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Chapter 4

Moving Through the City with Strangers? Public Transport as a Significant Type of Urban Public Space

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Cities are generally considered as ideal sites for walking: higher densities reduce distances between residences and activity destinations, making it possible to reach them on foot. Similarly, when city centres date from the pre-industrial and pre-motorization age, they generally offer plenty of pedestrian-friendly spaces that make the walking experience all the more enjoyable. For this reason, urban scholars frequently contrast pedestrian friendly cities to motorized urban sprawl, where the car dominates daily travel patterns.

However, this approach neglects another feature of urbanity: public transport. Transport research shows that in dense cities buses, tramways, subways and trains account for a non-negligible share of trips and travel distance, often higher than walking. Moreover, walking in the city does not always mean *just* walking. Indeed, most journeys made using public transport (unlike car journeys) include short walks to and from stops, and for this reason walking distance to stops is considered as a crucial measure of public transport accessibility. On the other hand, while moving through the city, urban dwellers often walk through spaces of public transport such as the subway network, tramway cars and the like.

This is especially true for European cities, where car dependence is lower than in American and Australian cities (Newman and Kenworthy 1999), despite being higher than the rest of the world. In 2009, public transport accounted for 17.3 per cent of the passenger-kilometres travelled by powered

transport in the EU-27, with national figures ranging from 8 per cent (Lithuania) to 40 per cent (Hungary) (European Commission 2011:41). In large cities, public transport holds even greater importance: in Berlin for example, 59 per cent of people used public transport ‘at least once a week’ in 2008, while 35 per cent reported daily use (Infas 2010:101).

In a nutshell, it is impossible to overstate the importance of public transport for mobility in European cities. In this chapter, I argue that spaces of public transport should be considered as fully-fledged public spaces, despite having rarely been studied as such. I begin by showing that many of the reasons for which people like or dislike public transport are related to the fact that it entails sharing space with strangers, interacting with them and thus encountering diversity. In doing so, I draw on evidence from a variety of sources at the intersection of urban, sociological and transport research. In the following section, I show that the car is the polar opposite of public transport, as its semi-private space allows people to avoid any interaction with strangers during travel. This in turn, explains (part of) the attraction that the private car exerts on urban travellers. In the third section, I present the results of a study on the propensity to share space with strangers during travel carried out in Milan, Italy (2009–2010) and involving the use of both qualitative and quantitative methods. In the conclusion, I illustrate why urban scholarship has generally overlooked the public spaces of public transport and what might be the implications of a change of course in this respect.

Public Transport as a Form of Public Space

A defining feature of the public transport experience is co-presence with strangers. This fact has several consequences: first, control over surrounding space is very limited. As illustrated by Nash in a pioneering study of bus riding (1975), this explains why passengers put on a ‘commuter stance’ involving ‘the negotiation of private space or territory within the public domain’ (Nash 1975:119). The fact that intrusions into personal space are perceived as an annoyance explains the increase in physiological stress in conditions of crowding (Evans and Wener 2007). Proxemics scholar Hall provided a vivid description of this uncomfortable situation:

crowded subways and buses may bring strangers into what would ordinarily be classed as intimate spatial relations, but subway riders have defensive devices which take the real intimacy out of intimate space in public conveyances. The basic tactic is

to be as immobile as possible and, when part of the trunk or extremities touches another person, withdraw if possible. If this is not possible, the muscles in the affected areas are kept tense ... it is taboo to relax and enjoy bodily contact with strangers! (Hall 1966:118)

A second implication is passengers have very low expectations when it comes to privacy on public transport. In other words, they are aware that they can be seen and heard by other passengers, and this has a major impact on their behaviour. As illustrated by Watson (2006), when people are asked about what they would do in private but not in public, they often answer with examples where public transport (as a paradigmatic example of public space) is contrasted with the private car. For example, psychological research has shown that some people feel uncomfortable using mobile phones in public places such as trains, because they feel as though they are being listened to by other people (Love and Kewley 2005).

Admittedly, the depiction of public transport by these initial paragraphs is quite bleak, focused as it is on the constraints that 'being in public' entails for the passengers' behaviour. It is clear, however, that for many passengers public transport is much more than that. The other side of the coin of being observed, for example, is the opportunity to watch others, and there are good reasons to believe that many people enjoy this activity. For example, Stradling and colleagues, in their research on passenger perceptions of the urban bus journey experience in Edinburgh (2007) conclude that 'for many, one of the psychological benefits of public transport is an opportunity to observe ... others' (Stradling et al. 2007:289).

An interesting illustration of this is the website *tubecrush.net*: presenting itself as a space 'where your chance encounter from the tube line can be shared on-line', the website encourages female users of the London subway to take pictures of male passengers that they find attractive and then post them on the website. Other users are then able to rate and comment on the pictures. The site description promises 'pages of ... guys going about their daily lives often not knowing the joy they bring to their fellow passenger admirers'. Similar websites have recently been created for New York, Boston, Spain and Australia. Similarly, as of February 2013, the Facebook page *Falling in love with strangers on public transport* was liked by more than 50,000 people around the world.

