

6. Hypermobile travellers

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Introduction

The contribution of aviation to climate change is, with a global share of just 2% of emissions of CO₂ (see chapter 2, this volume), often regarded as negligible. This perspective ignores, however, the current and expected growth in air traffic, as well as its socio-cultural drivers. Aviation is a rapidly growing sector, with annual passenger growth forecasts of 4.9% in the coming 20 years (Airbus 2008). In a carbon-constrained world with the ambition to reduce absolute levels of greenhouse gas emissions and limited options to technically achieve these (see chapter 13, this volume), the growth in air traveller numbers thus indicates an emerging conflict (see also chapter 4, this volume). Moreover, it becomes increasingly clear that aviation is an activity in which comparably few people participate. With regard to international aviation, it can be assumed that only about 2-3% of the world's population fly in between any two countries over one consecutive year (Peeters et al. 2006), indicating that participation in air travel is highly unequally distributed on a global scale. The vast majority of air travellers currently originate from industrialized countries, even though there are some recent trends, particularly in China and India, showing rapid growth in air travel (cf. UNWTO 2007). There is also evidence that air travel is unevenly distributed *within* nations, particularly those with already high levels of individual mobility. In industrialized countries there is evidence of a minority of highly mobile individuals, who account for a large share of the overall kilometres travelled, especially by air. These travellers are "hypermobile" in terms of participation in frequent trips, often over great distances. The following chapter sets out to describe hypermobile travellers and their mobility patterns from both statistical and sociological perspectives. It also presents a case study of the distribution of mobility in France, and discusses the importance of hypermobile lifestyles for emissions of greenhouse gases and climate change more generally.

Evidence of hypermobility

The terms "hypermobile" and "hypermobility" were introduced into the transport and cognate literature in the 1980s and 1990s (Hepworth and Ducatel 1992; Lowe 1994; van der Stoep 1995) as well as related literature on the geography and sociology of globalisation and regional change (e.g. Damette 1980; Shields 1996; Cox 1997). Whitelegg (1993), for example, in looking at the connections between sustainability and transport contrasted the hypermobility of those in the North with the chronic underprovision of transport accessibility in the South. Adams (1999) contribution to an OECD report on sustainable transport is a widely referred to with respect to the term "hypermobility", but he does not go beyond the statement that "*The term hypermobility is used in this essay to suggest that it may be possible to have too much of a good thing*" (Adams 1999: 95). For the purpose of this chapter, Khisty and Zeitler's (2001: 598) definition of hypermobility as "[...] *the maximization of physical movement [...]*" is more suitable to characterise the vast growth in temporary mobility by a relatively small number of individuals (Hall 2005a; Bell and Brown 2006). The chapter has thus a focus different from the perspectives of earlier works on hypermobility in that it seeks to describe highly mobile travellers rather than just the consequences of hypermobility for society (the focus of C. Jotin Khisty, P.S. Siraja and John Adams). In this chapter, the term should be understood to include a quantitative and qualitative dimension, and comprises a range of temporary mobilities, including leisure and business-related mobility, both of which will be reviewed in more detail in the following.

Leisure travel in industrialized countries has changed substantially in recent years, with a trend towards more frequent, but shorter trips to more distant locations, which is increasingly involving air travel (e.g. Peeters et al. 2006). Within Europe and the United States, this development is characterized by the emergence of low-fare carriers, now carrying some 150 million passengers per year in the European Union alone (Nilsson, chapter 5 this volume).

However, there is also a rapidly increasing leisure class of people travelling to distant or relatively peripheral destinations, often for considerably short periods of time (The Guardian 2008). Similar developments can be observed in business travel, where a considerable number of people may now be commuting on a daily or weekly basis between their places of residence and work by air. Clearly, over the last 20 years, there has thus been a transition of aviation from being a luxury form of mobility for the wealthy few to being a self-evident and often cheap means of mass transportation for large parts of society in industrialized countries, including both leisure- and business travellers. It seems equally clear that these changes in the availability and affordability of air travel have also fundamentally changed perceptions of distance, place and space (e.g. Janelle 1969, Urry 2000, Gössling 2002a; Adey et al. 2007); including what is regarded as routine and non-routine environments (Hall 2005a, b; Coles and Hall 2006). For example, Hall (2005a) criticises the notion of tourism as a being a break from routine for the hypermobile give that for them mobility as well as frequent visitation to the same locations is the norm.

The routinised space-time paths of those living in 2004 are not the same as those of people in 1984 when Giddens was writing or in the 1960s when Hägerstrand was examining routine daily space-time trajectories. Instead, because of advances in transport and communication technology, for a substantial proportion of the population in developed countries or for elites in developing countries being able to travel long-distances to engage in leisure behaviour (what one would usually describe as tourism) is now a part of their routine activities (Hall 2005a: 24).

As yet, little is known about hypermobile travellers (cf. Hall 2005a). Statistically, some 390 million tourists trips have been made between any two countries by air in 2007 (UNWTO 2008) - out of a global population of about 6.7 billion (UN 2008). However, as the same individuals will often have made multiple international flights over one year, it is estimated that the percentage of the world's population participating in international air travel is in the order of just 2-3% (Peeters et al. 2006). This implies that a very minor share of humanity accounts for a large part of the overall kilometres travelled and consequent impacts. From a global point of view, all international air travellers may thus be seen as "hypermobile travellers", as they usually account for vastly greater travel distances than the rest of the global population, but there are substantial differences in individual distances travelled as well as motivations for frequent travel. This demands a more thorough analysis of hypermobile travellers. However, while the term is widely used with respect to the scale, magnitude and frequency of travel, there are only a very limited number of published studies that provide an empirical basis for this.

