Adam, 1995; Bowles, 2016). Consequently, the *temporal setting of the experience* could be further divided into the time of day, seasonal time, tempo (i.e., the speed) in the setting and the rhythm (i.e., regular and repeated pattern) in the setting.

The reflections of the time of the day on hedonic commute well-being were particularly accentuated in the data since many informants worked shifts. Unconventional working times restricted the number of available commuting modes and the energy required to engage in active commuting: 'The kind of fatigue. After night shifts, I just like getting on the tram and getting home fast' (Madeleine). Furthermore, those who worked night shifts expressed both positive and negative emotions related to outdoor commuting. An example of the former is the contentment expressed by an interviewee: 'When you leave work after the night shift, it's very quiet over there. It's nice to pedal over there and have some fresh air' (Susan).

The informants also emphasised the role of seasonal time and, for many, their commuting mode changed between summer and winter. Especially in Finland, the winter weather conditions and slippery roads may cause injuries or additional strain to those commuters who cycle or walk: 'Maybe it's the slidy surfaces and snow that bother me in the wintertime. It's quite strenuous to pedal. And also the coldness – that doesn't really tempt me either' (Rose).

Table 4
Data supporting interpretations of present hedonic well-being experiences in commuting.

	Examples of citations
TEMPORAL SETTING OF THE EXPERIENCE	
Time of day	There is one bus coming from there [from the home neighbourhood] directly over here but it requires some walking and it's frightening to walk at 4 a.m. [in that part of the city].– Michelle And in the morning when I come [to work] at 5 a.m., it's a little nicer to come [by car] when it's the darkest time [of the year]. – Harvey
Seasonal time	Especially in the summertime, when it's hot, the bus sucks. It's terribly hot in there. It's much nicer to go with the scooter when you can scooter in the fresh air. – Glenn In the wintertime, all the roads are so poorly maintained [poorly snowploughed] that I won't go 'playing tricks' [with a bike] at all. – Alan
Tempo in the setting	I always consider, like, what kind of day at work is ahead. If the day is going to be completely awful, I easily tend to come by car. If the day is going to be an easy-going one, then I'll take the bus. – Rosaline In the morning, I came by bike via the arboretum. It's an amazing place. Over there, you really admire the scenery, the tranquillity and silence in the middle of the city. Otherwise, the way to work is next to a roadway, which is a bit strenuous. So I don't actually like it that I have a slightly unpleasant cycling route coming through the city, so it could be nicer, yes. – Roberta
Rhythm in the setting	I think it's quite easy to travel by bus; they constantly come and go, and you don't necessarily even need to take a look [at the schedule] to find out when the next one is coming. – Nora Well, I don't want to come here by car because the parking situation is like that…I would be anxious every morning about where to park the car. – Karen
TIME AS A FEATURE OF THE EXPERIENCE	
Duration of the experience	If I came by bus it would take me over an hour. And especially, if I don't make it to the next one, when the bus arrives downtown, then I won't catch the next one that comes in this direction, so I need to wait a moment. – Molly It's fastest to go by bike, faster than by bus…when you take a bus, you need to change buses downtown. When you go by bike, you can take a straight route, quite exactly 20 min from work to home. – John
Tempo in the experience	I don't like those rush-hour buses; they make me quite anxious. They are really crowded, especially this one shift that travels this route. – Linda I like the bus because it allows me some time on my own and to calm down after work – the brain gets proper rest over there. […] I usually don't do anything, I just look around, sometimes maybe skim through some Instagram or Facebook posts on the phone or something […] Usually I look out the window, sometimes listening to music. – Margret
Rhythm in the experience	It [the tram] is somehow such a pleasant and easy mode to just go from one place to another. Quick and all. You can just sit. It stops at every stop, and you don't need to worry about when to push the button. And the stops are clearly marked over there. – Madeleine And you don't need to take a look at the schedule. You just go to the stop and soon it [the tram] will come. – Clarice

Hedonic commute well-being was also echoed in the tempo in the commuting setting. For example, when family life was hectic or the workplace was busy, commuters sought to either balance it with slow and calm commuting or carry out their commuting duties as fast as possible. The latter was described by one interviewee: 'I have kids with hobbies. By the time I get home, the time window is very narrow since I take the kids to their hobbies almost every day. That's why I go by car' (Matthew). Furthermore, the tempo of the physical setting, such as the landscape, also influenced commuting behaviour, making commuters seek out calm cycling routes.