Of course, observing strangers on public transport can be a pleasurable activity for many other reasons. The concept of the *flâneur*, which has attracted increasing attention from social and urban scholars in recent years, is a useful reference in this context. According to Nuvolati (2006, see also Chapter 2), the *flâneur* can be described as an urban dweller who loves observing and interpreting what happens in crowded public places. Notably, the *flâneur* (or *flâneuse*) favours places where the crowd is in a state of constant flux, because this allows him/her to be a *voyeur*, observing strangers without being observed. Prime examples of such a place are sites of mobility and waiting. With regard to different modes of transport, Nuvolati argues that walking through the city is the best way to practice *flânerie*, which would be impossible from within the protective bubble of the car. However, there is arguably great potential for *flânerie* in the spaces of public transport as well.

The following excerpt from an interview with American singer/songwriter Ben Harper provides a good example of a *flâneur* who loves the spaces of public transport:

Finding inspiration is easy. How do I do it? I jump on a bus and write. I know public transport networks from all over the world off by heart. In Milan, my favourite bus is the number 91 ... I wake up early, put on a hat and sit at the back of the bus. I spend hours watching people: each person inspires me to write a song. People are open books to me: then it's up to me to write their autobiography. (La Repubblica Velvet 2008, own translation)

This statement is interesting in at least two respects. First, as noted by Nuvolati (Chapter 2), it confirms the strong links between the interpretive acts involved in observation of the crowd and artistic creativity. Second, the bus number 90–91 (the only line providing a 24-hour service during the week) is well-known in Milan for the high proportion of immigrants among the passengers. For many Milanese, the line also has a bad reputation in terms of danger and crime. How to explain that the same bus line generates such a variety of emotions, ranging from safety concerns to artistic inspiration?

This brings us to the third consequence of co-presence with strangers on public transport: the diversity of people who inhabit these spaces – another defining feature of public space. Notably, public transport is often identified with marginal, stigmatized or minority groups, especially in car dependent cities where non-car ownership is concentrated among older people and/or low income

households. For many people, public transport is one of the few contexts where these groups become *visible*, and this is met with mixed reactions. For *flâneur*-like people, this diversity is an asset, as they aim to ‘intercept and recount the most daring encounters between different populations’ (Nuvolati 2006:43, own translation) and are particularly interested in the observation of marginalized social groups. Others, however, experience this diversity as an annoyance, and this contributes to their dislike of public transport. For example, Henderson (2006:297) illustrates how the following comments about New York’s subway by baseball player John Rocker sparked much controversy in the US in 1999:

imagine having to take the number seven train to the ballpark, looking like you’re riding through Beirut next to some kid with purple hair next to some queer with AIDS next to some dude who just got out of jail for the fourth time next to some 20-year old mom with four kids. It’s depressing. (Pearlman 1999, quoted in Henderson 2006:297)

As illustrated by this quote, for some people the diversity of people on public transport is an annoyance *per se*. Most of the time, however, the process will be more complex: as Watson (2006) argues, ‘different cultures have different understandings of space and the kinds of embodied practices which are appropriate or not in public’ and ‘this can operate across racial/ethnic differences as well as those of age ..., or across gender and sexual orientation’ (Watson 2006:165–6). In that sense, the dislike for diversity in public space has often to do with the fact that ‘others’ behave in ways ‘that are deemed inappropriate or unacceptable ... because they are designated as “private”’ (Watson 2006:161).

In yet other circumstances, this dislike of diversity in the spaces of public transport is mediated by safety concerns. As Delbosc and Currie put it, ‘as a shared space, public transport can become the stage upon which clashes between social groups occur’ (Delbosc and Currie 2012:542). Notably, safety concerns are known to be an important barrier to the use of public transport (Delbosc and Currie 2012; Pangbourne and Beecroft 2013), particularly for older people, ethnic minorities and women (Lucas 2004): at the time of writing, the media are still debating the civil unrest caused in India by a case of gang rape on a bus in December 2012 (The Indian Express 2013). Public transport

is also a favoured target for terrorist attacks, especially since 9/11, and this can lead people to prefer other modes of transport (Elias, Albert, and Shiftan 2013).

To sum up then, public transport is one of the main contexts where urban dwellers experience two of the defining features of public space and urbanity: sharing space with strangers and dealing with diversity. However, people evaluate these features in different ways. Many city dwellers value these experiences, and are thus positively inclined towards public transport. Others loathe them, and tend therefore to seek shelter in the semiprivate space of the car. The latter group is the focus of the next section.