One of the first to look at a group of frequent travellers were Høyer and Næss (2001). In studying conference tourism, they report on at least three important insights with regard to hypermobile travellers. First, Høyer and Næss (2001: 452) summarize a Norwegian travel survey by Denstadli and Rideng (1999):

According to a recent Norwegian travel survey, job-related trips account for about 60% of all flights, domestic as well as flights to and from foreign countries. Five per cent of air travellers make more than 15 return flights annually. This group of customers alone accounts for a quarter of all domestic flights. Most of their flights are made in connection with their job. [...] Amongst the 60% of flights characterised as job-related, courses and conferences account for about one-third (a little more for domestic flights and a little less for foreign trips), while service/consulting makes up about one-seventh.

This study indicates that the distribution of air travel may be highly skewed within industrialized countries, i.e. countries where overall mobility is high, and that a considerable share of mobility may be work-related, with 'courses & conferences' accounting for a significant share of travel motives. The respective shares of personal- and professional mobility in air travel are, however, still debated in the absence of reliable global data sets on travel motives. Høyer and Næss (2001) go on to report on the case of scientist 'H' as a case study of a hypermobile citizen. Over the course of one year, H travelled on average 124 km

per day, which can be compared to the average daily mobility of 42 km per Norwegian per year. As indicated in table 1, almost 65% of H's annual mobility is a result of air travel.

Table 1: Annual accounts for a conference tourist: mobility and energy use

	<i>Mobility km/year</i>	<i>Mobility km/day</i>	<i>Energy use kWh/year</i>
Residential energy			7,000
Private car	16,000	44	6,130
Domestic scheduled flights	8,000	22	6,450
International scheduled flights	13,000	36	8,670
Charter flights	8,000	22	3,400
Total	45,000	124	31,650

Source: Høyer and Næss 2001
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Høyer and Næss (2001: 460) also present the results of a survey of conference participants (n=128, conference 'Traffic Days 1999', Aalborg University):

The participants included researchers as well as public and private sector practitioners. The respondents all lived in Scandinavia. On average, they had attended 2.7 conferences during the latest 12 months. Of these, 43% were in the home region (within 100 km distance of the workplace), 39% elsewhere in Scandinavia, 15% in Europe outside Scandinavia, and 3% in the rest of the world. The conference participation of the researchers was considerably higher than among the practitioners. [...] On average, each researcher had travelled by plane to 1.4 conferences during the latest 12 months, compared to a mean of 0.5 among the practitioners.

They conclude that scientists are highly mobile travellers, and, consequently, an important group contributing significantly to the overall amount of airmiles flown within a given society. While these results seem to indicate that business travellers may be an important group of hypermobile travellers, leisure travel can be as important.

In a study of 252 international leisure tourists in Zanzibar, Tanzania, carried out in October 2003, Gössling et al. (2006 and unpublished data) found that the average distance flown for leisure in 2002 and 2003 (i.e. over 22 months, air travel only) was 34,000 pkm per tourist, *excluding* the trip to Zanzibar. The 10 most frequent travellers in this case study had covered almost 180,000 pkm each for leisure travel by air in 2002/2003, with a maximum of 24 countries visited by one traveller in this period. Together, these 10 travellers had covered 20% of the total distances travelled. Averaged per year, the study thus indicates that leisure travellers can cover vast distances, with an average of 17,000 pkm travelled by air by each respondent over the course of one year, corresponding to 46.5 km per day (a conservative estimate, as the trip to Zanzibar was not included and the study did not address the last two months of 2003). As various studies of individual mobility patterns in industrialized countries show, this is about the *total average distance* or about twice the *average leisure distance* travelled per capita in industrialized countries (cf. Gössling 2002b). Furthermore, the study indicates that within the group of these highly mobile leisure travellers, there is a sub-group of hypermobile travellers, covering 90,000 pkm each within a period of 12 months, i.e. effectively travelling more than twice around the globe within a year, corresponding to 246 pkm per day (air travel only!). The study thus suggests that there is a group of long-distance leisure travellers, who are responsible for a considerable share of the distances travelled for leisure-related purposes. Their demographic characteristics suggest that they are 20-50 years old, well educated and wealthy, while their awareness of environmental problems caused by energy-intensive lifestyles is low (Gössling et al. 2006).

Another more recent study of air travellers at Gothenburg Airport, Sweden (Gössling et al.

2009) reveals that within all air travellers, mobility may be highly skewed. While about 28% of the air travellers in the study had made one or two domestic or international return flights in the past 12 months (including the present flight; similar figures are reported by Lethbridge 2002 for the UK), and another 23% in between 3-5 flights, the situation was different at the higher end of the spectrum, where about 12% of the respondents had flown at least 30 times (return) over the past 12 months, with a maximum of 300 return flights made by two respondents over one year.