The regularity of the rhythm in the commuting setting also influenced commute well-being. For instance, when the public transport system functioned well with regular routes and scheduled times, it was easy to prefer it over other commuting modes: 'There is a good rhythm regarding the bus traffic, so from our place…There's probably one coming every ten minutes, so it's handy' (Louise). On the other hand, unsynchronised temporal rhythms between the setting and the individual also influenced, for instance, uncertainty related to finding a parking place near the workplace, which made one interviewee anxious, and she preferred to take the bus. Another interviewee preferred her car because it gave her an opportunity to react to sudden unexpected calls during the commute: 'I need to be available then [at seven o'clock] because my job includes the recruitment of substitute teachers and every day there is somebody absent. So I thought that I'd be able to take care of it in the car because I always aim to get teachers to the first lessons, too. So in a way, my work [day] already begins at seven' (Monica).

However, time was also considered as an inherent part of the hedonic commute well-being experience. *Time as a feature of the experience* could be further divided into the duration of the experience, the tempo in the experience and the rhythm in the experience. The duration of the experience had a bearing on subjective well-being in contradictory ways. Whereas some interviewees counted the minutes required by different commuting modes to choose the fastest commute, many also highlighted that commuting gave them a break from other duties and enabled them to be alone with their thoughts. This opportunity was considered so important that some even complained that their commuting distance was too short. For example, Denise's commuting walk took five minutes, which she considered insufficient: 'I often do have a great urge to go and have a walk since the route to work is so short – so I need to get some distance from the issues at work [by taking a walk or a run]. If you go on a walk right away after work, it's the same as if you were to have a longer route to work. You forget work issues during the commute' (Denise).

Tempo in the experience was also noted in the interviews. The subjective reflection of tempo on commute well-being was demonstrated in how the same type of commuting, sitting in the bus, was experienced as busy and stressful by some, but as calming and relaxing by others. Many also highlighted that the active modes of commuting enabled them to choose their own tempo in commuting: 'It's lovely to ride a bike. Just, like, the feeling of riding, moving forward, feet moving' (Judith).

Furthermore, the rhythm in commuting had a bearing on hedonic commute well-being. Related to this, many interviewees praised the regularity and reliability of tram commuting. As commented on by Wendy, who needed to transit from tram to bus in the middle of

Table 5
Data supporting interpretations of justification in commuting.

