Review Article

The interconnected dynamics of social practices and their implications for transformative change: A review

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ABSTRACT

This review article analyses the interconnectedness of different fields of social practice. Our aim is to understand if and how the literature using social practice theory addresses these interrelations and how this is linked to questions of sustainability transformations. Based on our review, we suggest a framework that conceives everyday-life practices of working, dwelling, mobility, eating, and recreation as closely intertwined and not changing independently of each other. As our analysis demonstrates, such a framing also contributes to better understanding the dynamics of (un)sustainable transformative change. Greater sustainability cannot be achieved by technological fixes or changes in individual behaviour alone but requires comprehensive interventions that address the interactions between practices, as these often co-evolve and co-locate, and changes need to be aligned between different practice fields. This has high relevance for understanding the development of public policy interventions that aim to increase the sustainability of everyday life. Our review shows a significant value of social practice research on the interconnectedness of different practice fields, although certain areas still appear to be somewhat neglected, such as the interconnectedness of work-related practices with other practices of everyday life. It furthermore points to the potential contribution of studies of interconnected practices to the literature on sustainability transitions, a perspective otherwise neglected in transition studies focusing on organisational actors and institutional dimensions of socio-technical change.

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1. Introduction

Approaches and policy interventions related to climate change mitigation and sustainable transformative change have long emphasised the supply-side, but the demand-side and social practices have gained importance (Creutzig et al., 2022). Existing approaches to policy interventions promoting sustainability in everyday life are often dominated by either giving "price signals" to influence demand or by influencing "individual environmental consciousness" (Foden et al., 2019). A different approach takes social practices as a central unit of analysis, which Shove et al. (2012) have conceived as configurations of meanings, skills, and material objects. The academic work on practices has roots in several fields and traditions. For example, in the 1990s and early 2000s, practice-based approaches were used to study how workers learn in "communities of practice" (e.g., Lave and Wenger, 1991; Brown and Duguid, 1991; Cook and Yanow, 1993; Orr, 1996; Gherardi, 2000). However, in this paper, we are interested in the implications of social practices for *sustainable transformations*.

Literature drawing on social practice theory (SPT) has significantly gained importance for understanding resource and carbon-intensive patterns of everyday life.[1] However, much less has been said about how a social practice perspective can contribute to analysing transformative change processes needed to meet societal challenges such as climate change (Geels et al., 2015; Schot and Steinmueller, 2018). A key point in this respect is the interconnectedness of different fields of practices which makes it difficult to change them in isolation. This paper takes stock of the emerging body of literature on this issue. It analyses how practices from different spheres of everyday life are linked and how these interconnections of practices hinder or enable pathways of transformative change. We review how this literature reflects the transformative potential but also highlight possible points of competition between different bundles of social practices related to sustainability.

Most SPT studies zoom in on the configurations of single social practices, while the purpose of our paper is to zoom out (Nicolini, 2009) to analyse the interconnections between social practices from different fields. Social practice theory understands social life as a web of temporarily and spatially interconnected activities which hang together to form practice "bundles", "complexes", "arrangements", or "nexuses" (Schatzki, 2015; Shove et al., 2012; Hui et al., 2017). If we research how certain practices gain or lose importance, we must analyse not only how changing practice configurations may become more or less successful in attracting carriers but also how these practices are associated with other practices (Hui et al., 2017). How these conjunctions are formed typically depends on how the underlying practices are organised and relate to each other in space and time (Southerton, 2006). Everyday life unfolds in space and time. Social practices have certain time structures and sequences of events, which are more collective, such as fixed working times, weekends, mealtimes, or the news programmes on television. However, these collective time structures have become more flexible.

Therefore, we have scrutinised the literature about the interconnectedness and spatio-temporal organization of five important fields of social practices: working, dwelling, mobility, eating and recreation practices. We ask how an SPT perspective can help in achieving sustainable transformations. Our two research questions are as follows:

- Which interconnections of different fields of social practices have been analysed in the research literature and which role do spatial and temporal dimensions play in structuring this interconnectedness?
- How does the interaction between different social practices influence transformational change, by either strengthening or weakening a sustainable transformation?

In the following Section 2, we first discuss how social practices and their interconnections have been conceptualised by different authors and develop a terminology suitable for our purpose. We then describe our approach for reviewing existing literature on the interconnectedness of practices in Section 3. In Section 4, the results section, we summarise the main insights gained from our review of interconnections of particular practice fields with high relevance for sustainable transformation. Finally, in Section 5, we discuss how our findings can inform policies for transformative sustainable change, and in Section 6, we draw conclusions.

2. Conceptualising interconnected practices

While early theoretical work on practices goes back to the 1990s and early 2000s (Reckwitz, 2002; Schatzki, 2002; Schatzki et al., 2001), empirical analyses have intensified substantially over the past decade. SPT has gained importance in understanding (un)sustainable consumption and possibilities of intervening in environmentally harmful practices (Røpke, 2009; Shove and Walker, 2010; Strengers and Maller, 2015). It has also proven useful in providing pragmatic recommendations for policymakers, local actors, and economic stakeholders (Sahakian and Wilhite, 2014). SPT suggests shifting the focus of inquiry in social sciences from the mental-cognitive structures of individuals to people's everyday doings and sayings. Social practices have been defined as recognisable blocks or patterns of activity that practitioners enact, thereby reproducing, perpetuating and transforming the practices they carry (Schatzki, 2002; Shove and Walker, 2014).

Meanings refers to shared understandings and teleoaffective structures, that is: what guides a practice. *Skills* are forms of routinised, embodied know-how such as the coordinated movements involved in biking or internet research competences for online shopping. Finally, the *material dimension* highlights the importance of the physical surroundings, material objects and infrastructures, which can significantly shape the dynamics of practices and their ability to "recruit" individuals as carriers of these practices.

Social life is made of social practices, and most people carry out a large number of practices in their everyday lives (Warde, 2005). These practices do not operate in isolation but are connected (Schatzki, 2009). Many terms have been used to describe this interconnectedness of social practices, including complexes and bundles (Shove et al., 2012), systems (Watson, 2012), networks (Higginson et al., 2015), and nexus (Hui et al., 2017), summarised by Castelo et al. (2021). Our

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[1] While we are fully aware that there are diverse families of practice approaches, for reasons of simplicity we will use in the following the singular form of social practice theory.

purpose here is not to develop this language further but rather to adopt a pragmatic approach to reviewing the literature on interconnected practices and the implications for transformational change. It is nevertheless useful to highlight some of the key terms used to describe connectedness and their specific meanings to underline the different ways in which practices can be connected and interact.