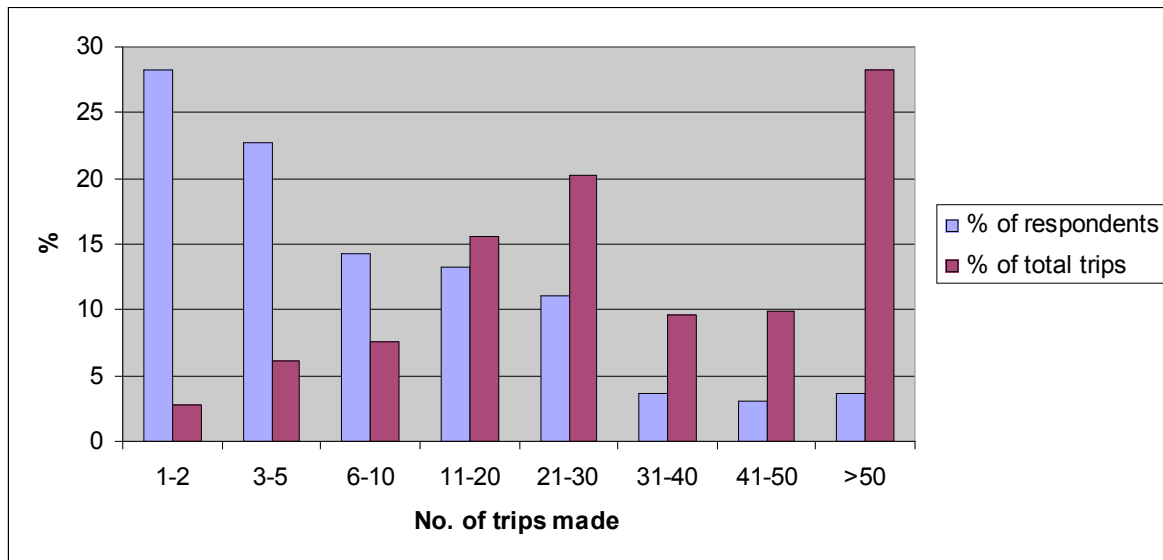


Figure 1: Relationship between air traveller and trip number shares

The results thus indicate that a minority of air travellers accounts for a large share of the overall number of trips made. In this survey, the 3.8% of hypermobile air travellers (>50 return flights per year) accounted for about 28% of all trips made by the sample. Even this survey thus confirms that there is a small group that could be termed 'hypermobile hypermobiles', i.e. a minority in each population accounting for a comparably large share of trips and overall mobility.

Finally, a survey by Lassen (2006) investigating the travel behaviour of employees of the company Hewlett-Packard Denmark (N=600) and Aalborg University (N=1200) revealed that the average employee of Hewlett-Packard took 3.8 international trips within the last year, covering on average of 17,000 pkm, with 94% of international trips being made by air (the share of respondents in the sample was 32%, i.e. 193 out of 600 employees). However, 25% of the sample did not make any trips at all, while the most frequent traveller made 43 international trips. With regard to the distances travelled, 26% of all trips were to Scandinavian countries, 67% to other European countries, and 7% outside Europe. A similar situation was found at Aalborg university (n=547, representing a 46% response rate), where on average only two international trips were made in one year, but the distance covered was higher at 22,000 pkm, with aircraft being the transport mode in 85% of all trips. Even in the case of Aalborg University, more than 30% of employees did not make work-related trips at all, while the most frequent traveller had made 22 trips within the last year. Of all trips, 22% were to Scandinavian countries, 56% to other European countries, and 22% to countries outside Europe. Lassen (2006) concludes that in both the case of Hewlett-Packard Denmark and Aalborg University, mobility is significantly higher than for the average Danish citizen, even though the study also suggests that mobility is unevenly distributed among employees, i.e. confirming the existence of a group of 'hypermobile hypermobiles'.

Essentially, the latter two studies, though not representative, indicate that some elite air travellers may account for a large share of the overall trips made, raising the question of how hypermobile travellers can be sociologically characterized. Reasons for high mobility may

generally be professional, i.e. work-related, as for instance indicated in an interview by the manager of a large international company: “*I divide my time between [...] headquarters in San Francisco and a flat in New York*” (Metro 14 November 2005), indicating that he is commuting to work over a distance of more than 4,000 km. Likewise, the lead singer of a Swedish pop band stated in an interview that “*In 1989-1991, we have been sitting on aircraft 260 days per year*” (Metro 8 September 2005). While these members of the cultural and economic elites (Bauman 1998) may thus be seen as ‘hypermobile hypermobiles’, other societal groups may also be highly mobile. An example may be traveller ‘A’, a 25-30 year old woman coincidentally encountered on a train in southern Sweden during the time of writing of this chapter. ‘A’ has worked for 5 years in the USA for a research institute, then for another two years for an aid organization in Afghanistan. During the years abroad, she flew home at least twice a year. She is presently coming from Bangkok, via a stopover in Istanbul, to visit her sister in Malmö, Sweden. She will then travel to the low-cost airport Nyköping some 300 km further North, where she got a free flight (tax only) to Paris, and then continue to travel from there to Israel (both trips to visit friends). After that she’ll move to New York, where she plans to study law. This example illustrates the importance of visiting friends and relatives (VFR) travel motives in increasingly global social worlds, as well as the global socio-economic structures in which people increasingly become embedded. Leisure-related travel motives may also greatly enhance distances travelled, however. The *Guardian Weekly* (21 March 2008) reports, for instance, that:

Cash-rich/time-poor travellers [...] are indulging in ever more ambitious mini-breaks to wildly exotic locations. [...] these “breakneck breaks” will increase by more than a third this year, with the number of Brits travelling to destinations including Hong Kong, New York and Rio de Janeiro for just a few days rising from 3.7 m to 4.9 m in 2008.