	Examples of citations
SELF-EXPRESSION VIA COMMUTING	
Sense of identity	It [cycling] has just been a part of my identity since I was a child. […] It's just my thing. When I was a child, I got to choose between a doll stroller or a bike, either/or, so I took the bike then, and I was something like three or four [years old]. It's been the thing for me. – Lynn
	I have always walked an awful lot. When I was school age, my school route was three kilometres, and I almost always walked it. […] So, walking is very natural for me. – Veronica
Self-control	I have just made it clear to myself that I come to work by foot. Period. Not so much thinking of the weather or if I fancy walking and whether it's dark or not. – Phoebe
	I have a rule that I've made for myself that if it's under three kilometres, I'm not allowed to take the tram [but I walk instead]. – Wendy
Personal values	I just don't want it [the car]. I'm a kind of ecological person. – Miriam
	For ecological reasons, we [my husband and me] try to use public transport, if possible. – Nicole
	I moved two years ago [to this part of the city]. It was a conscious choice just because of this: to be able to go on foot or by bike. So, I have actively changed my lifestyle, my own carbon footprint. I've calculated it, that it counts, and I have also actively chosen the kind of habit where I don't use the car. – Sharon
Autonomy	It [going by car] is so handy. You don't need to think of any bus schedules or anything; you just leave when you leave. You get to sit, to listen to the radio, and you get as close as possible to the destination where you're going. It's just so easy. And effortless. – Rosaline
	With cycling, you don't need to wait. You go when it's time to go and you're there as fast as you can pedal. Then, there's also the flexibility; you can take a shortcut every here and there where cars cannot drive, and you can park your bike right in front of the market. – Kelly
Competence	I have a driving licence, but I don't know how to drive. If you don't drive for ten years, you can't anymore, all of a sudden. – Heather
	Although I've considered myself quite an advanced person, I haven't really made a digi leap regarding this matter, so it frightens me a bit… how to be able to take it [an e-scooter] into use and how to control its speed. – Gladys
MEANINGFUL RELATIONSHIPS IN COMMUTING	
Family	I have a son of my own, a special needs child […] I usually come by car so that he doesn't need to be home alone for such a long time. […] Maybe it is the time saving that is the thing for me when he has returned home from school, so I don't want to prolong the going home very much. – Bridget
	Well, often I tend to come by [my own] car. […] I'm the one in our family who goes to the grocery store and everything, so I have kind of good justifications for it. – Eric
	By my own car. […] Quite often, I commute together with my husband. He works in that part of the city that is next to my workplace. – Tiffany
Friends	By my own car. There's also another person from the same residential area going to the paediatric clinic. So, we take turns. We have probably commuted together by car for ten years already. It works well. We are at a similar stage in life and have a similar work background, and we both work in the paediatric ward. – Shelly
	There were probably eight persons or so, at best, getting on the [bus] number 5 and I knew exactly where each of them works [here, at the same place]. – Veronica

her commute: 'I love it [the tram], it's just brilliant. Firstly, there is the issue of not needing to take a look at the schedules. I don't need to give a single thought to when it comes and I don't need to check whether I'll be able to catch the bus and when does the next one go, since they [the trams] constantly come and go. So the independence and freedom is absolutely the best thing about it – like it is in those vehicles which you drive yourself. So it's the only one of the vehicles that are driven by others where you don't need to keep an eye on your watch all the time' (Wendy).

4.3. Long-term eudaimonic well-being in commuting

Representations of eudaimonic commute well-being in the interview data could be divided into self-expression via commuting and meaningful relationships in commuting (Table 5). The eudaimonic well-being elements were rather permanent and influenced commuting decisions in the long term, thus integrating the past, present and future time horizons.

Self-expression via commuting was divided into a sense of identity, self-control, personal values, autonomy and competence. A sense of identity was manifested in the interviewees' characterisations regarding what kind of commuting was innate to them. This is shown in the following quote by an interviewee who preferred using her private car over cycling: 'Cycling has never been the thing for me. I like many other sports. I have never, not even as a child, cycled very much. It's just not natural for me' (Carol).

The interviewees also highlighted their own self-control, which made them use certain active commuting modes, even though they did not always create positive experiences when applied. Often, the reasons were related to health benefits, as stated by an interviewee who justified cycling ten kilometres every workday over using a private car: 'Going by car would not be an option for me because […] there's the health aspect. Because you cannot get health just by wanting it – it's all about actions. So, two small outdoor activities every working day is the kind of action with which I think I can gain healthy years to come, when I'm between 90 and death' (Judith).

