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Practical Aeromobilities: Making Sense of Environmentalist Air-Travel

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Introduction

As a fundamental part of modern cultural and social life, air-travel is deeply embedded within global capitalism (Baer, 2018) and integral to worldwide mobility (Young et al., 2014). However, increased attention to the environmental impacts of aeromobility has made flying a form of what Keller and Halkier (2014) call 'contested consumption', well illustrated by the popular term 'flying shame' (Gössling, 2020).

The environmental costs of aviation are significant. Aviation is responsible for 2.5% of global CO_2 emissions, but the environmental ramifications are more complex.[1] Evaluating the climate effects of global aviation

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between 2000 and 2018, Lee et al. (2021: 13) conclude that 'aviation emissions are currently warming the climate at approximately three times the rate of that associated with aviation CO_2 emissions alone'. All the emissions embodied in production and infrastructure add to these numbers. Despite this complexity, the aviation industry's efforts to ensure sustainability rest on the speculative 'promise of technology breakthroughs' (Higham et al., 2019: 536) and a reliance on carbon offsetting schemes (Baer, 2018: 302). Until 2020, emissions reductions from improved technological efficiency gains have been cancelled out by increased demand and overall industry growth (e.g. Graver et al., 2019). It took a global pandemic of the magnitude of Covid-19 to break the long-term trend of massive and continuous growth in air-travel across the world, as travel restrictions and other infection control measures reduced global mobility and halted the aviation industry.
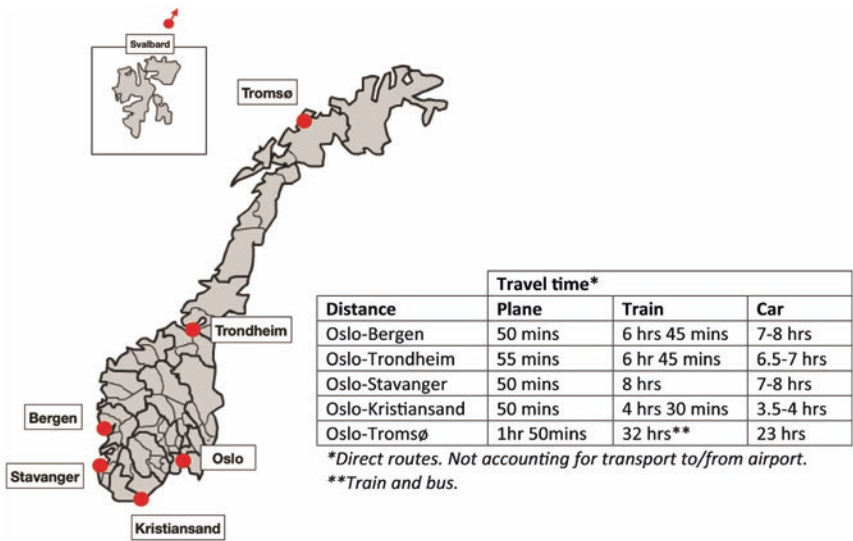
Most of the emissions from commercial aviation are the consequence of the mobilities of a relatively small group of 'frequent flyers', and air-travel is still reserved for the 'kinetic elite' (Cresswell, 2006: 240) of the world. In a recent study of global air-travellers, Gössling and Humpe (2020) note that, in 2018, only 11% of the global population travelled by air, and a mere 4% took international flights. More notable still is their conclusion that the most frequent flyers, which amount to 1% or less of the world population, are responsible for more than half of passenger air-travel emissions. These numbers illustrate the inequality of consumption-related environmental footprints and act as a reminder of the high-carbon lifestyles of wealthy consumers.

In recent years, air-travel has become a heated topic for public and academic debate, and anti- flying initiatives have proliferated. As one of the most emissions-intensive modes of commercial transport—only challenged by cruise ships[2]—a few flights alone may greatly affect the environmental footprint of individual consumers. Indeed, the positive environmental effects of an otherwise 'green' lifestyle are easily cancelled out by emissions from occasional flights (Higham et al., 2014). Yet research indicates that self-proclaimed 'green' consumers often continue to fly (McDonald et al., 2015) and that 'pro-environmental attitudes' have less effect on aeromobility than on routine practices (e.g. Alcock et al., 2017).

The apparent paradox has been explained as part of 'the flyer's dilemma', defined by Higham et al. (2014: 462) as 'the tension that exists between the perceived personal benefits of deeply embedded air travel practices and the collective climate change consequences of such practices'. This body of literature has tended to operationalise value-action gaps and cognitive dissonance to understand the consumption of air-travel (e.g. Hales & Caton, 2017) while paying less attention to the socio-structural conditions through which frequent flying takes place (Young et al., 2014). The aeromobilities literature has however demonstrated the deep societal embeddedness of aviation (Cwerner et al., 2009). As argued by Adey (2008: 1319) affluent societies are in many ways 'made and constituted by air travel'. Indeed, the societal embeddedness of travel and movement, as well as how 'the spatialities of social life' presuppose movement, has been a central concern for the mobilities turn (Sheller & Urry, 2006: 208). Yet, as argued by Lin and Harris (2020: 604), the increasingly global reach of air-travel implies that 'the need to understand how mobile lives are organised through aviation has only become more acute'.

In this chapter, we respond to this call and build on insights from the new mobilities paradigm (Sheller & Urry, 2006) to investigate aeromobilities from a sustainable consumption perspective. We are interested in understanding barriers to making mobility more sustainable, which would imply flying less. In doing so, we focus on Norway, a country with rugged landscapes where geography and infrastructure have contributed to making aviation a common means of domestic transportation (see Fig. 8.1). Indeed, Norwegians are among the most frequent flyers in the world.[3] Specifically, in order to disentangle the societal embeddedness and stubbornness of unsustainable mobility patterns, we focus on the aeromobilities of a particular group of Norwegian consumers: those who are motivated to contribute meaningfully to combat climate change and protect the environment, and hence are acutely aware of the environmental ramifications of air-travels.