Shove et al. (2012) distinguish bundles and complexes of practices. Bundles are conceived as "loose-knit patterns based on co-location" (p.81), while complexes of practices "represent stickier and more integrated combinations" (ibid.). Thus, bathrooms may be considered sites where practices such as bathing, showering, and brushing teeth form a bundle–without being strictly dependent on each other, but sharing certain elements such as sinks or conventions of cleanliness and beauty. In contrast, "getting ready for the work day" involves a complex of practices, which are closely linked and typically performed in sequences: showering, body care, dressing up, having breakfast, and packing the stuff for the day. Interestingly, also Schatzki uses the term "bundles", although with a slightly different meaning. According to him, material entities are analytically distinct from practices, and he argues that "social life, or human co-existence, transpires as part of bundles of practices and material arrangements" (Schatzki, 2015, p. 15). In this perspective, offices with desks, sockets, screens, coffee machines, heating installations, etcetera and, last but not least, human bodies represent a material arrangement that bundles with holding meetings, trading, negotiating, reporting or researching. Several practice-arrangement-bundles, in turn, can form larger "constellations", which are "larger nexuses of practices and arrangements" (ibid.: 16). For instance, office practice-arrangement bundles connect with manufacturing plants and logistics bundles to form business constellations.

Finally, when constellations form associations with each other, they constitute a "forum", which is "an immense maze of interconnected practices and arrangements" (ibid.). In a co-edited book with Hui et al. (2017), Shove and Schatzki put forward the term "nexus", which appears to be an umbrella term for all kinds of associations between practices, comprised of "wider complexes and constellations" (p. 1). Others (c.f. Castelo et al., 2021), in contrast, speak of "nexus of practices" when referring to a more specific kind of relationship, "practices-in-between", that is, practices that are at the intersection of several others. Mobility practices are the most typical example of this, as they connect multiple activities of working, shopping, leisure time, or housing. To complete this list of concepts, one should also mention the notion of "systems of practices", which has been suggested by Watson (2012) to make

practice-based approaches communicate with the multi-level perspective as introduced by Geels (2002).

Watson argues that

> socio-technical systems, like those of automobility and velomobility, can usefully be recast as systems of practice. The concept of systems of practice aims to capture, simultaneously, how far practices are embedded in systemic relations constituted first by relations with other practices; and second also through the systemic elements– including infrastructures, technologies, rules, norms and meanings – which those practices constitute and sustain (p. 493).

Consequently, Watson claims that "[a]ny sociotechnical transition has to be a transition in practices." (489)

Despite differences in detail, bundles, complexes, constellations, or nexus-practices share the basic idea that practice dynamics cannot be reduced to "internal" reconfigurations of single practices but that their associations with other practices need to be taken into account to understand their dynamics–and potential sustainability implications thereof. In this review article, we are not restricted to a certain type of association as described above, nor do we strive for their empirical operationalisation. Instead, these concepts inform us about the different shapes of interlinkages between practices and practice fields and help assess the collected literature. It is also important to remind that we are particularly interested in associations between different practice fields. Consequently, we search for bundles, complexes, or constellations that link two or more social spheres, while we disregard "interior" relationships to one field of practice, for instance recreation. In this article, we are interested in how the interaction of social practice fields can inform policy-makers on transforming social practices towards more sustainability (Watson et al., 2020). Spurling and McMeekin (2015) suggest three conceptual frames for policy interventions: "'recrafting practices', 'substituting practices' and 'changing how practices interlock'" (2015, p. 78). For the purpose of this paper, we focus on changes in what they term interlocked practices.

3. Materials and methods

This article is based on a semi-systematic review of the literature on interactions of social practices and their importance for sustainability. The following Table 1 summarises the review process and characterises the different stages.

Table 1
The different stages of the review process.

Phase	Stages
Aim of the investigation	Understanding interactions of social practices and their importance for sustainability transitions
Search strategy	1. Defining search strings for article database Web of Science for identifying the different social practices:
	a) (TS = "social practice*") AND (TS = recreation OR TS = leisure*)
	b) (TS = "social practice*") AND (TS = work* OR TS = labor OR TS = labour)
	c) (TS = "social practice*") AND (TS = dwelling* OR housing*)
	d) (TS = "social practice*") AND (TS = food OR eating OR nutrition)
	e) (TS = "social practice*") AND (TS = mobility)
	Including articles and review articles published from 2001 to 2020.
	2. Combining search strings for the different interacting social practices (for results, see separate table),
	3. Identifying relevant review articles and articles by screening abstracts and downloading full texts,
	4. Adding books and/or book chapters by using reference lists of identified articles, Google Scholar, and other databases ("snowballing") and keywords variations.
Reading the studies	Study team determined the distribution of work to closely read the selected articles and book chapters.
Quality assessment	Decision about inclusion or exclusion of articles following a critical quality appraisal of each paper based on:
	1. Relevance for the aim of the investigation with focus on importance for sustainability transition,
	2. Methodology and research design appropriately described,
	3. Theoretical sensitivity, and
	4. Clearly defined results.
Synthesising	Commonalities and differences were analysed and synthesised.
Summarising	Main results were discussed, scrutinised and aligned, and conclusions across the different interacting social practices where drawn.

Table 2

Number of references identified and cited in the article.

Number of references	Working	Dwelling	Food	Mobility	Recreation
Working	–	20/11/11	61/3/12	54/4/12	19/6/11
Dwelling	20/11/11	–	6/23/11	10/14/11	17/8/11
Food	61/3/12	6/23/11	–	15/9/13	12/5/8
Mobility	54/4/12	10/14/11	15/9/13	–	3/14/14
Recreation	19/6/11	17/8/11	12/5/8	3/14/14	–

Note: Numbers indicate number of Web of Science references, references retrieved in additional search, references cited in the final sub-section.

To identify the relevant literature body, we used the Web of Science (WoS) database as a starting point. WoS is among the most important databases; it covers the key academic journals, also in the field of social sciences, and it ensures both good retrieval and reproducible qualities. We carried out a systematic and semi-structured search (Snyder, 2019) in WoS in February and March 2021. A keyword approach was applied to identify articles published since 2001, including both empirical and theoretical approaches. We distinguish between the five fields of social practices of working, dwelling, mobility, eating, and recreation. These fields are highly relevant for policy and sustainability transition and structure most areas of people's everyday lives.

The combination of the above search strings in the full text of the papers resulted in 488 papers in total, which we collected in a literature database in EndNote. These papers were distributed among the authors of this paper according to combinations of practice fields that resulted in the single sub-sections (food and mobility, working and recreation, etcetera). The authors of the sub-sections screened the papers, carried out additional focused searches in other databases, and combined this with searching for papers through inward and outward citations. For the semi-systematic review we considered articles for the period 2001–2020, while for the years 2021 and 2022 we do not claim a comprehensive screening but included relevant articles that we identified in the additional searches.

Our selection of papers for an in-depth analysis followed four main inclusion criteria:

- Social practice is in the centre of the paper, if not in the title, then has a prominent role in the abstract;
- Review papers and conceptual papers have been included if available but also case studies;
- A meta-perspective on interacting social practices and their role in the sustainability transition has been of special interest.
- Relevance for the aim of investigation, as the most important criterion.

Table 2 shows for each practice the number of articles identified during the two main phases of the search strategy (WoS and additional references) and the number finally cited.