Commuting was also used as a way to realise and demonstrate personal values, especially those related to environmental protection and climate change. These values seemed to influence the choice of commuting mode and, in some cases, motivated the commuters to move closer to their workplace so that active commuting would be possible. Furthermore, when commuters were not able to use commuting modes that matched their personal values, they experienced a bad conscience. This was also the case with this interviewee, whose household had two cars: 'So, in a way, the easiness of everyday life, at the moment. I have had such a bad conscience about commuting by car. And we have thought about it with my husband. Someday, when the kids are older, the most ideal case would be to get rid of my car and we would have my husband's car. There would be one car in our family, and I would go by bus or also by bike in the summertime. That is the ideal, but it feels impossible at the moment. And I have had such a bad conscience because of it' (Emma).

Some informants, especially those commuting by car or those cycling or walking, highlighted autonomy in commuting and mentioned the freedom they felt when commuting: 'It's the same for both bike and car; you can leave when you leave. Like, when you leave from work, it's okay to leave five minutes later, but if you [depend on] bus schedules or something like that, you need to be there at a certain time […] with the car I can live just how I like' (Laureen).

Furthermore, competence in commuting was, on some occasions, stated to be important for well-being. In particular, the informants highlighted how a lack of competence made them evade certain commuting modes. Car driving was one of these competences, as also mentioned by Kelly: 'I haven't missed driving in the least, as it was always somehow a little strenuous. […] Like, the driving itself was okay, but then there was all the other traffic. Although I am confident going by bike and I know all the routes and I'm able watch out so that no one hits me with a car, somehow, I feel more terrified when I'm driving the car. So, I don't drive. I have a driving licence with which I can verify my identity on different occasions, but I don't drive' (Kelly).

Commuting behaviour was also linked to *meaningful relationships*. The well-being of families, particularly children, was emphasised in the interviews. Interviewees combined commuting and transporting children to day care, and they wanted to get home fast because the children were waiting there. In addition, the use of private cars also made commuting and grocery shopping easier for the family. In some cases, it also enabled sharing the commuting ride and commuting with one's spouse. Even though family was strongly highlighted in the commuting justifications, some also mentioned the role of friends. Some had shared car rides with neighbours for years. Also, those using public transport mentioned meeting friends during their commutes. Louise, who both worked and studied in the hospital area, described her mornings as follows: 'I study for a higher vocational degree at the same time, here, and the school is opposite [to the hospital], over there. I come by tram because it actually arrives closer to the school and it's somehow… A part of our group comes so that we are often on the same tram, so you get to meet your co-students over there already. It's quite a nice start to the morning and we go and get a cup of coffee and so…' (Louise).

5. Discussion

Our research extends the understanding of commute well-being (Chatterjee et al., 2020; Mokhtarian, 2019; Schwanen, 2021) by empirically studying time-related aspects. Through exploratory research, we detected three types of pursuit linked to subjective commute well-being: past hedonic well-being experiences in commuting, present hedonic well-being experiences in commuting and long-term eudaimonic well-being in commuting.

We divided past hedonic well-being experiences in commuting into routines and negative critical incidents. They were both related to past experiences of commute well-being, and they reflected on current and future commuting behaviours. Past research (Wilhoit, 2017) has shown that commuting routines provide predictability and comfort, but also offer time and space free from other routines. Our research supports these results and points out how energising commuting routines provide instant gratification, as opposed to potential experiences of enhanced commute well-being that could result from disrupted commuting routines. Thus, the attractiveness of instant gratification and striving for a balance between short-term and long-term commute well-being need to be acknowledged

when considering the time-related aspects of commuting.

Whereas striving for instant gratification complicates the search for commute well-being, past negative critical incidents seem to have a rather straightforward influence on commuting by restricting the commuter's behaviour. Thus, our study complements past research that has displayed the variety of critical incidents in commuting (e.g., Dozza & Werneke, 2014), and shows how long-lasting the effects are from one negative experience.