As a proxy for this motivation, we base our empirical investigation on interviews with 13 individuals actively engaged in environmental work through an environmental organisation, here labelled as *environmentalists*. We draw on a combination of mobilities and social practice approaches (see Verbeek & Mommaas, 2008; Hansen, 2017; Rau & Sattlegger, 2018)

Distance	Travel time*		
	Plane	Train	Car
Oslo-Bergen	50 mins	6 hrs 45 mins	7-8 hrs
Oslo-Trondheim	55 mins	6 hr 45 mins	6.5-7 hrs
Oslo-Stavanger	50 mins	8 hrs	7-8 hrs
Oslo-Kristiansand	50 mins	4 hrs 30 mins	3.5-4 hrs
Oslo-Tromsø	1hr 50mins	32 hrs**	23 hrs

*Direct routes. Not accounting for transport to/from airport.
**Train and bus.

Fig. 8.1 Norway map and travel times. Note: The illustrative map is reworked by the authors. The original illustration is under the public domain. Source: Wikimedia Commons (https://commons.wikimedia.org/wiki/File:Blank_Norway_district_map.png)

to explore environmentalist aeromobilities. Proposing a geographical approach to our understanding of practices, in which the spatial and temporal boundaries of practices are in focus, we argue that aeromobility contributes to the tempo-spatial expansion of many practices, changing their contents, meanings, and the contexts in which they unfold. With a case study of consumers that to various degrees attempted to limit air-travel in a highly aeromobile society, the chapter contributes to the mobilities literature with new insights to the barriers to sustainable mobility. More concretely, we add new insights to how ethical concerns inform mobility practices, by showing the active negotiations and dilemmas our participants engage in and the complex ways in which environmental convictions weave through practices but 'compete' with a wide range of other concerns, expectations, and requirements. By applying social practice theory to analyse the environmentalists' aeromobilities we seek to bypass the prevailing dichotomy between structure and agency in the debates on

aeromobility consumption. Relatedly, the chapter contributes to the ongoing debates on the (bounded) agency of individual consumers as participants in social practices (Nicolini, 2012; Keller & Halkier, 2014; Gram-Hanssen, 2021).

In the following section, we explain our theoretical framework for analysing (environmentalists') air-travel in terms of social practices and their geographies, before presenting the chapter's methodology. We then turn to our findings, framed around the environmentalists' practices of, and sense-making tied to, aeromobility, before discussing the embeddedness of the environmentalists' aeromobilities within dynamic but temporally and spatially contingent practices.

Environmentalist (Aero)Mobility Practices

Practices and Aeromobility

Flying has clear 'practical' dimensions: First, while air-travel can be defined as an integrative practice in its own right, with its own sets of 'understandings, know-how and teleo-affective structures' (Warde, 2005: 150), it importantly forms part of and connects a wide range of other practices. Second, and relatedly, because air-travel allows for cheaper, longer (Pels, 2008), safer (Savage, 2013), and more frequent (Storme et al., 2017) and efficient travels, it opens up new avenues for carbon-intensive lifestyles and practices—as well as practice geographies—which in turn reinforce the dependence on flying. Moreover, as Adey et al. (2007: 774) have noted, much like how driving a car has become a dominant means of personal mobility, flying has become the 'normal international mode of travelling'.

The recognition of these 'practical' dimensions of aeromobility serves as a starting point for our inquiry into environmentalist aeromobilities. As such, the unit of analysis is not air-travels per se, but the overarching social practices of which these become part (Randles & Mander, 2009). Theories of practice come in many forms (see Welch & Warde, 2015 for an overview). We do not rely on a specific reiteration of social practice

theory but draw on a range of conceptual 'tools' from the social practices literature to make sense of aeromobility's practical dimensions. Social practices are mediated through practitioners' lifeworlds and the contextual backdrop of a situation anchored in a specific time-space. In other words, practices are 'routinised type[s] of behaviour' (Reckwitz, 2002: 249) producing 'activities situated in time and space and shared by groups of people as part of their everyday life' (Verbeek & Mommaas, 2008: 634). Central here is the ontological position—common across practice theories—that agency is 'distributed' between different material and immaterial elements (Sahakian & Wilhite, 2014).

According to Wilhite (2013: 62), the essential claim of practice theories is that actions have imbued in them 'sociomaterial histories'. Practices are situated performances which must always be framed in light of their broader context (Reckwitz, 2002: 249) to be fully understood. While practices usually refer to specific 'doings' (such as queuing, boarding, sitting in the plane), practices might also be abstracted into general phenomena (such as 'flying'; see Reckwitz, 2002: 249). In other words, practices can be either 'integrated' or 'dispersed' (Schatzski, 1996).

The embeddedness of aeromobilities in other practices is aptly summarised by Gössling and Nilsson (2010: 242), who note that 'Air travel is becoming an ever more important agent of change in the development of increasingly mobile, globalized worlds, in that it shapes new perceptions of distance, space, and time, creating new ways of dwelling, travelling, and socializing in aeromobilized time-spaces'. With this deep embeddedness in mind, we are particularly interested in the *geographies* of practices—or more specifically how 'time-space' becomes socially constructed through practices (Simonsen, 2007)—and how these are changed and (re)produced through aeromobility. Attending to these geographies requires us to 'zoom' in and out between 'the accomplishments of practice' and 'their relationships in space and time' (Nicolini, 2012: 16).

Flying Environmentalists

Though frequently discussed in analyses of (un)sustainable consumer behaviour, 'environmentalism' is inconsistently applied and often not

defined. There are many 'ideal' versions of different environmentalisms: while their normative goal of protecting the environment is common across these, their proposed steps towards achieving sustainability may vary (e.g. Clapp & Dauvergne, 2005). Considering the growing awareness around environmental issues, including air-travel (Gössling, 2020), a wide group of consumers may self-identify with 'environmentalist' values. In this chapter, we have sought to bypass simply attitudinal accounts by focusing on individuals who are actively engaged in work oriented towards environmental protection and/or climate change mitigation. We henceforth label this niche group of consumers environmentalists.