Our main objective was to analyse how fields of social practices hang together, addressing possible synergies or relationships of competition between different practices and how these change in time and space. To this end, we combined the samples for different bundles (see Fig. 1). This graphical presentation as a pentagram (Fig. 1) summarises our theoretical framework, with the five practice fields at the corners and the practices connecting between them, pointing out possible competitions or synergies to achieve sustainability.

Finally, we reviewed the literature regarding the links between particular practice fields and produced summaries thereof. These notes were jointly discussed, scrutinised, and aligned.

In the results section (4), we apply this framework, analysing those identified articles addressing each pair of interconnected practice fields and the impact of these interactions on sustainability transitions.

4. Results

In the following, we analyse the identified literature on the interconnection of different practice fields regarding spatial and temporal interconnectedness of practices and how this contributes to or hinders transformative change. Based on our analysis, we discuss possible interventions towards greater sustainability.
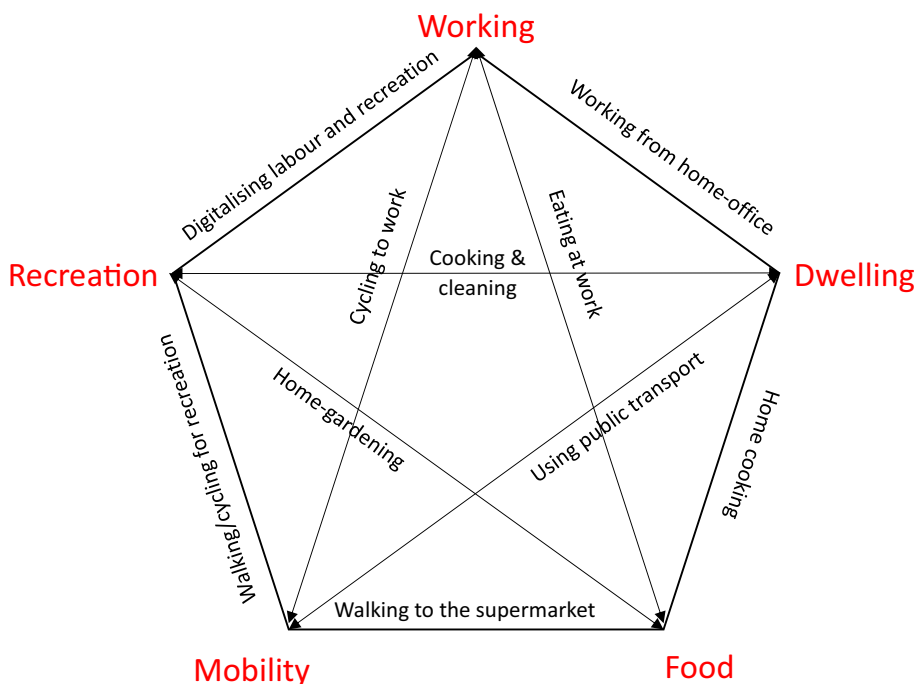

Fig. 1. The pentagram of social practice bundles. Topics for the bundles are just illustrative.

4.1. Working and dwelling

In half a century's time, it may well seem extraordinary that millions of people once trooped from one building (their home) to another (their office) each morning, only to reverse the procedure each evening… Commuting wastes time and building capacity. One building—the home—often stands empty all day; another—the office—usually stands empty all night. All this may strike our grandchildren as bizarre-Cairncross (1997) cited in Spurling and McMeekin (2015).

As this quotation illustrates, since the time of industrialisation home and working were two spheres of life that were spatially and temporarily separated for most of people, framed by opposed discourses of industrial and household production (Tietze and Musson, 2005). Cities used to be characterised by zones reserved for industrial production and others dedicated to living, and both fields of social practice were connected by the nexus practice of commuting (Doling and Arundel, 2020). These clear boundaries between the worlds of the home and the workplace had not existed before the times of industrialisation and, with the rising popularity of the practice of teleworking, have recently again been blurred (ibid.). This nexus practice has been spurred by information and communication technologies such as the PC, smart phones and, most recently, videoconferencing apps. Statistics on the growing popularity of home working are not unanimous, which is mainly due to diverging survey instruments defining whether a person is considered a homeworker (Doling and Arundel, 2020).

As a consequence, typical home activities and working activities increasingly intermingle, both spatially and temporarily, to form "home offices" or "working homes" (Nansen et al., 2010; Wapshott and Mallett, 2012). However, the advantages of teleworking do not come without new challenges: new spatial and temporary boundaries need to be negotiated with family members (Nansen et al., 2010; Tietze and Musson, 2005) to find acceptable arrangements between "contracted" (work), "committed" (family), "personal" and free time (Wiedenhofer et al., 2018). Those arrangements are never fixed, but constantly in flux: "this does not result in a balance or settled equilibrium, but oscillates between the poles of segregation/ segmentation and synchronisation/integration, and remains an open and continual process, an unsettled nexus, of interaction and negotiation" (Nansen et al., 2010). The nexus practice of teleworking has hence created new synergies between the practice fields of working and home activities; however, this has also led to an increased competition between singular practices which now can be more flexibly allocated in people's activity sequences (Southerton, 2006) and anchored at the same physical environment, the home (Hui and Walker, 2018).

Overall, it can be expected that telework as an important nexus between the practice fields of working and the home will find more practitioners. A very intriguing question for researchers is what implications this tendency may have for sustainability transitions. In their systematic literature review, Hook et al. (2020) found that most studies support the hypothesis of energy savings through increased teleworking, which is mostly attributed to avoided commuting between home and workplace. However, the authors point out that the devil is in the detail. More encompassing studies, which go beyond avoided commuting and consider associated practice bundles such as increased home energy use and additional non-work-related travel, are "more ambiguous" (ibid. p. 27) regarding the potential environmental effects. Rebound effects may result from an increase of (energy-demanding) activities in working homes: "Processes of acceleration enabled by technological innovations result in more and more practices being squeezed into a given period of time which, in turn, can bring about rebound effects" (Sonnberger and Gross, 2018). In sum, Hook et al. (2020, p. 27) conclude that "these uncertainties and complexities suggest that, despite the positive evidence for energy savings that was found across the sample of studies, we should be cautious in drawing conclusions about the scale

and consistency of energy savings from teleworking." In any case, more empirical work with a comprehensive network-of-practices perspective is needed to assess the environmental potential of home working.

4.2. Dwelling and food

When bundled with dwelling practices, social food practices include food planning, shopping, cooking, eating, food disposal and redistribution, as well as managing leftovers and assessing quality and edibility, for example, via date labels (Schanes et al., 2018). We collectively denote these activities as the 'domestic food life cycle', which take place in the domestic sphere of the home, household, and family and in collaborative consumption settings (Parker et al., 2019).

Food practices connect in bundles with non-food practices in a temporal and spatial dimension, forming looser practice bundles. In a dwelling context, they bundle with practices such as homemaking and childcare (Castelo et al., 2021, p. 5) and working from home. SPT studies clearly show how food and dwelling practices are interconnected in space and time and how this bundle of practices has changed over time (Cheng et al., 2007; Warde et al., 2007). This literature is more limited regarding how food and dwelling practices interact to strengthen or weaken a sustainable transformation. In this regard, we note that households can reduce the environmental impact of food consumption in three main ways: choose products with lower environmental impact, prevent waste of edible food, and increase recycling of inedible food.