While these studies and quotes can provide some sociological insight into the group of hypermobile travellers, i.e. those participating in frequent and often long-distance air travel, no systematic study seems as yet to exist that allows for a better characterization of hypermobile travellers and their contribution to the distances travelled as well as the emissions of greenhouse gases caused by any society. In the following, results for France will be presented to gain further insight into the group of hypermobile travellers.

Who are the hypermobile travellers? A case study in France

The following results are based on the representative monthly survey “*Suivi des déplacements touristiques*” (SDT, including 30,000 households and 53,000 individuals), a tourism travel survey focusing on domestic and international travel of French residents, i.e. excluding international tourists in France as well as French living abroad. All travel of distances >100 km is included. Regarding the calculation of emissions, the French Ademe¹ provides emission coefficients in its “*Bilan carbone*” (*carbon account*) database. The figures used here include indirect emissions from energy production but exclude energy linked to infrastructure building and maintenance, as well as a life cycle analysis (ADEME 2006). For air travel, Ademe uses an uplift factor (radiative forcing index, RFI) of 2. Each tonne of CO₂ is thus doubled in this calculation to account for the radiative forcing impact caused by non-CO₂ emissions (see chapters 2, 3 this volume).

The combination of the two databases allows the calculation of travel patterns and emissions for 4,510 individuals. Based on hierarchical clustering, i.e. a process used to obtain groups through an iterative process aggregating the two nearest individuals, which finally results in obtaining clusters that are as homogeneous as possible, six groups of travellers can be distinguished:

Cluster 1: frequent travellers who privilege short (less than 3 nights) or day trips

¹ Agence de l’environnement et de la maîtrise de l’énergie

- Cluster 2: travellers who tend to use trains, favouring French destinations
- Cluster 3: travellers who tend to use cars, favouring French destinations
- Cluster 4: travellers used to travel by plane, favouring French/ European destinations
- Cluster 5: frequent travellers in France and abroad, including to long-haul destinations, using all modes of transport
- Cluster 6: immobiles, i.e. those staying at home

Figure 2 associates each of these groups with greenhouse gas emissions, expressed in kg CO₂-equivalent per individual. The results show that the cluster immobile individuals (cluster 6) causes virtually no travel emissions, while the cluster of long-stay car travellers (cluster 3) as well as train travellers (cluster 2) and the short stay travellers (cluster 1) cause comparably low emissions. Of greater importance for overall emissions are travellers in France and the rest of Europe (cluster 5), using different transport modes, and in particular the frequent flyers to French and European destinations (cluster 4).

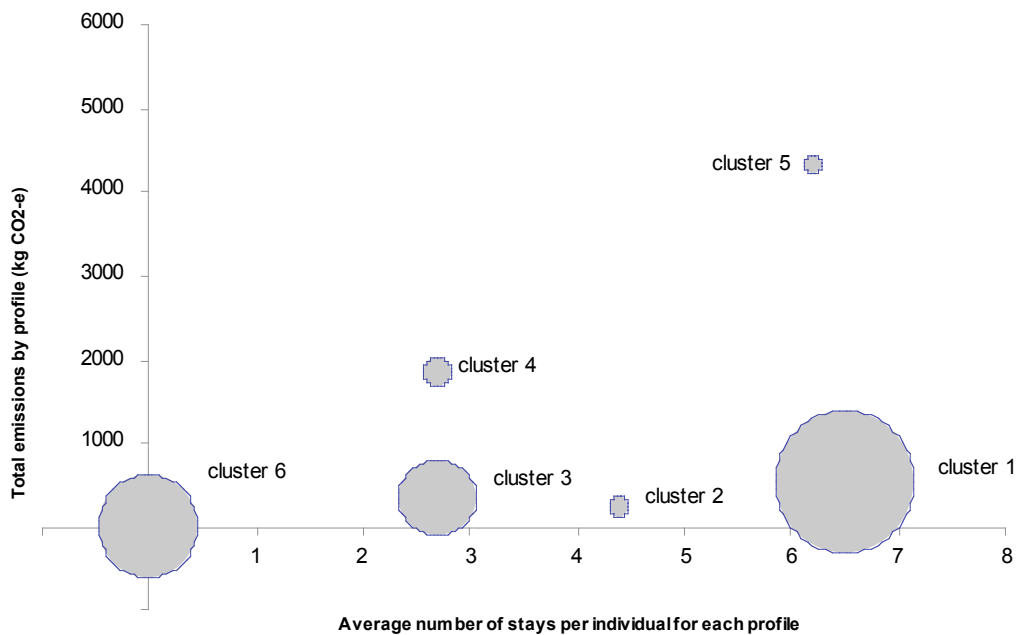


Figure 2: Traveller clusters, based on average number of trips and emissions per individual
 Note: The size of the circles is proportional to the share of the profile in the population

Figure 2 also show that in terms of trip numbers, clusters 1 and 5 are fairly similar with an average of 6.5 and 6.2 trips per individual per year. However, in terms of emissions, an individual in cluster 1 emits on average 536 kg CO₂-e, while an individual in cluster 5 causes 4,300 kg CO₂-e.