The relatively active position of the practitioner in mediating aeromobility makes air-travel a fruitful avenue for practice-theoretical scrutiny. Theorising 'the reflexive individual' has been framed as a lacuna in the development of practice theory (Welch et al., 2020). We conceptualise environmentalists as practitioners with a particular propensity towards introspection and self-reflexivity pertaining to certain environmentally dubious consumer practices—such as, in this case, air-travel. While processes of deliberate 'thinking and reflection' are generally thought of as 'mental and individualist' and thus downplayed in practice approaches, they are 'features of activity- in-practices' which contribute to transforming practices over time (Hui et al., 2017: 6). As Halkier (2020: 1) notes, practices may be both mundane and routinised, on the one hand, and yet 'discursively questioned', on the other. Moreover, there are elements of symbolism and cultural expression in practices (Warde, 2005; Welch et al., 2020). The growing contestation around air-travel may thus affect practices, as consumers draw on public discourse to handle contested consumption and related normative expectations through what Keller and Halkier (2014) conceptualise as 'performance positionings'. As such, although agency certainly is bounded and distributed, we ought not lose sight of the practitioners' motivations (Reckwitz, 2017: 120) as *reflexive* actors within collective practices.

Although all consumers can be construed as reflexive practitioners (Halkier, 2020), we may assume that environmentalists are more reflexive about their air-travel habits—and other carbon intensive practices—than the average consumer. Analysing how these consumers deal with and

negotiate one of the most environmentally destructive part of their consumption patterns, and the barriers they encounter in trying to reduce air-travel, can thus provide novel insights into the stubbornness of unsustainable consumption patterns.

Conceptualising Environmentalism in Practice

Social practice theory has been widely applied to study the tacit and prereflexive nature of many everyday practices such as showering and cooking (e.g. Shove, 2003). The ways in which such mundane practices are performed depends largely on what Schatzski (1996) refers to as their 'practical understandings'—that is, various ways of proceeding with, responding to, and going on with a given practice anchored in its unique socio-material context (Welch & Warde, 2017). While practical understanding belongs to the practice in question, practitioners draw on their 'practical intelligibility' when performing specific practices. To account for the ways in which environmentalism may affect practitioners' more reflexive engagement with certain practices, however, we further rely on two other of Schatzki's (2002) fundamental components of practices: 'general understandings' and 'teleoaffective structures'.

'General understanding' is relevant when considering how environmentalism, in all its forms, may impact the performance of specific social practices. This concept refers to 'normatively ordered arrays of ends, orientations, and associated affective engagements' across practices (Welch et al., 2020: 326). General understandings cannot directly explain action (Gram-Hanssen, 2021: 10) but help us consider 'the relation between culture and action' in practices (Welch & Warde, 2017: 191), including both discursive and pre-reflexive aspects of this relation (ibid; Welch et al., 2020). 'Conditioning' practical intelligibility and the norms that underpin it, general understandings thus have an 'organising' or 'integrating' function in practices (Welch & Warde, 2017: 195). Environmentalism consists of certain ethics, and Gram-Hanssen (2021: 13) argues that 'ethics', as a form of general understanding, is 'threading through many different practices, depending on the specific context and situation'.

In discussing how to understand ethical consumption through social practices, Gram-Hanssen (2021) furthermore argues that 'teleoaffectivity' is the defining aspect of practices. While general understandings (e.g. environmental ethics) cut across and 'normatively condition' (Welch et al., 2020: 76) many practices, teleoaffectivity infuses practices with a 'purposive element' (Warde, 2016: 40). In essence, the concept describes the ways in which practices (e.g. air-travel) are oriented towards certain ends or fulfilling certain goals, and how affect and emotion play a part in this orientation (Welch et al., 2020: 64). Each practice thus has a 'teleoaffective structure'. As summarized by Warde (2016: 40), 'teleoaffective structures' represent 'the purposive element of practices, the ends towards which engagement in the practice is oriented'. Engaging with the concepts of teleoaffectivity and general understandings help us consider the participants' complex motivations for practicing aeromobility.

Methodology

To conduct this study, a sample of environmentally conscious/motivated individuals was required. Recognising the elusive nature of the 'green' or 'environmentally conscious' consumer segment, we decided to specifically target individuals who worked in, or had an active and committing engagement with, an environmental organisation.[4] This way, we sought to avoid self-report bias: those self-identifying as being concerned with environmental issues, and more passive 'support' members of environmental organisations, were filtered out by default. The expected prerequisite knowledge of sustainable consumption and the environmental ramifications of air-travel among this group of particularly reflexive consumers enable insights into the stubbornness of social practices and the barriers to sustainable change in consumption patterns.

Thus, in-depth interviews with 13 Norwegians working for environmental organisation make up the empirical data for this study (Table 8.1). The participants did not represent the respective organisations with which they were affiliated. Participants were chosen through a non-probability, purposive sample, which was also to some extent based on snowballing. Participants were recruited by e-mailing several environmental

Table 8.1 Overview of sample

Participant	Gender	Age range	Life situation
Jarle	Male	25–30	Single, no children
Siri	Female	18–25	Single, no children
Egon	Male	51–60	Divorced, children
Mina	Female	25–30	Cohabitant, no children
Endre	Male	18–25	Single, no children
Julia	Female	31–40	Married, children
Silje	Female	31–40	Cohabitant, children
Frida	Female	31–40	Married, children
Maja	Female	25–30	Single, no children
Nils	Male	31–40	Cohabitant, children
Roald	Male	31–40	Cohabitant, children
Tine	Female	18–25	No children
Mikkel	Male	25–30	Single, no children

organisations with offices in Oslo, Norway. Eleven interviews were conducted in-person, and two on video call, in the late autumn and winter of 2018/2019. The interviews lasted up to 90 minutes and were recorded and transcribed in Norwegian. Quotes and expressions have been translated to English and all participants have been given pseudonyms. The research has followed the guidelines of the National Committee for Research Ethics in the Social Sciences and the Humanities and was reported to and ethically approved by the Norwegian Centre for Research Data.