Sirola et al. (2019) studied the everyday practices of food *planning and shopping* in Japan and found that "the ability to anticipate food consumption as well as the lifespan of food products help to reduce food waste" (Sirola et al., 2019, p. 7) and that frequent grocery shopping was associated with less food waste. Williams et al. (2012) confirmed the latter in Sweden, while in France, Plessz et al. (2016) found that "bulk shopping and cooking are popular in households with highly interlocked practices and where the households have other time-competing practices requiring their attention such as work, children, or social events" (cited by Breadsell and Morrison, 2020, p. 149).

In terms of *cooking and eating*, consuming sustainable and healthy food requires food preparation skills. Contrary to popular belief, Meah and Watson's (2011) study of kitchen practices found no evidence of deskilling between generations. Convenience food and new technologies helped especially women balance work and family life without this leading to deskilling (Meah and Watson, 2011, para. 4.18). Jackson and Viehoff (2016) also identified an increase in the use of convenience products and explain this trend by considering the bundles of social practices that compete for parents' time, notably caring and food preparation. A decline in the time spent eating at home has been observed in many countries (Warde et al., 2007), suggesting a weakening of the bundle of food and dwelling practices. This trend is related to more eating out and to the use of convenience products, with women's employment status being a key driver.

Regarding *food disposal and redistribution*, Schanes et al. (2018) analyse how each practice in the domestic food life cycle affects food waste, highlighting the complexity and interconnectedness of food practices. They found that consumers consider it improper and associated with feelings of guilt to throw away food and that such emotions are significant factors in food waste reduction. The economic value attached to food and the time spent on food preparation were strong motivations to reduce food waste, but ethical and social factors were also important (Schanes et al., 2018).

Finally, while food practices are often portrayed as routinised and static, recent research suggests more dynamic patterns. Plessz et al. (2016) found that age and household structure significantly affected food purchases and that biographical turning points, in particular family events, were ideal opportunities for individuals to adopt new food standards and practices. They conclude that "any specific food practice is

more likely to recruit (or lose) practitioners who have reached turning points in their lives, because these are occasions during which they reconsider resources, skills and standards" (Plessz et al., 2016, p. 118). However, opportunities for change may also arise due to changes in households' social and physical contexts. Breadsell and Morrison (2020) found that the frequency of shopping increased after households moved to a low-carbon development residency, which was accompanied by an increase in the use of local stores and markets.

Our bundled food and dwelling practices review offers two main lessons for the green transformation potential. First, rather than adopting a "moralising approach" to unsustainable consumption (Jackson and Viehoff, 2016), policies should consider that food practices are interconnected with, and shaped by, other social practices of domestic life. Secondly, policies should pay special attention to households that undergo changes in life situations as these situations may offer greater opportunities for change.

4.3. Mobility and recreation

What connects mobility and recreation in the first place is the affective perspective on mobility practices, where mobility is a social phenomenon in its own right. There are also "non-rational" factors associated with mobility practices such as experiences, sports, thrill (Jones, 2012), and affectivity, identity, and meaning (Adey et al., 2012; Jensen, 2009; Löfgren, 2008; Sheller, 2004). A main reason for non-rational factors determining mobility practices is the integration of dispersed practices into mobility, like listening to music, monitoring own and others' performance, using the "right" equipment, and active navigation. These meaning elements of driving (thrill, sports) have formed attractive practice configurations with other elements, which helped recruit many practitioners (Cass and Faulconbridge, 2017).

Digital technologies facilitate an intersection between mobility practices (especially walking, running, and cycling), recreation, and health. Mobility practices are "medicalised", brought into the realm of public health by apps, gamification and quantification (quantified self, counting steps, analysing body functions etc.). An individual cyclist can be part of a community even by cycling on his/her own. This directly relates to the pandemic where such activities seem to increase or sustain, enabled through digital technology. Connected through apps in phases of social distancing, social relations, competition, self-reflection, doing something good and physical performativity coalesce. Digital technology thus can reframe mobility behaviours and create new patterns and practices (Carter et al., 2018).

The literature on mobility patterns refers to daily mobility practices (Cresswell, 2010) such as sport activities, excursions, weekend leisure activities, and tourism (Hiltunen and Rehunen, 2014; Hui, 2013), and long-range travels. Boyer (2018) has analysed transport practices on the example of recreational bicycling. The American context–a decades-long perspective of socialisation with car domination–is of particular importance in the analysis. Boyer emphasises the importance of infrastructure development, like access to bicycle lanes; however, he considers it insufficient. He argues that recreational cycling offers individuals a chance to acquire a threshold level of skills and materials necessary to form the basis for riding a bike for utility purposes as well (i.e., commuting, shopping).

In the relation between holidays and mobility, the focus is more on alternatives to short-haul flights to mass tourist destinations. An emerging concept here is "slow travel", which is "an alternative to air and car travel where people travel to destinations more slowly overland and travel less distance" (Dickinson et al., 2010, p. 482; Rabbiosi, 2021). Hall and Holdsworth (2016) interpret family holidays as a constituent of family practices.

Mobility practices that are also connected to leisure are "transnational gentrifications" (Alexandri and Janoschka, 2020). This means leisure-oriented mobilities at the crossroads of tourism and housing or second homes. Prior to Covid-19, this has seen a long time of expansion and concerns many corners of the world. Alexandri and Janoschka (2020) expect this to rise again after the pandemic, "leveraged by central banks with zero interest rates and accelerated by platform capitalism" (p. 3211).

4.4. Food and mobility

Literature addressing the interconnectedness of food and mobility practices is sparse but highlights three areas. The most obvious area is related to *grocery shopping*. The spatial dimension is particularly strong here, by means of where people live, including how far from work and supermarkets, and how they get there (by car, public transport, bicycle, foot, etc.). How people get around also influences what food products they buy, where they buy them, and decisions around eating out (Godin and Sahakian, 2018). For example, access to a store as part of a daily transit seemed to be the dominant time and space in which people acquired food items. Godin and Sahakian (2018) find that transit routes, especially between home and school or the workplace, combined with time, had a structuring effect on the choice of retailer, the consumption of processed foods and convenience foods. Access to food is another key issue, including attention to mobility or commuting in relation to food provisioning (Burgoine and Monsivais, 2013; Widener et al., 2013). Notions of mobility and access to food provisioning systems may offer a more dynamic account of how food practices play out (Godin and Sahakian, 2018) or how mobility "interlocks" with food consumption practices (Spurling and McMeekin, 2015; Spurling et al., 2013).