The Car as a Tool of Secession from Public Space

In Great Britain, the Department for Transport recently commissioned a report on ‘perceptions of congestion on motorways’, with the aim of understanding why many people continue to drive despite congested traffic conditions (Faber Maunsell 2008). One of the main findings from focus group research was that:

even in congested traffic most [drivers] said ... they could enjoy features of their car (where applicable), such as CD/radio, and that seating in a car was often more comfortable than public transport seating (and that a seat was guaranteed). ... In addition, they felt that one of the advantages of the car was that it offered them time alone, independence or space on the occasions they were able to travel alone, and this was seen as a key benefit when compared with public transport ... and most ... felt that time alone in the car was a key benefit compared with public transport. It was seen by some as often their only escape from busy working and/or family lives. (Faber Maunsell 2008:3)

In a nutshell, one of the main reasons for choosing driving over public transport is that it allows them to travel while remaining in a private space. To be sure, the space of the car cannot be defined as 100 per cent private: several elements (from the transparency of windows to the risk of collisions) are there to constantly remind drivers and passengers that they are sharing the public road with others. On the other hand, however, vehicles are an island of privacy in the midst of public space. Mitchell has conveyed this ambiguity through the metaphor of the bubble, protecting the passengers but ‘in other senses ... liable to be popped at any moment’ (Mitchell 2005:78).

Importantly, over time the ‘thickness’ of this bubble has increased. According to Urry (2006:26), there have been two main modes of ‘dwelling within the car’ over the course of the twentieth century. During the first phase (*inhabiting the road*), there were no ‘technologies of insulation’ and ‘the car-driver dwells-on-road and is not insulated from much of its sensuousness’ (2006:27). In a second phase (*inhabiting the car*), starting from mid-century, ‘those who dwell within the car are able ... to prevent the smells and sounds of the road outside to from entering the car’ (2006:27).

To sum up then, the private car offers more extensive control over surrounding space and expectations of privacy than public transport. Fraine et al. (2007) have shown that many drivers experience the car as a primary territory, such as the home. According to Flamm (2005), the privacy of the car allows a variety of modes of appropriation of travel time and indeed a growing body of research has shown the variety of activities that people enjoy while travelling by car. For example, Bull (2004) has shown that many people value the chance to listen to music in the high-quality listening environment of the vehicle, with the additional advantage that nobody can hear them sing along. Laurier (2004) has shown that ‘doing office work on the motorway’ is quite a common practice among commuters, especially when driving in congested conditions.

In addition, travelling by car does not usually entail co-presence with strangers inside the vehicle, at least if relatively marginal practices such as car-pooling, hitch-hiking and taxis are not taken into account. In the words of Urry (2006:27), ‘car-drivers control the social mix in their car just like homeowners control those visiting their homes’. This might be an asset for those who dislike the public nature of public transport, as illustrated in the previous section. For example, in a recent study focused on Berlin, Rahn (2012) has found that one of the underlying motivations for car use among suburban residents is the desire not to share public transport spaces with strangers.

Crucially, while many drivers seem to enjoy sole occupation of the car as a moment of ‘temporary respite from the demands of the other’ (Bull 2004:249), this does not mean that the private car is a place necessarily characterized by isolation and lack of sociability. In fact, the ‘domestic nature’ of the car space has been found to encourage intimate interactions between family members (Sheller 2004) and notably between mothers and children (Dowling 2000). As Urry (2006:27) puts it,

it is precisely those aforementioned technologies of insulation that ‘produce an environment in which a certain sociability can occur’.

Therefore, it would be wrong and naive to suggest an opposition between public transport spaces – depicted as places of social interaction – and the private car – stigmatized as a place of isolation and individualism. Indeed, social interactions between family members, friends and acquaintances inside cars are probably more intense and significant than most interactions occurring between public transport passengers. The crucial difference, however, is another: it is only in public transport places that we find the potential for face-to-face interaction with strangers and casual encounters – a defining feature of urban public space that is notably absent in private motorized mobility.

As a result, travelling by car precludes the experience of diversity: car commuters, for example, might share the same stretch of motorway every morning with other drivers very different from them (in terms of social class, ethnic group and so on), but they are unlikely to be aware of this. For many people, being able to travel without coming into contact with diversity is a welcome opportunity. This is particularly apparent in cities characterized by high levels of segregation and tension between social groups.

Henderson (2006:299), for example, in a study of the city of Atlanta (one of the most segregated *and* car dependent cities in the US), illustrated how the car provides whites with ‘a means of travel through the space inhabited by blacks, all without having to interact with blacks’. Similarly Sterrett, Hackett and Hill (2012:52–3) observed that in Belfast – a prominent example of a ‘divided city’ – residents avoid passing through the other community’s territory on foot or using public transport, but only feel safe doing so by car. In order to describe this phenomenon, Henderson put forward the concept of *secessionist automobility*, defined as:

using the car as a means of physically separating oneself from spatial configurations like higher urban density, public space, or from the city altogether ... [while at the same time seeking to] avoid people of other races or classes, or to avoid spontaneous interaction on public streets. (Henderson 2006:294–6)

Of course, this phenomenon is more apparent in cities like Atlanta and Belfast, where levels of residential segregation are higher than in most European cities (see van Kempen 2005). However, I argue that the notion of the car as a tool of spatial secession put forward by Henderson (2006) is a valuable approach for the study of other contexts as well, where the same processes may be at work in a less visible way.