In advance of the interviews, the participants filled in a questionnaire asking for simple, descriptive data such as name, age range, and household status, and more evaluative questions aiming to uncover the extent to which they engaged in certain activities relating to aeromobility. The questionnaire helped us 'map' the participants' aeromobilities and develop appropriate interview guides. They were, for instance, asked how many flights they had taken in the past year. The questionnaire served as a prompt for the participants to reflect on relevant themes in advance of the interviews.

We conducted 'semi-structured life-world interviews' (Kvale & Brinkmann, 2009: 27), resembling informal conversations loosely aided by the interview guide. Through the interviews, we questioned what kinds of (aero)mobility practices the participants engaged with, and the reasons for this. The goal of the interviews was to both explain and evaluate the participants' aeromobilities. In terms of evaluation, we sought not

merely to map aeromobilities, but to question how mobilities were nego-tiated by the participants. While participants were allowed to speak rela-tively freely, the interviews were guided by questions tied to, for example, reasons and motivations for (not) flying in different contexts, general travel practices, and their broader reflections on consumption and envi-ronmentalism. The interviews were first coded inductively, with a focus on themes brought up by the participants, and subsequently deductively, based on the elements of practices as described above. Through this pro-cess, analytical themes were organically construed from the data.

While there is some potential tension between a theoretical framework informed by social practice theories and their focus on 'doings' and a methodological approach best able to capture the 'sayings' of individual interviewees (see Halkier & Jensen, 2011), we subscribe to the notion that, to quote Hitchings (2012: 61), 'People can talk about their prac-tices'. The usefulness of interviews is furthermore obvious when discuss-ing contested forms of consumption, as letting interviewees explain performances and understandings is necessary for understanding the negotiations and positionings they engage in.

Why (Not) Fly? Making Sense of Aeromobility Practices

In this section, we uncover how aeromobility was embedded into partici-pants' practices and their geographies. The environmentalists in this study displayed significant knowledge about their own environmental footprints. In different ways, and to different extents, they 'discursively questioned' (Halkier, 2020: 1) their practices and brought environmen-talism into their performances. While they made efforts to maintain low aeromobility, all had taken one or more flights in the year prior to the interviews. Reasons for flying were many and layered, often revolving around maintaining social relations with distant friends, relatives, and peers in a daily life where time and money were limited resources.

Dealing with Distance: Aeromobility as a Solution to Geographical Constraints

The geographies of social relations had implications for the participants' aeromobility. As several participants had friends and family in different parts of the country—and, in some cases, the world—aeromobility played an important role in facilitating co-presence and maintaining social relations. Often cheaper and significantly faster than alternative modes, flying allowed the participants to visit loved ones relatively frequently, conveniently, and affordably. The spatial complexity and consequent mobility demand of modern life is well captured in Julia's account of trying to uphold relations with family not only in Northern Norway, but also across continents:

> [Flying] … it's important to our lives … we have family in India too, and we don't have the option to go there very often, but now there's a wedding and stuff which makes us feel the need to go there, and we wish for our children to have a relationship with India … an alternative is maybe to see the family less often, and we're maybe not willing to do that.

Similarly, Siri strictly moderated her aeromobility but found no alternative to air-travel when visiting her sister abroad: 'if you're going to Zimbabwe you have to fly'. She had also flown to save time when visiting family in Denmark: 'instead of … a whole day it took an hour by plane'. These examples of the dispersal and stretching out of social ties demonstrate how aeromobility helps facilitate the maintenance of globalised social relations. Offering the possibility of physical co-presence across geographies, aeromobility reinforces 'linked lives', that is, the collective entanglement of practitioner-biographies (Rau & Sattlegger, 2018) and the broader intersecting of practice trajectories and geographies.

Research suggests that leisure activities have become increasingly travel-based in Norway (Aall et al., 2011). While seeing family was generally thought of as a necessity, the holiday—which is emblematic of leisure travel—presented a greater dilemma for the participants. Most participants had taken steps to reduce holiday practices which relied on air-travel. They sought to travel less often and less far. When travelling, they

considered the 'necessity' for (air-)travel (Gössling et al., 2019). Comparing her leisure trips with more purposeful travels, Siri explained that 'I was … on a little vacation in Scotland, and … *that one* I felt bad about … because it was kind of just a stupid little holiday'. Most participants sought to avoid typical 'beach holidays', framed as unsustainable and excessive. While Julia was unwilling to forego flights to visit family, she explained that 'cutting out the beach [*Syden*] travels … that's much easier for me'. Yet Mikkel cherished his beach holiday. Incorporated into his yearly routine, this type of trip served a broader purpose than mere leisure. For Mikkel, it provided escape from the cold and dark Norwegian winter:

> Holiday is important … to, well, maintain motivation the rest of the year … a reward or something (…) in periods when you're fatigued and tired of Norway and snow, you want to relax … about once a year, you have to get away, and in winter … you might have to go so far that train travel is not an option.

The 'beach holiday' practice (*sydentur*) holds a certain cultural significance in Norway. The combination of a cold climate, dark winters, and an affluent population has made annual beach holidays a ritual for many Norwegians (Døving, 2011). It also serves as a clear example of the spatial expansion of Norwegian holidays to the extent that going abroad had become close to an expected part of summer holidays until the Covid-19 pandemic locked people into local and domestic travel, indicating a potential change in general understandings related to holidaying.

In sum, aeromobility expanded the possible geographies of practices tied to social connectivity and leisure. We now turn to how aeromobility affected the possible time-spaces in everyday life.