Further, the pandemic has increased the popularity of online grocery shopping. This may change the interconnectedness between food and mobility, and also create new future practices in this domain. Still, understanding the potential of online grocery shopping for a decrease in travel, calls for knowledge on how changes in people's shopping practices influence other practice areas (Berg and Henriksson, 2020; Hiselius et al., 2015). For example, people may prefer to take their bicycle to work if there is no need to combine commuting with grocery shopping on their way home. Also, online grocery shopping may contribute to more invisible forms of mobility, where the sustainability effect will depend on the mode of transport used for delivery, and not least what mode of transport these services replace (i.e., if people otherwise would walk to the supermarket). This points to the importance of researching how mobility related to online grocery shopping cannot be detached from mobility connected to, for example, leisure or working.

The second area concerns *eating-out* practices triggered by mobility routines. A qualitative study of eating-out practices in Germany (Pfeiffer et al., 2017) demonstrates a strong temporal dimension insofar eating out is highly dependent on working and leisure-time activities, a perceived lack of time, and efforts to streamline schedules. For example, those who daily drive long distances stopped at gas stations, grocery stores, or fast-food joints to get a small snack on their way home, and the food consumption underway often happened on the way to other appointments–thus causing a comparatively small number of extra acts of driving (Pfeiffer et al., 2017). This did not guarantee more sustainable food practices but combining mobility and eating may still lead to savings on mobility–and the environmental costs of this (ibid.).

Third, food can also be a key element of the popularity of travel destinations, conceptualised in the term *culinary tourism* (e.g., Kim et al., 2009; Spilková and Fialová, 2013; Stewart et al., 2008). This has been followed by studies of sustainable culinary tourism (Alonso et al., 2018), and peer-to-peer social dining, though there seem to be little alignment between social dining and sustainable tourism goals (Davies et al., 2020).

To sum up, food and mobility can be understood primarily as a practice bundle (e.g., moving and eating). It is, however, an empirical question whether the interconnectedness of food-mobility is strengthening or weakening a sustainable transformation, as the outcome will differ with how this practice bundle is performed. For example, in culinary tourism, food experiences are made possible and encouraged by tourism and travel, and it is also founded on the consumption of food. Still,

the sustainability aspect will depend on what people eat and the length and means of transport. Also, grocery shopping will have different effects depending on travel length and means of transport, and – in cases of online shopping–the means of transport for food delivery. Whether this can spur sustainable *transformation* will again depend on what types of practices become interlinked with, for example. Culinary tourism or online grocery shopping, and how these practices spread.

4.5. Recreation and working

The literature on the interconnectedness of work and recreation/ leisure practices, and sustainable transformative change is not extensive, but has recently expanded, especially after 2015. Some of the papers put more stress on the theoretical issues (Baranowski and Mroczkowska, 2021; Gandini, 2021; Hansen, 2015; Klein et al., 2021; Kurz et al., 2015) while the others are empirical and case studies-oriented (Boyer, 2018; Hui, 2012; Smetschka et al., 2019; Wiedenhofer et al., 2018).

Hansen (2015) refers to the distinction between "hedonic well-being" (HWB), defined by material possessions, and "eudaemonic well-being" (EWB), defined by the meaning in life, personal flourishing, and social relations. Referring to the research in the Scandinavian countries, Hansen argues that economic growth and increasing workloads primarily allow HWB while increasing the amount of leisure time provides EWB. The author concludes that social practices of leisure and 'time affluence' at the expense of work time and 'material affluence' provide a smaller carbon footprint.

The current experiences of the pandemic, when living space has become a workplace for many people, have shown the challenges posed by the blurring boundaries between free time/private life and working time/professional life (Jenkins and Smith, 2021). Under these circumstances it is difficult to preserve a fragmentary view of the individual practice dynamics (Shove and Spurling, 2013). The recent debate also deals with the problem of "digital labour" (Gandini, 2021). The essence of digital labour is the appropriation of leisure-oriented activities, which blurs the boundaries between work and leisure, not least as a result of the automation of leisure (Baranowski and Mroczkowska, 2021).

Smetschka et al. (2019) propose an analysis of an Austrian case with multi-regional input-output models (MRIO) and time-use perspective, according to which it is available time and other resources, for example, financial ones, that regulate the competition between work, leisure, and other practices. The authors argue that the lack of time can induce or force individuals or households to perform fewer sustainable practices. The main conclusions are that leisure activities are mostly low-carbon, while only a few of them (e.g., eating out) are high-cost and high-carbon activities. By far, the largest carbon footprint is generated by transport practices and mobility. Recommendations for future time policies include 1. reducing and/or redistributing working hours, also in gender-related terms, more equally among adults in the households and 2. possibly increasing time budgets for leisure activities. Klein et al. (2021) recently offered another time-use approach analysis of the Finnish and French cases. They argue that the composition of leisure activities differs between people with distinct work hours.

Wiedenhofer et al. (2018) have systematically reviewed the research on time-use and the potential of urban household social practices that may contribute to climate change mitigation. The authors recommend the following transformation of the existing labour and leisure practices: 1. less work but still sufficient for a decent living income, and proportionally limited overconsumption; 2. more time for well-being activities, community development, and family life, enabling communities and inclusive cities to develop; and 3. distribution of work among more people, potentially reducing unemployment.

4.6. Working and food

The literature on the interaction of social practices related to working and food is dominated by the literature addressing food practices.

Eating practices, such as "how we eat, where, when and with whom, is influenced by the social organization of work and family life, and the physical locality of private homes and workplaces, as well as the rhythm and organization of the workday" (Holm et al., 2016, p. 359). Holm et al. stress the importance of the "institutional and practical arrangements in society, such as the size and composition of households, the arrangements of public catering at workplaces and educational institutions and the accessibility of commercial venues for eating out" (ibid.).

Availability *of food at the workplace* is an important determinant of food practices (Bojorquez et al., 2018, p. 76). Work has become more stressful due to time scarcity, leading to unhealthy food practices, such as skipping meals and consuming unhealthy fast food and convenience food (see, e.g., Devine et al., 2003; Greene and Fahy, 2020; Jabs and Devine, 2006). According to Pfeiffer et al. (2017), workers have a range of options for lunch at work, such as work canteen or cafeteria, eating at a nearby restaurant, preparing a meal in the staff kitchen, eating a lunchbox brought from home, buying a snack from a supermarket, or eating nothing. What is chosen depends on the working conditions, for instance, the length of breaks, flexible time schedules (Devine et al., 2003), and the availability of facilities for eating or preparing food at work (canteen, kitchen, microwaves etc.).

Countries differ regarding the *meaning* of having lunch at work. For instance, having a lunch break in Sweden is connected to eating out and having a warm meal, while in other countries it can just be a lunchbox or the work canteen (Holm et al., 2016). The meaning of having lunch at work differs, but this changes as well due to migration.

The workers' food has become a market for commercial food providers, either delivering canteen food (Costa-Souza et al., 2018) or offering near work lunch restaurants or convenience food stores. The equipment with microwaves in office kitchens allows office workers to warm up food from home or ready-made food from the supermarket. The same applies to university students who often suffer from limited access to food at their universities. The installment of microwaves has been reported as an intervention that allows students to bring and warm up leftovers and avoid unhealthy food or not eating at all (Middha, 2020). Eating in work canteens allows healthier food diets and addresses food waste (Evans et al., 2012). However, this requires interaction with the kitchen personnel, the use of smart equipment, and competence building.