Table 2: Emissions per individual and cluster

Cluster	Emissions (kg CO ₂ -e)	Distance travelled (pkm)	Share of each cluster in national emissions
Cluster 1	536	3,898	32%
Cluster 2	231	4,265	2%
Cluster 3	344	2,371	11%
Cluster 4	854	4,041	11%
Cluster 5	4,300	19,153	42%
Cluster 6	34	150	2%
Average all clusters	570	3,452	

Emissions are correlated with distances travelled, with a range of 150 to 19,153 pkm per individual traveller per year in between clusters. Long-distance travellers (cluster 5) mostly

rely on air travel, pushing per capita per day travel distances related to tourism to more than 52 pkm, which can be compared to slightly more than 4 pkm per day in the group of “immobile” travellers (cluster 6).

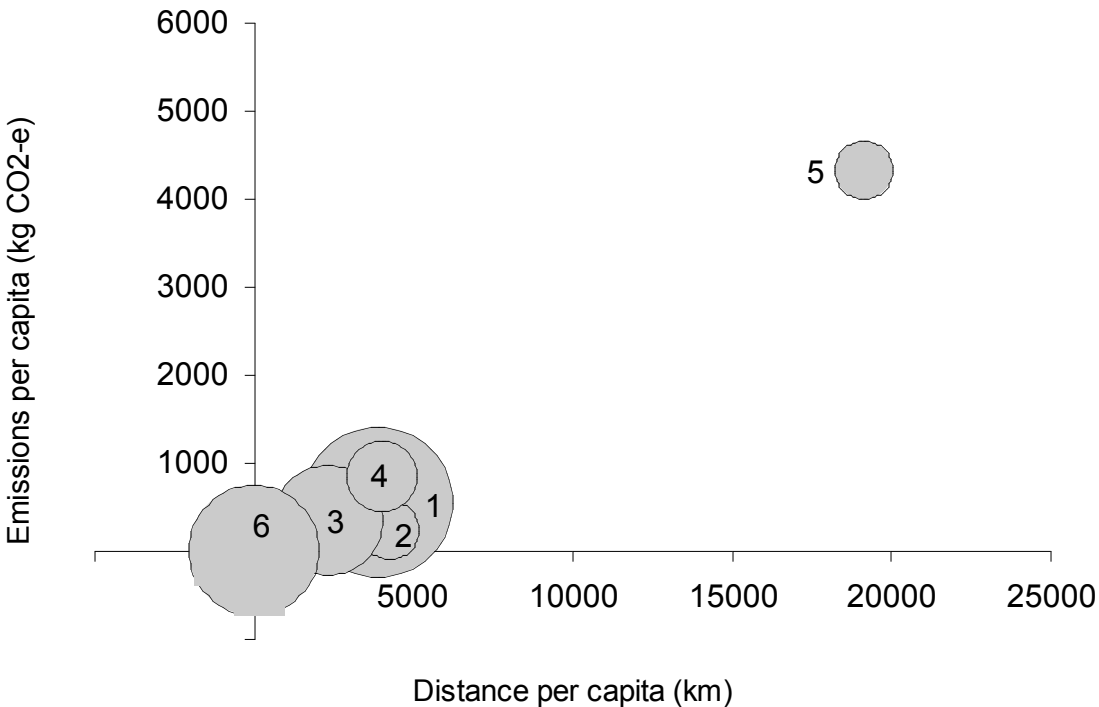


Figure 3: Annual per capita travel distances and corresponding emissions per capita
 Note: The size of the circle is proportional to the share of the cluster of total tourism-related transport emissions

Figure 3 shows that there are considerable differences between clusters 1,2,3,4 and 6 with regard to emissions and distances travelled. However, cluster 5 clearly sticks out in terms of distances travelled and emissions caused, indicating the importance of this hypermobile group of air travellers in generating emissions. While even individuals in cluster 4 use aircraft for a significant part of their travel, the main difference in between the two groups is the number of trips made during a year, with cluster 5 individuals making on average 6.2 trips per year, 38% of these by air.

From the above analysis, further attention should be given to cluster 1, 4 and 5. Cluster 1 represents frequent travellers engaging in rather short journeys. Cluster 4 comprises travellers travelling less frequently, but often by air. Cluster 5 represents the hypermobile travellers engaging in frequent trips, with a large share of these made by air. As these clusters are not entirely homogenous, a more detailed analysis is provided in the following.

Table 3: Average number of trips and use of aircraft

	Average number of trips	Share of aircraft as means of transport in all trips made (%)
Cluster 1	6.5	2
Cluster 4	2.7	35
Cluster 5	6.2	38
Average (clusters 1 to 6)	3.6	6

In the analysis of the three selected clusters, figures are expressed as deviations from the average values in the whole sample; unless otherwise indicated they refer to tourism stays.

Cluster 1 can be characterized as follows:

- Frequent travellers in France both for leisure- and business-related reasons (the number of stays is 80% and 40% above average), with a high share of day trips (+87%)
- Stay mostly in France (97% fewer visits to remote countries and 58% fewer visits to Europe and the Mediterranean than the French average)
- Visiting friends and relatives is a predominant travel motive (+149%), while leisure travel is less important (33% less than on national average)
- Use of the car is predominant (57% greater than average) as well as conventional trains (+106%), even though not the high-speed train TGV (54% less than average) or aircraft (70% less than average)
- Own more second homes than French population on average (+25%).