Convenient Aeromobilities: Competing Practices and Contested Temporalities

Changing expectations to convenience and comfort have been important drivers for the standardisation and normalisation of increasingly

resource-intensive consumer practices (Shove, 2003). Given mobility's situatedness within different social practices, convenience was particularly important when travelling. For the participants, convenience related to the extent to which the mobility fitted in with the broader practices of which it was part—and this was often about minimising time spent on mobility. The convenience of air-travel was thus attributed to the *speed of travel* that it offered, coupled with its reliability in terms of availability and affordable pricing. For instance, Tine explained that she had wanted to take the train home on Christmas Eve once but was persuaded by her father to fly to save time. Against the backdrop of everyday life, flying thus enabled flexibility compared to other modes of travel.

The participants described experiences of 'time-squeeze' in daily life, feeling that they had 'little time to begin with' (Egon). Having access to a high level of personal mobility—offered in large by air-travel—thus allowed for the 'shifting components of practices within time in ways that generated greater flexibility in personal schedules' (Southerton, 2009: 57). Shove (2009: 19) has proposed the term 'practice compression' to describe how time spending decreases; both in terms of specific practices and in terms of the intervals between these practices. Flying enabled 'compressing' practices to fit within designated timeslots. For instance, affordable tickets and short travel times allowed Jarle—the most frequent flyer in the sample—to spend 'several weekends a month' in his hometown: 'if it's a Saturday night—to be alone here or at a party [there] … I'll choose the party … as long as flights are cheap'. By shaping expectations and experiences of time in everyday life in this manner, practices not only consume but effectively produce time.

Conversely, maintaining low aeromobility oftentimes meant accepting reduced flexibility. In contrast to the flexible geographies of Jarle's social life, Maja's strict no-flying policy worked as a barrier for her to spend time with her family in another city. The train journey took upwards of seven hours, making weekend trips impractical. She explained that 'my mom … wishes I would come more often … so now she and my sister are coming [to Oslo instead] … they fly, just to be here one day for my sake'. Maja's reluctance to fly in this case led to two people flying rather than one. Flying enabled 'compressing' the social visit to only one day or a couple of days because little time was spent on the move while at the same time expanding

the possible geographies of such an event. As with Jarle's example above, this made the weekend a viable time 'slot' for reunion, enabling connectivity without challenging the institutionalised schedule and rhythm separating (work) week from weekend (Southerton, 2009).

While flying *enabled* flexibility, avoiding air-travel required already *having* some level of flexibility. Some participants actively resisted air-travel in favour of other mobility modes. Spending more time on the move implied having to 'fit' other practices around the mobility. Siri travelled by train to and from Northern Norway in the summer to volunteer at a festival. When travelling home to Tromsø for holidays, Tine and some fellow colleagues would organise a train trip together to make a social event of the journey. Engaging 'slow travel' (Dickinson et al., 2011) in this way thus required some level of freedom and flexibility in orchestrating practice configurations which was not necessarily afforded those with tighter schedules or family matters to consider. It also, more often than not, required financial flexibility because alternative transport modes were generally more expensive. In addition to matters of travel speed, the relative costs of different transport modes reinforced aviation as a 'default' against which alternative modes were considered: 'so long as flying is cheaper … people will choose that' (Tine).

The convenience of air-travel compared to other modes of transport was particularly revealing in the intersection between work and personal life. The interviews reveal a dynamic and interconnected relationship between work travel and daily practice, particularly for those in households with children. When travelling for work, flying was often seen as the most practical option. Air-travel was generally the most time-effective means of mobility, meaning that the participants could free up time for other, often family related, activities. Several female participants talked about the adaptations they had to make for work-travel to fit with family obligations:

> If it's an alternative to take the train, and it doesn't take too long, I kind of want to choose that, but it has to do with travel time, because you have to make work and family go together (Frida).

[The] train takes longer time, and if it was just about me I wouldn't care about that, but I have a family who … determines my [transport] choice (Silje).

As with leisure and holiday travels exemplified above, these examples of how family dynamics affect mobilities illustrate how practices compete for time and how their trajectories may overlap.[5] Such practical negotiations of travel mode are pertinent examples of how 'social' and 'personal' temporalities intersect and reproduce each other through practices (Southerton, 2009).

While air-travel offered flexibility and speed, participants found flying to be 'uncomfortable' (Mikkel), 'cumbersome' (Nils), 'ineffective' (Egon), and 'a hassle' (Frida). Aeromobility was associated with a set of compartmentalised practices extending far beyond flying itself:

first you have to take the train to the airport, check in luggage, take your belt off, scan stuff, hang out in a sweaty waiting area, cramped, bad seats—and the same thing again when you land (Mikkel).

you spend a lot of time waiting, queuing, being controlled; then you transport yourself in a very cramped metal box with a lot of people and bad air (Egon).

In comparison, train-travel was thought of as a comfortable experience, characterised by a more seamless process: 'It's faster to fly … but … you can sit down on the train and *then you're there*' (Mina). Having previously lived abroad, Jarle had often opted for train instead of flying when travelling for holidays 'because it was more convenient'. He explained that 'the Eurostar train travels at 200 km/h and it takes two hours to get [from London] to downtown Paris'. These reflections reinforce the notion that efficiency of travel is central when consumers negotiate mobilities in daily life, and illustrate how expectations to the speed of travel change along with expanding practice geographies.

Flexible Aeromobilities: General Understandings and Environmentalism

In the previous two sections, we have shown how air-travel enabled geographical and temporal flexibility and allowed the participants to meet the tempo-spatial requirements of certain practices. Often, mobility mode was adapted to fit with broader practice requirements and not vice-versa. Inspired by Gram-Hanssen's (2021) work on theorising ethics within social practices, we now turn to how the participants 'made sense' of their engagements with aeromobilities as they negotiated mobility requirements in light of their environmentalism in different ways.