Lastly, there is also the possibility to use the workplace as a site of exposure to and learning new cooking practices and a site for learning (Bojorquez et al., 2018; Daly, 2020; Devine et al., 2003). *Shared meals* at work can help to transfer cooking competencies, such as Daly's (2020) example of colleagues from Vietnam demonstrating stir-fry cooking. This has generated new tastes and preferences for more diverse types of food. Therefore, it has been suggested that interventions should target eating in communities (Daly, 2020). However, with the pandemic shared meals have become more unusual and it remains to see how such practice re-emerges after the pandemic.

SPT argues for pro-environmental change through sustainable transformation of practices and not through persuading *individuals* to make different decisions (Hargreaves, 2011). Therefore, SPT does not focus on policy strategies directed at behavioural change of *individuals*, but instead suggests developing incentives for healthier eating at workplace cafeterias, better work conditions and providing well-paid job opportunities to allow for healthier food alternatives (Bojorquez et al., 2018; Meier et al., 2018). This confirms Devine et al. (2003), who argue that worksite interventions should also involve family members to be successful rather than interventions at the worksite alone. In the very different context of the Global South, this also means access to clean water, both at home and at work (Mguni et al., 2020). Moreover, the change of these practices has to consider the "links between seemingly unrelated practices, the surrounding material infrastructure, legal, social and power relations as central to such interventions" (Hargreaves, 2011, p. 95).

4.7. Mobility and working

A less obvious area where the interconnectedness of practices shows its analytical value is the relation of practices of work and mobility. Three 'themes' stand out in this respect. *Commuting* as the most salient work-related mobility practice is not only shaped by transport infrastructures and services but depends to a large extent on practices of work such as its timing, location, or mobility plans offered by the employer. A second theme is *mobility at work*, as many professions and jobs require various forms of work-related travel. A third topic is that work practices currently undergo substantial transformation, especially related to digitalisation and the possibility to be '*digitally mobile*' without having to travel physically. A review of literature about interrelations of mobility and working practices makes clear that a transition towards sustainable work-related mobility cannot be achieved without a simultaneous transformation of work practices. At the same time, the aim of making work more (socially) sustainable is also inextricably linked to changing practices of work-related mobility.

The *practice of commuting* dominates large parts of many peoples' lives and significantly impacts CO$_2$ emissions. The unsustainability of commuting practices can be understood along the three key elements of practices (Shove et al., 2012)–material, competencies, and meaning. The material dimension is exemplified by a lack of infrastructure for public transport (Kammerlander et al., 2020) and a spatial design of cities that separates work and dwelling. Such material structures not only turn commuters often into "captive car drivers" (ibid., p. 333), but they also create a need for longer-distance commuting in the first place. A lack of competencies and information, for example, about alternative modes of transport to work, often aggravates the problem. Finally, along the dimension of meaning, public transport is often still associated with costliness, lack of comfort, and low status. Cars, in turn, provide a 'sensory experience', linking people to the car emotionally and sustaining automobility for commuters despite inconveniences (Kent, 2015; Sheller, 2004).

A key issue for the coupling of work and travel is the timing of work practices (Wiedenhofer et al., 2018), where synchronised working hours cause peaks in commuting and congestion and have a major impact on sustainability and GHG emissions. The timing and synchronicity of work practices are closely interwoven with other practices such as shopping and other errands after work, or school opening times. Designing measures to change such practices requires a deep understanding of time-use patterns and flexibility in practices of different types of social groups (Julsrud and Hjorthol, 2021).

A very different type of work-related mobility is travelling during work. This kind of mobility is often underestimated, also in its environmental impact. Exemplary studies are the difficulties for professional urban drivers (e.g., craft and service workers) to switch to e-mobility (Julsrud and Denstadli, 2020), or the entrenchment of air travel in the professional life of academics (Higham et al., 2019). According to Shove et al. (2012), the transformation of such practices in organisations can be described in the three stages: stability, reconfiguration and realignment. Julsrud and Denstadli (2020) point to the role of change agents in organisations and the role of learning to facilitate such a change of practices in the reconfiguration phase. The question of attracting more employees into more environmentally friendly practices can be aligned with ongoing work practices in the setting of everyday performances of work routines, how pre-existing mobility practices can be adapted, or new meaning established. Electric vehicle use turns out to be more compatible with the existing transport regime, while the aim of mobility substitution (e.g., reducing travel demand) requires addressing an even broader set of interlinked practices (Whittle et al., 2019).

Finally, arrangements of work and mobility are reshaped by digitalisation processes, recently enhanced by the Corona-virus pandemic–see Kuzemko et al. (2020). Teleworking or shared workspaces may have a significant impact on commuting patterns (Green, 2002; Wiedenhofer et al., 2018), even though more specific studies such as the one on academic air travel also show that only selected segments of work mobility are replaced by online meetings (Higham et al., 2019). However, the potential of digital technologies can also be used to develop new service platforms for mobility at work, as exemplified by a large company in Stockholm, that provides a package of company-internal bus services, car rental, bicycle pools, and more to its employees (Hesselgren et al., 2020).

4.8. Dwelling and mobility

Drouilles et al. (2017) see the main connection of mobility and dwelling in all trips with the home as the final destination or point of departure. This includes all types of routine trips, grocery shopping, commuting to work, bringing children to school, etcetera. Hence, the relations between dwelling and mobility are often part of other interconnections of practices, like working, food and recreation.

Mobility practices show different spatial patterns in an urban versus a rural context and in different regions and countries. In an urban context, people observe their city moving through it, but they enact and perpetuate the city by practising mobility. "The meaning of places in the city is constituted by the movement as much as by their morphological properties" (Jensen, 2009: 140). In a rural context, mobility may show more of the functional perspective in connecting other practices.

It is one of the key propositions of SPT that carrying out sets of routine practices reproduces social structures (Barr and Prillwitz, 2014; Nettleton and Green, 2014). Bartiaux and Salmón (2014) and Berg and Henriksson (2020) investigate how differences in household size determine practices and the potential to change practices. With children involved in the household, practice changes only if "the entourage" shares the particular approach. They argue that life-course transitions encourage reflection on habits and invite moments of change because the unconscious shifts into consciousness. Such moments are moving to a new house, the arrival of the first child, change of job, etcetera. Focusing analysis on the patterns of mobility practices over people's lifetimes can help shed light on the interlinkages between people's lives and the development trajectory of a practice.

There is also a stream of literature that analyses how dwelling and surrounding infrastructure shape mobility practices. Here the discussion revolves significantly around materials, devices and technologies (e.g., electrical vehicles, Geels, 2012; Urry, 2004) and infrastructure (Shove et al., 2015). "The physical landscape (urban structures with a separation of work and home, roads) has been shaped around the car and stabilizes it" (Geels, 2012: 477). It corresponds to what Thaler and Sunstein (2008) and Barr (2015) call "choice architectures": The practice of using a bike instead of the car may be promoted by additional components in the choice architecture like cycle racks, secure cycle storage or showers at the workplace. However, even with such elements in place, one must not underestimate the signals sent out by the existing built environment, often signals to use the car due to the sheer distance and the physical landscape.