Notably, such an approach would be a welcome antidote to the excessive focus of urban research on ‘residential segregation’ and its negative consequences. As argued by Martinotti (2005:93), ‘in current urban analyses many functions are considered, but the residential one is greatly overstated’. This implies, for example, that while residential segregation is intensively researched, the ‘micro-ecological dimension of segregation’ has been neglected (Dixon, Tredoux and Clack 2005). Similarly, I argue that the *mobile dimension* of social avoidance – how different social groups (do not) mix in the flows of quotidian mobility – constitutes an untapped field for social research. In the next section, I illustrate the results of an exploratory empirical study on this topic.

The Empirical Study

The Attitude Dimension

To sum up, public transport and the car correspond to two different types of space, which in turn relate to four dimensions of travel experience (Table 4.1).

Table 4.1 Dimensions of travel experience across the public–private divide

Dimension	Private car	Public transport
Control over surrounding space	Full	Very limited
Expectation of privacy	Rather great	Limited
Co-presence with strangers	Generally absent	Defining character
Experience of diversity	Generally absent	Generally present

Source: Mattioli (2013).

Urban dwellers, on the other hand, differ in their evaluation of the features listed in Table 4.1. Notably, existing research suggests that they diverge in their evaluation of co-presence with strangers,

which is a defining character of both public transport and public space. As I argue elsewhere, these diverging attitudes:

deal rather clearly with the values of privacy and publicness in contemporary urban life, and should thus be of interest to scholars concerned with the relations between public space and mobility in cities. At the same time, they should also draw the attention of transport scholars, since it may be assumed that these diverging views may even contribute to leading people to different ‘modal choices’ of transport means. (Mattioli 2013:46)

In this section, I move from the (rather simplistic) assumption that a single attitude *continuum* is capable of explaining the varying propensity of people to share space with strangers during daily mobility. I call this dimension *secessionism–social mixing in mobility* (SSMM). In doing so, I draw the term ‘secessionism’ from Henderson’s study of automobility in Atlanta (2006), but I use it to shed light on the micro-level of individual attitudes and behaviours, rather than on the macro-level of the ‘politics of automobility’.

Moreover, I argue that it is useful to break down this attitude dimension into three main sub-dimensions:

1. *co-presence and possibility of interaction with strangers on public transport*: with regard to this sub-dimension, I expect *secessionist* individuals to express dislike towards it, and the propensity to avoid this experience through the use of the private car. On the other hand, I expect *pro-social mixing subjects* to value this defining feature of public space, and to express liking for practices of *flânerie* such as observing others or listening to their chatter, as well as for the simple experience of ‘being among the crowd’.
2. *diversity of people on public transport*: with regard to this sub-dimension, I expect secessionist people to dislike this feature of public space, notably in relation to safety concerns and/or the visible presence of marginal or minority groups. By contrast, I expect subjects at the other end of the spectrum to report high levels of enjoyment for diversity, notably in relation with voyeuristic activities such as observing the crowd and so on.
3. *sole occupancy of the car*: with regard to this sub-dimension, I expect secessionist subjects to report higher levels of preference for driving alone. On the contrary, I expect

pro-mixing subjects to dislike this, as their propensity to enjoy crowded places should predispose them to perceive this as a form of seclusion and isolation from the outside world.

In order to test empirically whether this attitude dimension exists, I generated a Likert scale including 28 items, meant to measure the position of respondents on the SSMM *continuum*. The items were written using the sub-dimensional structure illustrated above as a point of reference, as illustrated in Table 4.2.

Table 4.2 **Examples of items in the SSMM scale**

Sub-dimension	Secessionism	Social Mixing
Co-presence and interaction with strangers on public transport	‘One of the things I like about the car is that I don’t have to share my space with strangers’	‘I like mixing with people on public transport’
Diversity of people on public transport	‘There are too many weird people on public transport’	‘One of the things I like about public transport is that there’s a huge variety of people mingled together’
Sole occupancy of the car	‘One of the things I like about driving alone is that I can behave as if I were at home’	‘One of the things I don’t like about driving alone is that it’s lonely’

The SSMM scale underwent two rounds of pre-testing: these are described in the following section.

Qualitative Findings

The scale was pre-tested on a small sample (n=12) stratified by age, gender and education level (all respondents had a driving licence): a rarely-used pre-testing procedure, called respondent debriefing, was performed in the Milan area in 2009. The main goal of the procedure was to ensure that the meaning of the item as written in the questionnaire was consistent with the way respondents interpret it (Hughes 2004). This meant conducting standardized interviews with follow-up (open) questions (in-depth probes): essentially, respondents were first asked to fill in the questionnaire, including 28 five-point Likert-scale items, and then, for each item, to explain ‘why’ they had chosen to rate it as they did.