Having established that aeromobility served various functions in participants' lives, they nonetheless had different ways to position aeromobility in light of their environmentalism. This was reflected in the ways they described their relation to air-travel. Several participants felt they should fly as little as possible, underscoring some level of personal responsibility. Others emphasised that the environmental impacts of air-travel were not a zero-sum game:

> [Being] part of contemporary society while working to improve this and that, I don't think those are opposing categories. Relatively speaking, I drive quite a lot; that, too, is a little odd, right, but it so happens that that's just how it is … we still can't entirely escape the car in the same way that we can't entirely escape the plane (Nils).

The importance of air-travel in their work and personal lives was also emphasised: Mikkel underscored the role that aeromobility played in 'maintaining the motivation to continue fighting' for the environment through his work, and Frida argued that the weight of her work on environmental policy had larger impacts than her personal consumption practices. Jarle pointed to the potential socio-economic impacts of him falling into a depression and not being able to carry out his work due to his (aero)mobility being restricted. When flying, however, some described concrete strategies to alleviate impacts of their own aeromobilities, either by *compromising*—combining trips (Roald), flying one way (Maja, Silje), or prioritising certain trips over others (Mina)—or by

compensating—eating more vegetarian food (Siri), shopping less (Mikkel), or lobbying for more sustainable travel in the work setting (Frida). Such strategies offered compromise between performing sustainable consumption whilst ultimately engaging in aeromobility.

By 'singling out what to do in specific situations', variation in general understanding was reflected in varying 'intelligibilities' among participants for different mobility options or trajectories for practices requiring mobility (Gram-Hanssen, 2021: 13). In interviews, this was evident through participants' considerations of the 'viability' of different mobilities in different contexts. Whether or not flying was seen as viable—'within the limits of reason', as Nils put it—compared to other modes depended on how practice elements were configured in each situation. 'Viability' was highly subjective, depending not only on the available infrastructures, or material settings, but on the meanings and competences applied to them by the participants (Shove et al., 2012).

In terms of specific travel arrangements, length and duration of a given trip as well as availability of alternative modes were considered. Although long-haul travellers have high environmental footprints (Böhler et al., 2006), the participants indicated that flying might be warranted to a greater extent when travelling longer distances (cf. McDonald et al., 2015)—for example, instead of spending 'three days in a car' (Nils) to travel to Northern Norway. However, what was considered a 'short' or 'long' journey was subjective: Tine and Maja would opt for ground travel from Oslo to Tromsø while Jarle and Frida both referred to a roughly four-hour train journey as a typical 'cut-off' distance for travelling on the ground. As noted, external factors such as travelling with others or dealing with expectations from friends and family affected what was considered the appropriate mode. 'Viability' in this context, then, does not merely describe a material condition but an expectation to, or contestation of, the (relational) temporal profile of practices.

However, they also qualitatively evaluated a given trip's purpose. Flying for the purpose of upholding social relations was for instance seen as more justifiable than 'flying on holiday to Tenerife to lay and daze in the sun' or 'flying to London to buy a purse' (Nils): 'if flying is the solution to maintaining a friendship, I won't judge that … more encourage,

perhaps; I think I might have been actively supportive, like, *yeah I think you should take that trip*' (Mikkel).

Attending funerals or visiting sick or elderly relatives was a recurring example of unforeseen situations for which environmentalism became less relevant altogether—any environmental concerns might be easily over-shadowed by the 'urge' for being present (Storme et al., 2017). In such situations, not only were the mobilities experienced to be beyond the control of the participants but they were guided by strong affects. Relatively stable mobility practices could thus be disrupted (Rau & Sattlegger, 2018). On the prospect of attending a faraway funeral, Endre reflected

> I think … [sometimes you're in a] situation where you feel you have to go there, that you can't think like that … you're a little, like, in the moment … and then you think, I could've taken the train, but … I wanted to sit one hour on the plane, and you don't save a lot of time, but you save a little, and right at that point, it was worth it for me.

Describing aeromobility as a means to an end, the participants under-scored the 'purposive element' (Warde, 2016: 40) in certain air-travels. When working for an environmental organisation, flying was thought of as a 'necessary evil' and a 'tool for doing the job' (Nils), sometimes required 'to meet people in person' (Mikkel) or to 'make things go around' (Endre). There was a general sentiment that air-travel might be worth it if the long-term consequences of doing so likely constitute a net environ-mental gain (see Baer, 2018; Hales & Caton, 2017; Storme et al., 2017). Moreover, work flights were perceived to be the employer's responsibility as much as their own, as illustrated by expressions like 'it's for work, so I don't quite consider it *my* flying' (Nils) and 'privately I don't fly …' (Egon). Having recently travelled to a country of the Global South for a work project, Mina explained that 'It's like I no longer think of it as air-travel … I think of it as work … as something important'. This compart-mentalisation illustrates further how mobilities become integrated elements in broader practices, and how this affects both attitudes and recruitment to aeromobility.

In some instances, affect had a stronger mediating effect on partici-pants' aeromobilities than any specific goal-orientation. While

consumers are able to identify past travels as unnecessary or unwarranted (Gössling et al., 2019), practices may not be characterised by this level of reflexive deliberation at the time of enactment. Several participants admitted to at times engaging in environmentally reckless, unjustifiable, or hypocritical travel practices. These were impulsively/spontaneously borne out of, in participants' own terms, 'fuck it' moments[6]: 'To say "fuck it", that's something I do from time to time, because, well, let's say I have some friends going on a weekend trip. It's like *OK I actually really want to join*, and then it's like—well … *fuck it, I guess I'm joining*' (Silje). Talking about his beach holidays, Mikkel said that 'If [I need to defend my choice for] anyone … it's myself … you know it's wrong, but *fuck it this time*'. These scenarios describe moments in which participants with varying degrees of reflexive deliberation 'gave in' to the mobile expectations and possibilities created by specific practices and infrastructural arrangements. Self-reflection on personal aeromobility was thus mediated through what Molander and Hartmann (2018: 376) term 'teleoaffective episodes'—that is, moments in which participation in a given practice is negotiated based on expected, perceived, or experienced emotional and teleological outcomes—whether they occurred in anticipation of travel, during travel, or in assessing past travels.