Johansson et al. (2019) investigate how moving to a private-car-restricted and mobility-served neighbourhood impacts mobility practices. They find that "the process that shaped the new residents' car ownership and travel patterns was, in part, quite slow and unspectacular compared with the intentions and expectations of the stakeholders involved" (p. 1).

4.9. Recreation and food

There is a strong interconnection between food, recreation, and well-being, regarding *nutritional and health aspects*. Fifita et al. (2020) investigate the link between organic food consumption and well-being by highlighting long-term well-being and healthy food diets. The authors provide evidence that organic food consumption is considered pivotal to their future well-being. The relation between organic

food and well-being is rooted in social interactions rather than being conveyed by traditional advertisement tools.

Food shows an interconnection with well-being by also enabling enjoyable activities, such as spending time with others and engaging in leisure activities. Cox (2013) and Cox and Blake (2011) investigate the concept of 'information in social practice' via considering concrete examples, such as food blogging. The latter is known as a rather flexible practice, aiming to celebrate good food and make sure that food consumption becomes an extraordinary event. Food bloggers are also willing to fit into a wider community, namely other bloggers or food journalists, thereby emphasising the social component.

Cooking as a recreational activity can generate well-being, as people find it relaxing or enjoy preparing dishes for others, thereby suggesting another example of interconnectedness. Cohen and Cribbs (2017) explore food practices of Lesbian, Gay, Bisexual, and Transgender (LGBT) seniors regarding cooking at home. They find evidence of at least four relevant meanings attributed to cooking at home: i) staying healthy as controlling own daily life, ii) being independent, iii) reinforcing or developing relations with other people, iv) reminiscence. The sense of pleasure and relaxation associated with cooking was emphasised. Grocery shopping is described as a major element of food practices. Having control over one's diet generates well-being, for example, by making people feel independent. This is also emphasised by Aasen et al. (2012), who explore how Norwegian end-stage elderly patients perceive their participation in a dialysis unit. Some patients expressed strong interest in their involvement in the decision-making process regarding their diet, among various activities. This also severely impacts their life quality.

Several problematic issues can be highlighted. *Poor eating habits* compete with well-being. They may have social causes, such as lack of eating spaces for students at universities, lack of canteen facilities at work, and patients not being able to control their diets, among other issues. With respect to students, Middha (2020) investigates the link between students' eating practices and the availability and features of eating spaces at a university campus in Australia. They find that specific material features (e.g., microwaves in eating spaces) positively affect eating patterns and, consequently, well-being. Eating spaces also improve students' habits in terms of less impulsive food purchases, in turn reducing food waste.

Another potentially problematic competing area is *collaborative consumption* (*CC*). Food-based CC denotes a social practice or situation when members of a group collectively participate in a pool of food, such as at restaurants or family events. Parker et al. (2019) argue that food-based CC often leads to over-purchasing, overconsuming, and wasting food, finding that when consumers are in CC group contexts, they purchase significantly more food per person, which leads to overconsumption and waste. Such a practice is due to generosity aspects and cognitive mistakes.

Finally, *food anxiety* is an important well-being aspect of food practices. The challenge of finding the correct balance between diet and health through food selection and consumption choices can give rise to significant anxiety and responsibilisation. Petersen et al. (2014) find that this is particularly true for mothers, whose main objective is to optimise families' health and well-being. The authors focus on how anxiety is related to social practice to explore the process whereby Australian mothers are made responsible for their families' dietary practices. Mothers' engagement with the issue of childhood obesity prevention can be complex and ambiguous, implying different degrees of self-responsibility with repercussions on children's weight and health status.

4.10. Recreation and dwelling

Three interconnected fields of social practice stand out with respect to recreation (leisure) and dwelling: domestic energy consumption, home activities and residential environment, and social context.

Dwellings can be strongly interconnected with human well-being, either by providing a comfortable and safe environment for living (domestic energy consumption) or by allowing people to practice relaxing and enjoyable activities at home (e.g., cooking, cleaning). This applies not only to dwellings, but also to the residential arrangement in which they are located.

Regarding domestic energy consumption, Smale et al. (2017) discuss two case studies related to smart grids in the Netherlands by analysing the changes that smart grids cause in households' energy consumption patterns. A predominance of households did not switch off the heat pumps 'smart' functionality, mainly motivating this as cost-saving without loss of comfort. Little flexibility was found related to time-shifting their energy consumption practice for leisure time and eating. Much higher flexibility was for the use of their laundry, tumble-drying and dishwashing machine. Taking a slightly different perspective, cleaning and well-being might provide good examples of interconnectedness of home activities, while considering specific appliances. Nicholls and Strengers (2019) focus on the robotic vacuum cleaner and show how its use substantially changes conventions of cleanliness in the home and leads to supplementary energy consumption. Using smart devices generates short-term feelings of wellbeing and decreases family stresses regarding the distribution of labour in the home, but "capping" excessive upward shifts in cleanliness expectations generates sustainable well-being benefits to families. Bisaga and Parikh (2018), Kuijer and Watson (2017), and Nicholls and Strengers (2019) investigate energy consumption at home from a SPT perspective.

Another example of interconnection concerns the residential environment and social context. Maller et al. (2016) explore the role of natural and built environments in everyday physical activity. The case study is a master-planned estate in Australia specifically designed to promote health and well-being. Neighbourhood features, such as parks and lights, trees, roads, footpaths, and other factors, such as weather and seasonal change, play a major role in shaping the propensity to perform physical practices. Oldrup (2009) stresses the importance of outdoor and leisure activities for residents living in suburban areas. Palmer et al. (2019) studies daily activities of elderly. In Scotland, older men and women with access to leisure activities tend to spend less time in sedentary behaviour. While declining physical function and health contribute to increasing time spent sitting, having the chance to do more things with/and for other people help to avoid sedentary behaviour. Results obtained via semi-structured interviews are supported by those retrieved via objective measures; sedentary behaviour is measured via an accelerometer worn by respondents for seven days.

Additional (and increasingly stronger) interlocking between dwellings and well-being can be identified, as people tend to spend more and more time in indoor environments. Kuijer and Watson (2017) argue that changes in social practices are associated with higher space heating demand by emphasising, for example, the need for larger houses to separate cooking spaces from eating spaces or children's play moved from outdoors to indoors. New technologies for domestic energy improve the quality of life in dwellings by reducing energy expenditure (which becomes particularly important for low-income households) and by creating a more comfortable living environment (Bisaga and Parikh, 2018). Householders purchase solar energy systems to have light for domestic activities, which allows them to shift part of their activities to evenings.