The material gathered through the interviews provides interesting insights into how respondents experience public transport. Indeed, several respondents confirmed that they like to indulge in observing other passengers while they travel:

you have a chance to see what's around you ... of course, you look around ... maybe your gaze falls on certain types of people [laughs], girls for example! (SA, 25, male, high level of education)

I often watch people ... there are passengers who ... behave in a certain way, I don't know ... maybe they're reading the newspaper and so ... they react to what they're reading or ... there are similar situations ... I get curious ... you listen, you see, you know what I mean? There are a lot of people who make gestures ... perhaps without realizing it, or maybe they think no one is watching, because they're in the crowd ... This is strange behaviour, sometimes they make you smile, sometimes they disturb you ... I mean, when you travel ... if I'm not reading I focus on ... on everything, I look around me. (RG, 56, female, low level of education)

In this context, several respondents also agreed that part of the reason they like watching other passengers is to experience diversity. Different factors were mentioned and appearance or dressing style was one of them:

there are people dressed weirdly ... I mean, like ... there are people who look like they are straight out of a fashion magazine ... and then you see people who throw on anything ... so they're wearing a strange mix of clothes and it's interesting to see ... what they wear because ... I mean, sometimes it makes me laugh, other times I admire them. (CI, 25, female, high level of education)

[I like it] because you see all kinds of people ... fat people, skinny people ... I like to watch people ... how they behave ... how they express themselves, how they dress, you know what I mean? Their clothes especially, also because ... there are all kinds of people and I like ... to watch people. I am the observer-type. (GP, 67, male, low level of education)

However, the most frequently mentioned factor of diversity was national, regional and/or ethnic origin:

you see the weirdest people ... the most incredible races, I mean ... people I'd expect to see in Bangkok or Manila, but I find them in Milan ... so I'm intrigued, as I would be travelling ... hearing them speaking weird languages, it fascinates me ... [notably]

black people: their clothes, their hair ... their way of carrying themselves, their behaviour, it makes me really curious, that's all. (GP, 67, male, low level of education)

by 'interesting people' I guess I mean ... foreign people ... people who you can really tell they're foreign, because frankly ... I love seeing foreign people in Milan, I mean, you think 'cool, they've come to Milan!' ... When there's a football match, for example, you see the supporters ... or when there's a trade fair in town, and so on ... yeah, foreigners, different people, you see right away that they're different and therefore they're interesting. (SA, 25, male, high level of education)

I try to ... guess their origin, even of Italians ... maybe just from how they pronounce a word ... 'he's from Tuscany, she's from Sardinia' ... yeah, I like it. It's also a way of killing time as well, travel time, you know? I mean it's a kind of study ... that people do, that I do. (RG, 56, female, low level of education)

Interestingly, a respondent spontaneously made the link between the propensity to share space with strangers, urbanity and arguments that recall the ideal-type of the *flâneur*:

maybe it's also because I'm used to living in Milan, I mean: perhaps if I was born in a small town I'd hate it [sharing space with strangers on public transport] but it's something that makes me feel like I'm ... part of a big city and ... I like it when I'm abroad as well ... abroad even more so, because you're really among ... well, it's just foreign people, so you're actually the foreigner and you have that kind of sensation. (SA, 25 male, high level of education)

While interview results provide support for the hypothesis that some people like social mixing on public transport, they also confirm that this does not apply to everyone. To others, the very idea of enjoying the presence of others on public transport does not make sense:

I don't care who's on the tramway, whether they're all the same or all different [laughs], it's all the same to me ... it's just annoying if there are too many of them ... I really don't care what they're like. (MM, 70, male, high level of education)

I usually meet interesting people at concerts ... I'm not expecting to meet interesting people on public transport ... how am I supposed to recognize them? By looking at their coat!? I have no idea ... I don't have any particular interest in relationships on ... public transport. (NDL, 53, female, high level of education)

However, it is interesting to observe that no interviewee explicitly expressed dislike for the diversity of people on public transport, despite the fact that two items in the scale encouraged them to do just that. There are good reasons to believe, however, that this is a by-product of a social desirability response bias, probably made worse by the nature of the interviews (face to face). Indeed, the results of an online survey including the same items provide a different picture (see below).

With regard to the car, the interviews also suggest that, for some, the domestic nature of vehicles makes them an attractive choice for urban mobility:

When you're inside the car, it's like being at home ... of course, this is relative, you're still outside ... but perhaps you can behave in certain ways because ... you feel at home. Something that you can't do ... on the bus for example, because you're with other people, you're surrounded. (GF, 60, male, low level of education)

I don't have any problem sharing space with strangers but it's different ... I mean, the car ... is a place where I can eat, I can do certain things ... actually, I find it ... sometimes it's convenient to be on a means of transport that isolates you, isn't it? In a city where you are always in close contact with the outside world, to a certain extent. (NDL, 53, female, high level of education)

By contrast, only few respondents agreed that they perceive sole occupancy of the car as an unpleasant form of isolation:

I don't like [laughs] being alone in the car ... so maybe I turn on the radio, to keep me company because ... feeling isolated inside the vehicle it's not nice, it feels like time drags on, it feels longer. (MC, 63, female, low level of education)

In a nutshell, these qualitative findings suggest that preferences either for the public spaces of public transport and for the 'domestic' space of the car correspond to real attitudes. When respondents were asked to elaborate upon them, they put forward arguments that recall theoretical concepts such as 'the *flâneur*' and secessionist use of the car.