Past studies (e.g., Choi et al., 2013; Mokhtarian & Salomon, 2001; Nie & Sousa-Poza, 2018) have connected the commuting environment and time to hedonic commute well-being, and our research builds this understanding further by focusing on the time-related aspects. We divided present hedonic well-being experiences in commuting based on the time horizons of the experience into the dimensions in which time as a construct defined the setting of the well-being experience (i.e., time of day, seasonal time, tempo in the setting and rhythm in the setting) and the dimensions in which time acted as a feature of the well-being experience (i.e., the duration of the experience, tempo in the experience and rhythm in the experience). This understanding is important since it indicates that if we are aiming to understand commuting and commute well-being, 'time' should not be treated as a univocal factor but rather as a multifaceted element. This challenges the modern linear conception of time and brings in more diverse ways to understand temporal dynamics in a commuting experience and its setting.

Furthermore, by also analysing the eudaimonic side of commute well-being, we echo De Vos et al.'s (2013) call to study both hedonic and eudaimonic well-being in commuting and Chatterjee et al.'s (2020) call to empirically study the eudaimonic aspects of commuting. In our study, long-term eudaimonic well-being in commuting was empirically divided into self-expression via commuting (i.e., sense of identity, self-control, personal values, autonomy and competence) and meaningful relationships (i.e., family and friends) in commuting.

Even though our study focused on commuting, in which the instrumental value of travel (getting to work and back home again) is highlighted, our findings show that hedonic and eudaimonic elements of well-being also act as drivers of commuting behaviour. Thus, our findings support the research by Mokhtarian and Salomon (2001), Cornet et al., (2022) and Steg (2005), and lead us to assume that many of the elements of hedonic well-being (such as experiencing tranquillity and silence on the way to work) could also drive commuting even if it were not strictly necessary, for instance, due to remote working.

Furthermore, the present findings provide a complementary understanding of the motives for selecting the travel mode for a particular trip. For example, a car can be chosen because of its speed and convenience (instrumental motives), but in some other cases, it can be chosen because of the enjoyment of driving a car (affective motives) or the kind of message it gives (symbolic motives) (Anable & Gatersleben, 2005; Steg, 2005). We suggest that commute well-being can arise when the particular motives behind using a travel mode can be met. For example, a commute performed by car in the fastest possible time can therefore create commute well-being for somebody who is short of time, and a more leisured cycle through a park can create commute well-being for someone who is stressed by driving and can afford a longer commuting time.

The findings showed the impact of past commuting experiences on commuting choices and, thereby, on present commute well-being experiences. Following the logic of circular experience (cf. Helkkula & Kelleher, 2010), present positive or negative experiences turn into past experiences and have a bearing on future commuting behaviour. The time-related aspects of commute well-being are further illustrated in Fig. 2. It shows how issues related to eudaimonic well-being establish the long-term base of commuting behaviour, how commute-related decision making and present commute experience are informed by past experiences and how they link to future commuting.

Acknowledging the time-related aspects in commute well-being is also important because if we are aiming for long-lasting behavioural change in commuting, we should consider the reflections of commute well-being experiences in current and future commuting behaviour, present commute well-being experiences that transform into past positive experiences for the commuters in the