Individuals with medium-high income levels (€3,000-7,500 net income per month) are well represented in this cluster, as are citizens in management positions and workers with higher education. Citizens of medium age (age 30-39) are overrepresented in this cluster, also including a higher share of 50-69 year olds. With regard to family structures, couples with one or two children are overrepresented. Geographically, the cluster is balanced, with people living in cities of all sizes. Overall, the results would thus indicate that family structure, social structure (visiting friends and relatives), age and income are defining travel patterns in this group.

Cluster 4 can be characterized as follows:

- Travellers heavily focus on trips to Europe and the Mediterranean (+741%).
- The use of the plane is dominant (+518%)
- Travellers focus on long stays (4 nights and more, +82%)

Medium-high income groups (€3,000-7,500 per month) are overrepresented in this cluster, as well as citizens working in management positions, workers with higher education, craftsmen, traders and farmers. Household size is generally smaller in this cluster, with two person households and households with one child being overrepresented. Households with 2-3 children are on the other hand underrepresented, while those with 4-6 children are overrepresented. Younger citizens (<20 years) are overrepresented in this group, as are elderly people. Individuals in this group live more often in medium- to large cities, as well as the French capital, Paris. In conclusion, this cluster may mostly contain “new conventional” holiday makers, who have substituted the French coast for “more southern” Mediterranean coastlines, usually favouring the plane as the means of transport. This group also contains immigrants visiting friends and relatives in their country of origin (southern Europe, North Africa).

Cluster 5 can be characterized as follows:

- Travellers focus on distant destinations far more than the average (+1,762%), which is also reflected in distances travelled (1,730% greater than average)
- Travellers make more trips both for leisure (+74%) and for business (+150%)
- Length of stay is greater for both long stays (4 nights and more, +56%) and short stays (fewer than 4 nights, +17%)
- Travel motives include leisure (+57%) and visiting friends and relatives (+10%).
- The use of aircraft is far greater than on average (+558%)

The individuals in this cluster could be considered as the hypermobile share of the population. Citizens with higher income levels (> €7,500 per month) are overrepresented in the cluster. With regard to profession, management positions and workers with higher education are dominant in this group. Elderly people (50-69) are overrepresented in this cluster. Singles dominate this cluster as well as couples without children, and they often live in Paris.

With regard to the relationship between individual travel patterns and their contribution to overall distances travelled (as well as emissions), figure 4 shows that half of the emissions of greenhouse gas emissions caused by the mobility of French citizens are caused by just 5% of the population, indicating the major importance of hypermobile travellers in addressing transport-related emissions.

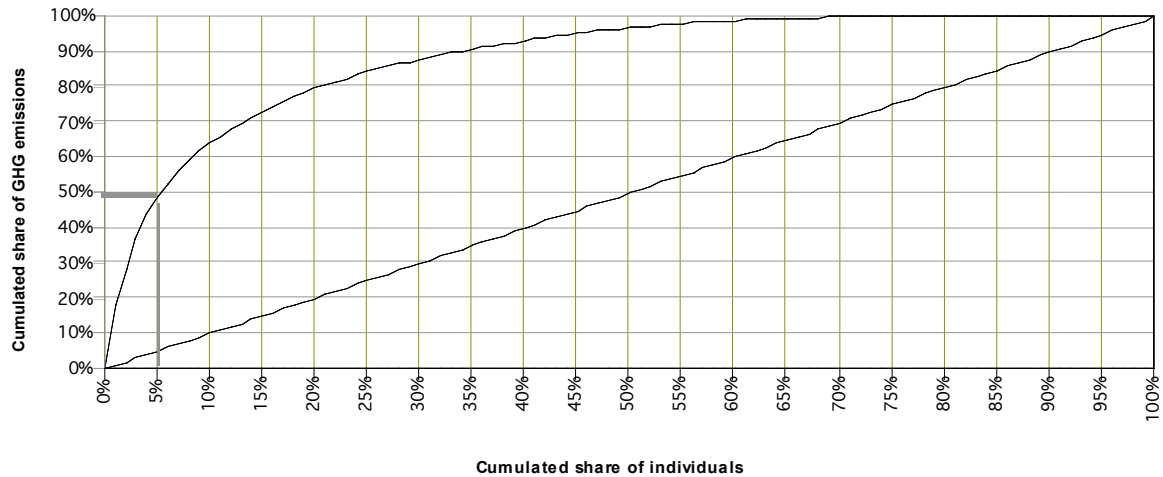


Figure 4: Cumulated share of GHG emissions and cumulated shares of individuals

The results of this case study suggest that averaged values to characterize a society's mobility patterns appear less suitable in a climate change context. Clearly, there are many groups in society whose lifestyles are, with regard to transport, rather sustainable. On the other side of the spectrum, there may be a minority of hypermobile travellers with highly unsustainable mobility patterns, who account for the majority of distances travelled, the predominant use of the most energy- and emission intense transport mode, i.e. aircraft, and, consequently, a high share of national emissions. However, the results of the French study also show that air travellers are not necessarily frequent travellers, confirming the findings of Gössling et al. (2009) that a considerable share of air travellers may only take one or two return trips per year, and often over comparably short distances. This group is of interest, as their air based mobility may be substitutable by high-speed trains (Ceron and Dubois 2006; Dubois and Ceron 2007). Of similar interest is the group of frequent travellers not using aircraft. Here, results indicate that life-stage as well as the family structure have important implications for mobility patterns.