However, the interview results also indicate that the contrast is not entirely clear-cut: several people expressed a liking both for the sharing of space and diversity on public transport *and* for the privacy afforded by automobile trips. To investigate the associations between these different attitudes more systematically, it is necessary to use quantitative methods.

Quantitative Findings

From a methodological point of view, the results of the respondent debriefing led to the selection of 22 items out of 28: six items were dropped, because respondents interpreted them in ways that were not consistent with a priori assumptions. Qualitative findings also led to changes in wording for several other items.

In order to explore the articulation of the scale, the 22 items retained were included in an on-line questionnaire submitted to the students of the University of Milano-Bicocca in April 2010. All students with a campus email address received an email inviting them to participate to the survey. Students without a driving licence did not have to answer the SSMM items, because some items referred to sole occupancy of the car.

The resulting sample was large therefore ($n=1,771$), but self-selected. Admittedly, this sample is not representative of the population of Milan. However, the use of 'convenience samples' (typically students) is widespread for the pilot-testing of attitude scales (Netemeyer, Bearden and Sharma 2003:116).

The results of the quantitative analysis shows the following: the correlation matrix shows that 253 out of 261 correlations between the items are statistically significant (at least at the 0.01 level) *and* in the expected direction. Since most exceptions are related to a single item, also showing low values of item-total correlation, this was excluded from further analysis. The resulting 21-items scale shows a high level of internal consistency (Cronbach's Alpha = 0.90).

However, this is not sufficient to argue that the scale is one-dimensional. In fact, the results of principal component analysis (with varimax rotation) suggest that the patterns of correlation between items are best explained by four factors (accounting for approximately 60 per cent of the variance). Accordingly, I have grouped the items into four additive indexes, each corresponding to an (internally consistent) attitude scale, as illustrated in Table 4.3.

Table 4.3 The four attitude scales retained after principal component analysis

Scale		Item with highest factor loading	No. of items	Cronbach's Alpha
1	Repulsion against public transport passengers	'Sometimes I'm scared of people on public transport'	7	0.86
2	Propensity to mix on public transport	'It is interesting to watch people on public transport'	7	0.85
3	Liking for isolation / sole occupancy of the car	'One of the things I don't like about driving alone is that I feel isolated from the outside world'	4	0.80
4	Liking for the car as a private space	'One of the things I like about driving alone is that I can behave as if I were at home'	3	0.71

Source: Mattioli (2011).

It is interesting to observe that the scales do not correspond to the sub-dimensions hypothesized a priori (Table 4.2). Notably, the first scale includes seven items that linked the co-presence of other public transport passengers with negative feelings (fear, embarrassment, annoyance): therefore, it measures 'repulsion against public transport passengers'. The second scale includes seven items that, by contrast, refer to public transport passengers positively, as well as mentioning interactions on public transport. The fact that these 14 items do not correspond to a single, one-dimensional scale might be interpreted as a sign that, for some people, other passengers on public transport arouse ambivalent feelings. While they can cause fear and anxiety, these can co-exist with a certain 'propensity to mix on public transport'.

The third scale gathers four items meant to measure preference for sole occupancy of the car. Notably, detailed results for these items (not reported here for the sake of brevity) suggest that most (albeit not all) respondents refuted the statements that linked 'driving alone' to feelings of isolation. Finally, the fourth scale includes three items linking positive feelings to the private space of the car.

The fact that the patterns of correlation between items are best explained by four distinct latent constructs does not mean, however, that every combination of scores on the four scales in Table 4.3 is equally likely. In fact, the scales are strongly correlated in the expected direction with each other, meaning for example that subjects with strong repulsion against public transport passengers are also

more likely to like the private space of the car and less likely to have a high propensity to mix on public transport (detailed results are not reported here for the sake of brevity). The exception in this context is the third dimension ('liking for sole occupancy of the car'), that is only weakly correlated with other scales. This could be due to low agreement with items that link 'isolation' with sole occupancy in the whole sample.

In order to illustrate typical response patterns in the sample, I conducted cluster analysis (k-means), using the four additive indexes in Table 4.3 as input variables. A four-cluster solution was retained, as it represents the most distinct clustering (accounting for 54 per cent of between-cluster variance). Table 4.4 shows the mean values of the clusters on the four scales (values ranging from 0 to 10).