In this context, while environmentalism certainly informed the participants' mobilities, it could not offer any direct explanation of them. The acceptance of aeromobility was contextually contingent, also affected by the 'teleoaffectivities' of different practices. This indicates that general understandings were affected not only by environmentalism(s) but also other practice elements. The participants employed various strategies to achieve mobility whilst reducing environmental impact. On these grounds, we may argue that 'viability' must be understood as constructed at the level of mobilities as practices and not simply attitudes or specific behaviours. Acknowledging this requires further attention to practices themselves, which we turn to in the discussion below.

Aeromobility and the Changing Geographies of Practices

The participants in the present study translated environmentalism into changes in consumption patterns—for example, by reducing or shifting mobility consumption—in different ways and to different extents. Similar to, for example, eating less meat, reducing personal aeromobility is in principle a rather straight-forward strategy for consumers to govern their environmental footprints. But although reduction in aeromobility may yield discernible results in some individuals' carbon footprint, our analysis indicates that reducing or shifting consumption at the level of the individual practitioner seems to have a limited potential to counteract the trend of expanding practice geographies and accompanying mobility requirements. Participants' aeromobilities were understood as incorporated into, and making possible, broader practices. Therefore, the environmentalists' aeromobilities must be understood in light of not only the particular practices that required flying, but also the changing geographies of practices in general. In this discussion, we therefore begin by 'zooming in' on specific aeromobile practices before 'zooming out' to consider broader practice geographies.[7]

Although all participants sought to reduce their own aeromobilities, which aeromobile practices they were willing to forego and which they felt warranted flying varied. While leisure air-travel was generally framed as an excessive consumption of aeromobility, flying was warranted when it contributed to some specified personal fulfilment—whether this was 'getting away' or gaining insightful cultural experiences. Moreover, in support of approaching contested consumption as part of 'a multiplicity of intersecting practices' (Keller & Halkier, 2014: 38), the participants' mobilities were 'filtered through' the needs and requirements from other practices and other people (see Warde, 2016). This was most evident in terms of work travel and fitting travel in with family obligations. Simply put, *not flying* often involved breaking with norms and expectations.

Given their interest in environmental issues, the participants engaged in a range of 'dispersed practices' (Schatzski, 1996) related to aeromobility: questioning, reflecting, examining, evaluating, and so on. Predicated

on self-reflexivity and self-awareness, these may be informed by environmentalism and other forms of general understanding. But air-travel, and activities that may require air-travel, are 'integrated' practices in which both general and practical understandings shape practice outcomes. We note a frequent tension between broad, 'general understandings' and particular 'practical understandings' of aeromobility; the latter rooted in the situational contexts of practitioners' lifeworlds (Welch & Warde, 2017: 185), at times framed as practical obstacles for the objective of reducing aeromobility. While environmentalism, understood here as a form of general understanding, certainly feeds into the teleoaffective structures of aeromobility, so do other understandings related to convenience, sociality, temporality, and so forth.

While environmentalism might imply learning to resist unsustainable practices and to challenge shared conventions, the analysis thus suggests that broader social practices—and contextually dependent practical understandings in these—impacted environmentalists' negotiation of their aeromobility. To use Ortner's (2006) terminology, aeromobility enabled engaging and enacting with different 'projects' in the lives of the participants and their peers. Those who still flew often, emphasised the sacrifices they were unwilling to make, while those who flew very little emphasised how this affected their practices, mobilities, and everyday lives in general. Even those who felt a strong sense of personal responsibility were affected by external pressures to fly. And so, flying *in general* may be seen as an environmentally harmful overindulgence on the one hand, while flying *in the context of a specific practice*—for example, incorporated into a social event with friends—becomes a necessary element in that practice. Although one may arrive at the conclusion that a given trip was somehow 'unnecessary' through post hoc evaluation (Gössling et al., 2019), such discursive reflexivity in 'hindsight' may foreground ideological positions while neglecting in situ practice requirements.

More broadly, our analysis underscores that time-space is integral to social practices and illustrates how intensified aeromobility has contributed to changing tempo-spatial relations and perceptions of distance (Gössling & Nilsson, 2010: 242). In an increasingly mobile world, the famous 'time-space compression' (Harvey, 1989) of globalisation speeds up and spreads out practices and geographically stretches out social

relations (Massey, 1991). The demands for mobility 'ratchet' (Shove, 2003: 3) upwards: Consumers expect to be more mobile—to move from point A to point B faster, quicker, and more affordably—as different practices become stretched out in scale and meshed together. By making this mobility possible, air-travel opens up new avenues for participation in practices involving moving long distances in a short amount of time. In this sense, changing geographies and temporalities of practices are integral to the experience of societal 'acceleration' in modernity (Rosa, 2003).

A crucial point here is that temporal 'data' are encoded into practices. In this sense, practices *make* time (Shove, 2009). Embedded in practices are 'conventions of duration, sequence and timing associated with the competent performance of a practice'—what Shove (2009: 25) terms 'practice-time profiles'. Once air-travel has established a 'baseline' for temporal distance, this baseline becomes the standard with which other mobilities' temporalities are measured. This was reflected by the separation between weekends and holidays—cemented in normatively organised institutional schedules—which affected the time-spending allowed for travelling between places.

While our analysis has emphasised how (aero)mobility is embedded in social practices through their changing 'normative' time-spaces, attention must also be put on the mobility infrastructures which make flying the quickest and often cheapest form of transport. Practices do not become 'aeromobile' because *flying* is paramount to the competent performance of that practice, but because air-travel may be the only mode of mobility which satisfies certain temporal requirements of practices. After all, even Jarle, who was a self-proclaimed flight enthusiast, had opted for the train when it was convenient for him whilst living elsewhere in Europe. Flying for work, social visits, or holidays can all be thought of as practices assembled through certain 'infrastructure-practice configurations' making 'some trajectories more likely or seemingly more viable than others' (Coutard & Shove, 2018: 21). Such configurations may be resilient and long-lasting. But new infrastructures can help reconfigure some of these practices. The year 2021 was nicknamed the 'European Year of Rail', as train infrastructures—including high-speed rails and overnight connections—are being built out across Europe (Smith, 2021), which may

accommodate for globalised practices to a greater extent without aeromobility. As none of the newly planned connections will reach Norway, however, aeromobility may still be easily incorporated into Norwegians' participation in a range of practices.