The emergence of hypermobile travel patterns

The chapter has presented evidence that air travellers may generally be seen as a highly mobile part of society (with regard to the distances travelled), even though further distinction of a small class of hypermobile hypermobiles, i.e. both frequent and long-distance (air) travellers can be made in Western societies – and possibly in every society –, who account for a major share of the distances travelled by society as a whole. These seem more generally to correspond to Zygmunt Bauman's (1998) cultural-, capital- and communication elites, or, as national travel surveys indicate, to the well-educated, high-income parts of society, to which men belong more often than women (e.g. Carlsson-Kanyama and Linden 1999, Carlsson-Kanyama and Rätti 2008). For example, in a study of census night patterns of temporary mobility away from permanent place of residence in Australia, Bell and Brown (2006) reported that the Australian evidence does suggest clear differences in the characteristics that predispose individuals to travel for particular purposes. For production oriented work-related travel outside the local area, the most significant predictors were being male, maritally unattached, in a high income job, and working either in mining, agriculture, or government administration and defence. In contrast travel for leisure and tourism consumption demonstrated more balanced sex ratios, but was selective of older age groups

and those who are unemployed or outside the labour force, although it too indicated a strong relationship with income.

It has long been recognised that it is the wealthier elements of a society, those with the greatest economic budget and, to a great extent, time budget, who are the most mobile (Hall 2005a). However, with global changes in transport systems, and particularly the rise of low-cost airlines, new groups of hypermobile travellers have come into existence. These may for instance include health migrants and medical tourists (Connell 2006; Ramírez de Arellano 2007), second home commuters (often to remote parts of the world, such as Swedes in Thailand or the French in Africa) (Hall and Müller 2004), short-break long-distance travellers (“breakneck breaks”) (Williams and Montanari 1995), frequent low-fare holidaymakers (Connell and Williams 2005), as well as longer distance commuters (Green et al. 1999) and long-haul business travellers (Swarbrooke and Horner 2001). This also includes opportunities to take “a break” or “sabbatical” in life, while flying around the world including various stopovers and/or participating in volunteer projects as part of the “OE” (Overseas Experience) or “gap year” has become a new *rite de passage* for wealthier and middle-class youths in industrialized countries (Williams and Hall 2002; Simpson 2005). The emergence of these new highly mobile societal groups is facilitated by increasing incomes, with disproportional growing incomes in the upper classes of society, as well as cheap and even declining fares for air travel and the perception of no-cost mobility created by low-fare airlines. Airline marketing strategies may also be relevant in the process, as for instance in the case of low-cost airlines targeting youth markets (Shaw and Thomas 2006) and the impact of frequent flyer programmes on the demand for air travel (Chin 2002). Just as significantly new flexible labour strategies and the reduction of international barriers in the mobility of skilled and, in some cases, relatively unskilled workers, as in the case of crop pickers, also substantially contributes to production oriented hypermobility (Hall and Coles 2008).

The recognition of consumption and production oriented forms of hypermobility is significant as it helps identify different reasons and characteristics of hypermobility that may, in turn, assist the development of mitigation strategies. Some of these forms of hypermobility are outlined in Table 4.

Table 4: Typology of hypermobility

	Production-oriented		Consumption oriented	
	Permanent Employment	Seasonal and Short-term contract Employment	Personal consumption	Leisure and Tourism
Reason / Motivation	<ul style="list-style-type: none"> • International business travel • Long-distance commuting • Expatriate employment 	<ul style="list-style-type: none"> • Seasonal work travel 	<ul style="list-style-type: none"> • Health and medical travel • Educational travel 	<ul style="list-style-type: none"> • vacations, including development of international weekend and short break market • second home commuting • sunbirding / snowbirding • VFR
Primary characteristics	<ul style="list-style-type: none"> • High income • professional / managerial • specific sectors and industries • males 	<ul style="list-style-type: none"> • Low and medium income • often relatively low skilled but meeting labour shortages at destinations • specific sectors and 	<ul style="list-style-type: none"> • medium and high income • professional 	<ul style="list-style-type: none"> • medium and high income • low constraints on travel

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Overall, several trends are influencing the rise of hypermobile travellers, including the emergence of low-fare airlines, introducing cheap mass travel and perceptions of no-cost mobility, as well as frequent and often short long-distance flights to more remote destinations. The social and economic importance of these trends is twofold. First, high-speed transport systems lead to increasing travel distances, because the average daily amount of time spent travelling, as well as the average share of personal income spent for travel seems constant (Schafer 1998, Schafer et al. 1999). When average incomes increase, the absolute amount of money spent for transport will also grow. Likewise, with faster means of transport, absolute travel distances increase. The important implication is here that faster transport systems will not be used to reduce transport time, i.e. to reduce the share of time spent travelling, rather than to travel to more distant locations. This would indicate that there are few limits to mobility with regard to the distances travelled by individuals, except via the constraints of the aviation transport network, while there may also be a trend towards more energy-intensive forms of travel, as mirrored in the rapidly growing number of private and increasingly luxurious aircraft. For example, news agency Reuters reported in December 2007 that the first A380, the world's largest passenger aircraft, had been sold to a private customer, a member of the Saudi royal family (e.g. USA Today 2007). This coincides with Miller's (2007) conclusion that growth in mobility may not primarily be a result of new parts of society becoming air travellers, rather than affluent people travelling more, with average household income for leisure passengers departing by air from London airports Gatwick, Luton and Stansted being over £50,000 (about €74,000 as of June 2008) per year (Miller 2007, based on UKERC 2005 and CAA 2006). While individual hypermobile travel patterns as yet only comprise a very small share of the world's population, there is evidence that a rapidly increasing number of people is becoming highly mobile. For instance, while 50% of adult UK residents flew at least once in 2001 (Lethbridge, 2002), this share is substantially lower in China and India (cf. UNWTO 2007) but appears set to catch up if the context (sociocultural and economic) stayed the same (Arlt 2006).