Table 4.4 Cluster profile and cluster size (mean and per cent values)

Cluster	Repulsion against public transport passengers	Propensity to mix on public transport	Liking for isolation / sole occupancy of the car	Liking for the car as a private space	Cluster size (%)
1 Secessionists	6.7	3.3	8.1	8.5	25.3
2 Moderate secessionists	5.2	5.5	5.0	7.2	30.4
3 Pro-mixing / pro-car	3.0	6.0	7.6	5.7	27.4
4 Pro-mixing	2.3	7.4	3.3	4.4	16.9
Total	4.5	5.4	6.2	6.6	100.0

Source: Mattioli (2011).

The results show that 25 per cent of students can be described as outright 'secessionists': indeed, they combine a strong appreciation for the car with strong repulsion against other passenger and low propensity to mix on public transport. The largest group, however, is the 'moderate secessionists' (30 per cent), combining higher than average repulsion for public transport passengers with average propensity to mix on public transport, and a strong liking for the private space of the car with a lower than average appreciation for sole occupancy.

Taken together, the two 'secessionist' groups account for little over half the sample, while the remaining 45 per cent is closer to the pole of 'social mixing'. In detail, 17 per cent of students can be

described as outright ‘pro-mixing’ subjects, who have weak repulsion against other passengers, the highest propensity to mix on public transport and weak appreciation of the private space of the car. Another intermediate group (‘pro-mixing / pro-car’) has similar (but less extreme) values on most scales, but scores very high on the ‘liking for sole occupancy’ scale: it accounts for roughly one in four students.

Table 4.5 Frequency distribution across the clusters, by gender and residence area (per cent values)

Cluster		Men	Women	Milan city-proper	Suburban areas	Total
1	Secessionists	21	28	21	26	25
2	Moderate secessionists	29	31	26	31	30
3	Pro-mixing / pro-car	30	26	32	28	27
4	Pro-mixing	20	15	21	16	17
Total		100	100	100	100	100

Source: Mattioli (2011).

As illustrated in Table 4.5, the frequency distribution of the groups varies according to crucial socio-demographic attributes. Notably, secessionist clusters are overrepresented among women (59 per cent) and in the suburbs (57 per cent), while ‘pro-mixing’ clusters are overrepresented among men (50 per cent) and in the city-proper of Milan (53 per cent). How to interpret these patterns? The gender difference is consistent with existing transport research, suggesting that women are more concerned about safety on public transport (Ortoleva and Brenman 2004; Delbosc and Currie 2012; Pangbourne and Beecroft 2013). This might lead them to experience casual encounters on buses and trains with more anxiety than their male counterparts, and thus to a preference for the ‘protected’ space of the private car.

The higher incidence of ‘secessionism’ among suburban residents can be interpreted as follows: living in car dependent areas where levels of public transport service are lower (as compared to the core city) is likely to lead to the development of pro-car attitudes (Næss 2009:161). If this is true, structural constraints would be the main determinant of travel behaviour (car use), which in turn would explain the development of ‘secessionist’ attitudes in daily mobility. For example, suburban

residents might be wary of sharing space with strangers on public transport, because of lack of experience or cognitive dissonance reduction (Festinger 1957). This does not mean that studying attitudes is irrelevant, as empirical studies have shown that pro-car attitudes, once established, might in turn ‘freeze’ behaviour and make it more resistant to change (Golob and Hensher 1998), even when structural conditions change.

Unfortunately, however, the questionnaire did not include questions about travel behaviour: it is thus impossible to ascertain whether secessionist attitudes are associated with greater car use and, conversely, the propensity to share space with strangers is correlated with greater use of public transport. Further studies might shed light on this particular point.

Implications for Urban Scholarship

Overall, the empirical results reported in this chapter suggest a preference for the car is partly connected to the fact that it provides a bubble of private space in the midst of cities, thus allowing car users to avoid contact with strangers and to ‘secede’ from public space. Conversely, part of the reason for preferring public transport (or not) is the fact that it is a form of public space, defined by the co-presence with strangers and by urban diversity.

In light of this evidence, it is surprising that urban scholars have rarely recognized the spaces of public transport as a form of public space. As I argue in more detail elsewhere (Mattioli 2013), this neglect is perhaps due to their *mobile* nature, which contrasts with the long-standing argument that mobility is somehow detrimental to urban public space.

Indeed, much of the debate surrounding urban public space has focused on the (disputed) assumption that public space in contemporary cities is increasingly degraded and threatened by other uses, as well as by processes of privatization (Tomas 2001). In this context, the advent of the automobile has been criticized for its negative impact on urban public space. The car has monopolized the public street, where different activities and modes of transport used to have equal access (Norton 2008). Increasing motorization has meant the proliferation of ‘car-only environments’ (Urry 2000:193) such as motorways and parking spaces, thus displacing other uses of urban space. Notably, scholars have exposed the fragmentation of neighbourhoods and the degradation of public spaces in areas adjacent to road infrastructure (Jacobs 1961). Overall, the idea, as argued by Jain and Guiver, is

that ‘space has ... been redistributed away from those moving around in local communities to those travelling through the space of others’ (2001:574). Finally, cars have been held responsible for the rise of a new form of settlement: suburban and periurban areas, where the public spaces that were commonplace in pre-industrial cities are now only rarely found.