In sum, the geographies of practices change along with their temporal and spatial 'boundaries', that is, the normative or accepted ranges for time-spending and distance covered in specific practices. The timeslots reserved for practices are shrinking, while the spatial 'reach' of practices has been widening. Recognising this qualitative evolution in practice geographies is necessary to understand the stubbornness of aeromobility beyond matters of individual consumer agency or superimposed material structures. When also seen in context of existing transport dynamics and infrastructures, we argue, air-travel becomes a highly stubborn domain of consumption—even for environmentalists.

Conclusions

In this chapter, we have applied a social practices perspective to better understand Norwegian environmentalists' air-travels. By seeing consumption as defined by the practices within which it takes place, rather than as the outcome of the deliberations of rational consumers, the deep embeddedness of aeromobility in contemporary Norwegian society is exposed. As a central and often standardised aspect of contemporary global infrastructure, air-travel affects the organising of societal expectations of mobility as well as perceptions of tempo-spatial relations. Though environmentalists employ a significant level of reflexivity in their negotiations of (air-)travel practices, the chapter demonstrates that they, too, are not exempt from this embeddedness. As sustainability and environmental ethics become more established in general understandings of aeromobility it may also affect the teleoaffective structures of air-travel. However, as we have pointed to, the teleoaffective structure of air-travel was in various ways normatively 'conditioned' (Welch et al., 2020) by environmentalism as a general understanding, but other practical and general understandings affected the participants' aeromobilities. There are, in other words, competing general understandings as well as a myriad of

practical understandings of aeromobility which still makes air-travel a highly 'viable' form of mobility. Acknowledging this does mean underplaying the potential impact of environmentalist ideologies on personal consumption patterns, but rather reminds us yet again of the crucial role social and material forces play in mediating practice outcomes—which may be beyond the control of the individual practitioner.

By 'zooming out' (Nicolini, 2012) from the individual air-travel practice to also consider the broader practice geographies, we have showed how aeromobility has allowed an expansion of the tempo-spatial boundaries of many practices, which, in turn, contributes to changing the meanings, contexts, and tempo-spatial requirements of these practices. We have shown how air-travel allows participation in practices which require swift movement over long distances, and which are normalised and standardised into Norwegian society in different ways. While air-travel can be thought of as a practice in its own right, our qualitative analysis illustrates that it is, perhaps more importantly, a part of many other practices. We argue that many practices, though not necessarily *requiring* air-travel, come to operate at aeromobilised scales, within 'aeromobilised time-spaces' (Gössling & Nilsson, 2010: 242), as societal events speed up, spread out, and compress. Unlike other forms of unsustainable consumption—for example, meat—there are often few immediate alternatives. Thus, we argue, we cannot focus solely on air-travel but need to pay attention to the aeromobile practices which are part of the fabric of contemporary societies. This illustrates how mobilities and geographies reproduce one another: aeromobility has created new baselines for viable travels, which in turn create new practice geographies and mobile lifestyles.

A decade ago, Urry (2012) asked whether mobile lives have a future. Our findings show that there at least are significant barriers to sustainable mobility. First, stubborn practice geographies may present a 'lock-in' to high (aero)mobility—also, to some extent, for environmentally concerned consumers. Second, the challenge of confronting aeromobility requires more than appealing to the morality of individuals. On these grounds, neither technological fixes nor consumer campaigns seem capable of sufficiently reducing the total environmental impacts of aviation. Change may be achieved through policy measures,

however, as Norwegians have been found to be comparatively approving of government intervention to restrict air-travel consumption (Higham et al., 2016).

Our analysis indicates that reaching this normative goal will require acknowledging—and further investigating *how* and *to what extent*—changing geographies of practices affect demand for mobility. Developing an understanding of the mobility requirements of practices may aid the process of facilitating alternative practices with lower mobility requirements as well as thinking through how more sustainable transport infrastructures can be leveraged in practices currently performed through aeromobility. In this pursuit, the mobilities research agenda can benefit from insights from the sustainable consumption field, in particular when it comes to the bounded agency of consumers and the negotiations they engage in as participants in mobility practices.

In closing, we note that, although geographical *expansion* of practices has been the norm, the Covid-19 pandemic has demonstrated that a geographical *retraction* is also possible. By making slow, local, and digital (im)mobility the new norm for many consumers across the world (Cresswell, 2021; Adey et al., 2021), the Covid-19 pandemic may have already initiated the process of re-thinking mobility requirements of practices.

Notes

1. For example, water vapour, nitrogen oxide, sulphate aerosols, and soot from the plane further trap heat within the atmosphere (Ritchie, 2020a).
2. See, for example, https://grist.org/living/you-thought-planes-burned-a-lot-of-carbon-say-hello-to-cruise-ships/ (accessed 25 June 2021).
3. Based on 2018 data, Norway ranks number 13 on the list of countries in the world with the highest per capita emissions from aviation, and as number 3 for domestic flights (Ritchie, 2020b).

4. Note that the participants had different connotations to the term environmentalism, and thus the extent to the ways in which they *self-identified* as environmentalists (Norwegian: *miljøforkjemper*) varied. However, by working in environmental organisations they met our criteria for selection.
5. Research suggests that women in particular suffer from the overlap between work-related travel and the informal 'work' tied to the household (Southerton, 2009).
6. Both this English term and a Norwegian equivalent were used.
7. The concept of 'zooming in and out' of practices is borrowed from Nicolini (2012).

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