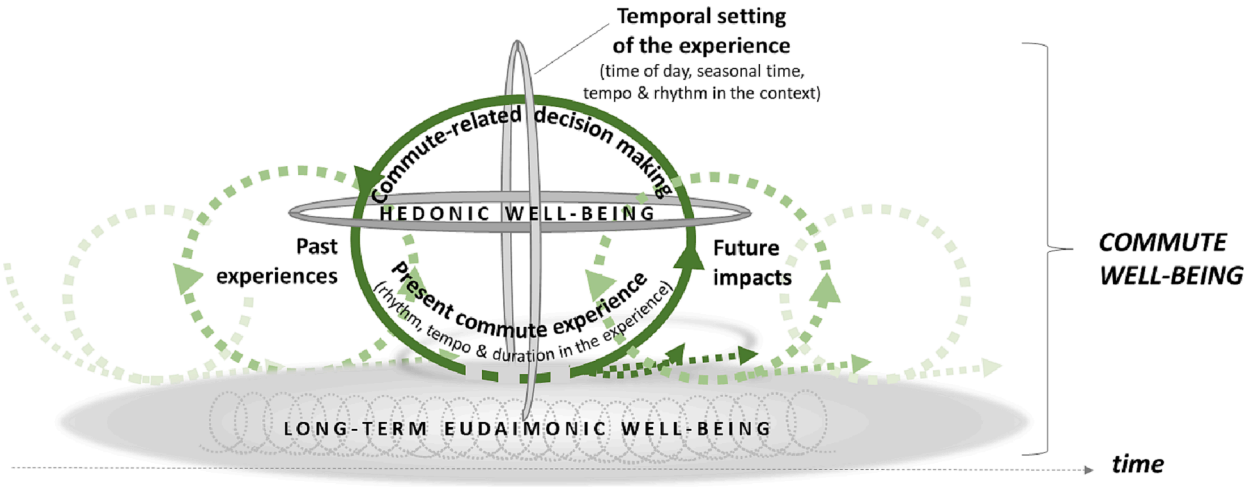

Fig. 2. Time-related aspects of commute well-being.

future, and the long-term eudaimonic well-being in commuting that affects individuals over a longer timeframe and enables commuters to contently live with their choices in the long term. Consequently, long-lasting commuting change towards active commuting also requires multilevel efforts: The providers of commuting services can influence the issues to provide hedonic experiential well-being, but the issues that generate eudaimonic well-being have the capacity to create lasting change.

In addition, we should aim to solve the possible conflict between the elements that generate hedonic and eudaimonic commute well-being. Nguyen (2022) suggested that this conflict should ideally be solved so that the hedonic and eudaimonic outcomes are transformed from conflicting to complementary by emphasising the active pleasure that is complementary to eudaimonic well-being (instead of passive, often short-term pleasure). For instance, the physical effort that produces a good feeling during commuting represents this active pleasure, whereas choosing the most effortless option represents passive pleasure. More lasting behavioural outcomes can presumably be achieved when an individual considers the experience as optimal and when the outcomes are primarily of the eudaimonic type. Thus, the active pleasure gained in the short term (from the effort put into commuting) together with long-term eudaimonic well-being in commuting ideally gains more weight than the passive pleasures gained from the instant gratification when commuting choices are made. This requires the removal of barriers and the facilitation of enabling elements (on both the individual and societal levels) with regards to sustainable choices so that the effort will be seen as beneficial, and justification can lean towards the more sustainable choices.

Our study has some limitations. Our data were collected from commuters in one city in Finland. Our research setting was a typical dynamic Nordic European city in which several commuting modes are available, and where the infrastructure also allows for active commuting modes. Even though we chose commuters' workplaces carefully to increase the transferability of the findings, the interviewees were mostly women. However, our qualitative study did not aim to provide generalisable results but insights into the underexplored field of the time-related aspects of commute well-being. Furthermore, we were not able to accurately follow up on the long-term outcomes of commuting since our research design was not longitudinal. We suggest that future empirical studies should adopt a setting in which commuting experiences are studied in several sequences.

6. Conclusion

Our research offers insights into the hedonic and eudaimonic dimensions of commute well-being and suggests that the pursuit of commute well-being is versatile. Past commuting well-being experiences impact commuting choices and thus present commute well-being experiences. The search for present hedonic commute well-being experiences takes place during the commute, and long-term eudaimonic commute well-being is related to rather permanent commuting choices. Recognising the time-related aspects of commute well-being is important because if we are aiming for long-lasting behavioural change towards active commuting, we should consider the past and present commute well-being experiences that impact commuting behaviour in the future. Increasing commuters' own awareness of these aspects is also important for achieving behavioural changes. The study had a number of strengths related to an exploratory approach that allowed for the emergence of novel themes and the contemplation of their evolvement in commuting. Future studies are encouraged to further study the temporalities of commute well-being and to quantitatively and longitudinally analyse the findings discovered in this study.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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