Although changes in technology are important for hypermobility it must also be acknowledged that the demand for increased long-distance mobility is socially and economically constructed within processes of contemporary globalisation (Hall 2005a). For example, along with advances in communications, aviation is contributing to time-space convergence via "space-time compression" (cf. Harvey 1989), in the sense that vast distances can now be covered in comparably short periods of time, and "space-time distantiation" contributing to increased extensibility, in the sense that social and economic relations are now stretched over time and space. Time-space convergence therefore unites concepts of hypermobility as used in the transport literature, to describe the maximisation of physical mobility by a relatively small number of people, with those of Damette (1980) to describe the accelerated switching of investment between locations as the turnover time of fixed capital is reduced. Both forms of hypermobility both contribute too and are affected by contemporary globalisation

Hypermobility is therefore embedded in reflexive and recursive social and economic practices that serve to reinforce acceptance and demand for global work and play. This is, in part, argued by some as being responsible for the emergence of a global cosmopolitan society of people (Giddens 2003), culturally tolerant and who are increasingly at home anywhere in the world (Urry 2000), while the wish to experience new places may be reinforced through travel (Gössling 2002a). Aviation is thus, more than any other means of transport, re-configuring perceptions of distance, space and time towards cosmopolitan identities and new global social networks. As this process involves primarily young people, the consequences may be far-reaching. As Shaw and Thomas remark, "[...] *'global lifestyle' aspirations acquired in their [the youths'] formative years may well establish travel patterns for 50 years or more [...]*" (Shaw and Thomas 2006: 210). Various, as yet little researched

processes support these developments, as high mobility is both associated with and often even a precondition for social status (Høyer and Næss 2001), while high mobility is simultaneously rewarded with even greater individual mobility, for instance through bonus systems (frequent flyer miles). These processes may in turn lead to the expectation of cheap and readily available mobility that may be perceived as both a norm and a human right (cf. UNWTO 2000; Shaw and Thomas 2006). Further complicating the picture is the extent to which processes of work and play are increasingly being defined in global terms. For example, Jones (2008: 14) observes, that 'Contemporary work is becoming less constituted through localised, physically-proximate relations and increasingly constituted through distanced relations. These multiple spatial associations increasingly extend to the planetary scale'. The reconfiguration of work in global terms also creates its own dynamic in terms of "how individuals and groups of individuals are empowered (or not) in relation to global capitalism, and the future life chances and opportunities which workers have open to them" (Jones 2008: 13). In order to compete in the global workplace it is therefore not surprising that increased value is based on the experience derived from hypermobility but also the willingness of individuals to continue to engage in such mobility for corporate benefit. Hypermobile behaviour is therefore encouraged not only by national, cultural and ethnic diasporas but also by new 'diasporas' of work and play.

Conclusions: hypermobility and climate change

The chapter has presented evidence that hypermobility is a process driven by a relatively small part of society, but increasingly comprising new societal groups with "new" mobility motives. Visiting friends and relatives, frequent business trips, second homes in more remote locations, long-haul short breaks for leisure, as well as low-cost short breaks all boost the distances travelled in industrialized societies. While aviation as such is in fact an important contributor to global emissions of greenhouse gases (cf. chapter 2, this volume), it deserves mention that these emissions are primarily caused by a small share of highly mobile and hypermobile travellers. In a world with a global trend towards higher, more energy-intense mobility, emissions will vastly increase. This process may be fostered by air travellers in general and in particular by the 'hypermobile hypermobiles' identified in this chapter. These findings also underline the current dichotomy between Kyoto- and post-Kyoto emission reduction needs and the reproduction of mobility through various, as yet little researched social processes. This should deserve the attention of policy makers in industrialized countries, as individual emissions associated with food consumption may vary by a factor 2-5, by a factor 4-10 for housing, but possibly by a factor 100-1000 for mobility.

Societal trends towards hypermobile, aviation-based travel patterns as currently observed may seem increasingly irreversible, both because of the symbolic power associated with this transport mode in terms of a "human right of mobility" and "freedom to travel", as well as very real need to travel arising in globalized social networks, where for instance "visiting friends and relatives" travel motives seem on the increase. From a climate policy point of view, hypermobile travellers appear to be the group with the largest potential to achieve substantial reductions in greenhouse gas emissions, even though this may be difficult, as they usually represent the political, economic and cultural elites of society. It may thus be equally important to dissuade other groups of presently less frequent travellers to enter carbon-intensive hypermobile lifestyles.

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