As per competing effects, dwellings in poor conditions or located in bad neighbourhoods can decrease well-being by causing anxiety and distress. This can generate negative chain effects, as the purchase of appliances compensates for such distress, leading to higher energy bills and further poverty issues for low-income households. Debnath et al. (2020) analyse components of cultural energy services, focusing on socio-cultural and socio-architectural drivers of demand for comfort, cleanliness, and convenience of dwellings. Higher demand for specific comfort and convenience appliances (e.g., air conditioners and water coolers) is a consequence of a lack of socio-architectural design

elements like open spaces, privacy, and walkability. Such demand for energy services might be interpreted as a response to social distress to compensate for low quality living environments.

5. Discussion

Our analysis of the growing literature on interconnected fields of practice confirms the increasing empirical richness and conceptual depth of this field of research. Moreover, the literature demonstrates the potential of social practice studies to open up new perspectives on green transformations and help design effective policy strategies. Of particular importance is how such practices are connected in different ways and how these interconnections hinder or enable pathways of transformative change. The reviewed practice fields revealed a variety of examples of connections between practices that provide unexpected opportunities for more sustainable socio-material configurations. At the same time, this perspective helps to understand why certain unsustainable practices are so resistant to change.

The need to change social practices is a crucial dimension in the transition of production and consumption systems towards greater sustainability. Change of social practices can happen in three different ways (Watson, 2012; Spurling and McMeekin, 2015; Shove et al., 2012). First, the elements constituting them can change. Second, the population of carriers of practices can change. Third—and this was the focus of this paper—the relation among practices can change, as practices are contingent on each other, for example, mobility practices can change in relation to working and shopping practices and vice versa. Many other authors in the field stress that a change in practices mainly occurs at particular junctions in life (birth of a child, change of job, moving, illness, etc.). Our literature review has given ample evidence that such a perspective on 'change in social practices' has been taken up in most of the analysed practice fields and is adopted especially in relation to the need for transformative change, such as the transition towards climate-neutrality (e.g., Cohen and Cribbs, 2017). Social practice research, and particularly research on the interconnection of practices, thus increasingly lives up to the challenge of developing a better understanding of sustainability transitions from an everyday-life perspective.

Our analysis also shows that understanding how practices are spatially and temporarily organised helps in understanding the strength of connections between them. The spatial setting can be the design of the home, the layout of cities, or transport connections in rural areas. Interestingly, most of the social practice literature focuses on the home and the social practices anchoring here. The co-location of practices allows avoiding time pressure and contributes to more blurred boundaries between social practices, such as the home as the place of eating, working, and recreation. Especially the reviewed time-use studies highlight that multiple temporalities of different practice fields co-evolve and intersect with the material elements of social practices. Understanding the co-location and co-evolution of social practices allows a better way to understand their interlinkages, how difficult it is to change the practices, and reveals ways to change them towards more sustainability.

We also found that mobility is an important nexus of practices that connects practices such as working, leisure, dwelling, and food. This is extremely relevant when it comes to sustainability transformations. Household work, taking care of family and friends, work, and leisure time are often connected to activities in different places. Uncovering this kind of nexus enhances our understanding of why car driving still "wins" over bike riding, for example.

Moreover, our review sheds light on social-practice research's sensitivity and fast response time to potentially disruptive events. A growing number of articles has already taken up the Covid-19 pandemic, which has undoubtedly already contributed to many changes in social practices that remain to be understood and may lead to long-term

transformative change. To name just a few: Firstly, the changes induced through the extensive deployment of digital technologies in workplaces and their impact on other social practice fields, such as mobility, recreation, and dwelling, should be studied to identify sustainability potentials, both in environmental and social justice terms. Secondly, online grocery shopping and food delivery services have become very popular during the pandemic and may remain at this level. Therefore, further research on the food-mobility bundle could therefore concentrate on new practices in this area, particularly in cities, where food delivery services may compete for space, which is already a scarce resource. These practices could also be investigated in connection to increased teleworking. Thirdly, the pandemic may have altered the relationship between leisure and dwelling as it has forced people to spend more leisure time at home and in the local area.

Finally, the literature on the interconnections of social-practice fields is biased towards specific fields and aspects. Most of the reviewed studies focus on three social practice fields and their connections to other practices: food, mobility, and dwelling. Recreation practices tend to be neglected and have received only some coverage through the interaction with mobility and food practices, while links with dwelling and working are rarely addressed. Most studies on dwelling and recreation do not consider the effect of dwellings' structural characteristics on well-being, but instead focus on energy-related aspects. Life cycle perspectives tend to be taken into account just in the context of food-related practices. The most important deficit is that the reviewed SPT literature does not systematically address interconnections with working practices. Such research would open up a great range of new opportunities for systematic studies of working practices and their connections and conflicts with other practices.

6. Conclusion

More sustainability cannot be achieved by either simple technological fixes or changes in individual behaviour. Governing change towards greater sustainability requires changing the focus of intervention from incentives for changing of individual behaviour to creating conditions conducive to the change of socially shared practices. As practices are contingent on each other, one practice can change as a result of a change in another, and vice versa; co-location and co-evolution of practices invite such changes. Understanding former and ongoing changes in social practices and their intersections is necessary to consider interventions towards more sustainability. Existing policy interventions often rely on behavioural theories, such as rational choice theory, behavioural economics, and theories of nudging, and only to a very limited degree on an understanding of social practices. This lowers the impact of policies for sustainable development. An important outcome of this paper is that interventions should address complexes, bundles, and nexuses of practices, as they often co-evolve and co-locate and because changes need to be aligned between different practices. A further contribution of this study is to collect evidence for the relevance of bundles of social practices of everyday life for sustainability transition studies–a perspective which is otherwise neglected in transition studies with their focus on organisational actors and institutional dimensions of socio-technical change.

Another important conclusion is that social-practice research may benefit from combinations of qualitative methods with surveys and other quantitative methods to gain a richer understanding of interconnected social practices. Most of the reviewed empirical papers apply only qualitative methods, ranging from document analysis and discourse analysis to different types of interviews, focus groups, participatory observations, photo diaries, walking video tours, case studies, and strong stakeholder involvement. Only a few articles use quantitative methods, such as time-use surveys or social network analysis, which would help increase the scope and generalisability of results. Broadening the methods toolbox of social practice studies thus may further contribute to their policy relevance.

The review also revealed some other shortcomings in current research. Different fields of social practices receive very different levels of attention. Particularly from our perspective on the interconnectedness of practices and the need for such an analysis for a better conceptualisation of larger-scale changes of practices, such neglected areas potentially limit the contribution this research can make to analysing the dynamics of sustainability transitions. This may be particularly true for the lack of studies of the connection of work-related social practices with other everyday life practices – a connection that is highly relevant for various types of transition to a more sustainable everyday life. When identifying 'grey areas', our analysis thus also defines fields for future research on (un)sustainable social practices in the complex manner. Comparative studies on the connection of social practices of mobility, dwelling, food and recreation with different working practices, differentiated by types of industries and working environments, may analyse diverse connections between fields of practice and how these connections contribute to transformative change.

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.

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