While the negative impacts listed above are undeniable, this excessive focus on the automobile has led scholars to (more or less explicitly) assume a simple opposition between traditional, walkable cities, with plenty of opportunities for interaction in public space, and car-dependent sprawling areas, where private spaces are scattered over a network of inauthentic ‘non-places’, defined by movement (Augé 1995; Merriman 2004). However, by contrasting *walking* with *powered transport*, this view has generally failed to distinguish between different forms of powered transport, overlooking the significance of public transport.

Interestingly, this view has been so pervasive that even public transport companies have adhered to it. For example, in a position paper focused on ‘the benefits of public transport’, the International Association of Public Transport argues that:

A high quality urban realm is important to citizens’ quality of life and to businesses deciding where to locate. *Public transport has a huge impact on the quality of the urban realm, most significantly by reducing the volume of car traffic on cities roads, and hence the noise, congestion, danger and waste of space caused by such vehicles. The efficiency of public transport provides the capacity for people to access city centres, whilst also allowing valuable public space to be used for walking, cycling, relaxing and enjoying our cities.* (UITP – International Association of Public Transport 2009:3, emphasis added)

As is apparent from this quotation, the widespread assumption is that increasing public transport supply is a good way to reduce the impacts of ‘bad’, public-space-unfriendly modes of transport (cars) and to increase the feasibility of ‘good’ modes of transport (walking and cycling), that allow people to best enjoy public space. The notion that public transport *as such* constitutes a form of urban public space, where people experience (and even enjoy!) the co-presence and the diversity of others, is nowhere to be found.

As Bertolini and Dijst (2003:35) argue, many of the most well-documented forms of public space such as ‘pedestrianized streets and squares in historic city centres’ have historically developed ‘along routes or at junctions for pedestrians or cyclists’. It is thus meaningless to oppose movement to public space, since ‘places where mobility flows interconnect have the potential for granting the diversity and frequency of human contacts that are still essential for many urban activities’ (Bertolini and Dijst 2003:35).

Driven by similar considerations, in recent years, a number of scholars have studied ‘mobility environments’ (Bertolini and Dijst 2003) as forms of public space: however, most of the attention has been drawn by *transport nodes* such as street crossings (Jensen 2010), railway stations (Bertolini and Dijst 2003) and airports (Nikolaeva 2012). By contrast, environments such as buses, subway cars and trains are still largely neglected, perhaps because they are ‘moving’ rather than still.

Based on the theoretical arguments and empirical evidence illustrated in this chapter, I argue that these spaces should also be considered as fully-fledged public places. The best demonstration of this is that people recognize them as such, and their liking (or disliking) of public transport is also affected by their own relationship with the defining features of urban public space.

Notably, in this chapter I have developed the notion, originally proposed by Henderson (2006), that some people use the car as a tool of ‘secession’ from public space. This concept is arguably a good analytical tool to show how social avoidance and segregation in urban areas have a dimension of *mobility*, as well as residential. This research direction would certainly benefit from further studies, employing a variety of methods. While in this study I have chosen to rely on the concept of ‘attitude’, using techniques such as the standardized questionnaire and the qualitative interview, there is room to invent different approaches to the study of secessionism and social mixing in mobility (involving ethnographic and mobile methods as well).

Overall, the idea that public transport constitutes a meaningful type of public space has interesting implications. One would be tempted to argue that public transport use has a positive impact on individuals, as they learn to negotiate the stranger phenomenon and to deal with urban diversity. Transport historian Errázuriz (2011:1–2), for example, has argued that the introduction of motorized public transport fostered the development of ‘important civic values associated with

metropolitan life' such as 'an inclination towards more tolerant attitudes'. The public transport experience should thus be considered – he argues – as 'an instrument of civic education' (Errázuriz 2011:6).

However one should keep in mind that, as Amin (2008) argues, there is no such thing as a direct and simple relationship between civic culture, political formation and urban public space, since there are today numerous alternative sources of civic and political formation. Therefore, the relationship between social mixing on public transport and the development of civic values should be an empirical question, rather than an assumption.

Still, the evidence illustrated in this chapter suggests that those European cities that have managed to preserve high levels of public transport use should be considered as a favourable context for the endurance of urban public space (regardless of its impacts on the public *sphere*), because public transport allows a kind of negotiation of the stranger phenomenon that is attractive to (at least) some urban dwellers. By contrast, sprawling and car-dependent urban areas limit this possibility, because they create equivalence between daily mobility and the private space of the car, where urban diversity is seldom experienced. This chapter provides initial, exploratory evidence that this might lead to the development of 'secessionist' attitudes to public spaces and mobility.

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