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Beyond the dilemma of mobility: exploring new ways of matching intellectual and physical mobility

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Abstract. Mobility has become a central aspect of many people's lives. This is the natural result of the massive investments made in the transport sector throughout the world. These investments were made because the benefits provided by mobility are many. However, the negative effects resulting from mobility cannot be ignored when sustainability is considered. This poses a question: how can we experience the positive effects of mobility without experiencing the negative ones as well? Through the use of an unorthodox paper structure we facilitate the exploration of multiple directions of academic scrutiny which might provide solutions for this question.

Keywords: mobility, accessibility, holism, role playing game

Introduction
Transport networks have experienced continuous development for thousands of years. In the last century, in particular after the Second World War, transport infrastructures experienced an unparalleled (r)evolution. An enthusiastic author has called it the revolution against the tyranny of space (Warntz, 1967). As a direct result, mobility became a central aspect of our societies and even of ourselves (Elliott and Urry, 2010). As so many people nowadays are not only affected by, but also strongly dependent on, mobility, it seems that for them the tyranny of space is being replaced by the tyranny of mobility.

Many current environmental and societal problems are attributed to this growing role of mobility, especially car-based mobility (Banister, 2005; 2008; Sheller, 2004; Steg, 2005; Urry, 2004; 2008; 2010). However, the aforementioned revolution also had many benefits. Indeed, mobility improves not only the accessibility of individuals to jobs, services, social contacts, and leisure activities; but also the accessibility of companies to employees, clients, services, information, and material resources. Policy makers, academic researchers, planners, geographers, engineers, and many other professionals are being asked to find a way to keep these advantages while managing the disadvantages of mobility. This daunting challenge has been coined the 'dilemma of mobility' (Bertolini and le Clercq, 2003): how to achieve both sustainability and accessibility?

The objective of this paper is to propose a learning tool for improving our skills to think about this complex problem.

We feel that the way out of this dilemma encompasses a ‘holistic understanding of mobility’ (Cresswell, 2008; Cresswell and Uteng, 2008). By this we mean a deep and interdisciplinary understanding of what mobility gives to and takes away from the quality of life of individuals and society. The purpose of this higher level of understanding is twofold: (i) to identify more sustainable ways of achieving the same (if not a higher) quality of life in contemporary societies; and (ii) to know how to implement these changes in a way which people can accept. This implies that it is necessary to remove the “artificial disciplinary and sub-disciplinary divides between different sets of research which have mobility at their centre” (Cresswell, 2008, page 130), as this will facilitate better and deeper insights about the ramifications of mobility practices. As argued by Urry (2000), physical, imaginary, and virtual movements are becoming the finest concepts to understand contemporary social life. As a result, we should not only pay more attention to what it entails to be mobile today, but also we should be prepared to recognise that mobility is actually more influential in our lives than we might expect. Our argument is that it will be easier to understand how to solve the dilemma of mobility when we understand better what mobility actually is and what it represents for the contemporary person. In our view, the central problem lies in the second purpose addressed above: how to implement sustainable forms of mobility which people can accept. There are strong implementation barriers impeding these changes (Banister, 2008; May and Marsden, 2010) which are very difficult to overcome. For example, people attach strong emotional meanings to the car (Dennis and Urry, 2009; Sheller, 2004; Steg, 2005) and so for an individual to accept a modal shift to collective transport he or she has to let go all these attachments. The purpose of this paper is to provide a simulation experience in which disciplinary divides are transcended by means of imaginary mobility (more details are presented below). Hopefully, this will facilitate the emergence of new ways of envisioning solutions (or, at least, of increasing awareness about the available options) and, maybe, new ways of creatively ‘formulating the problems’ (see Runco, 1994) posed by mobility.

The paper is structured as follows: in the next section, the dilemma of mobility is explored in further detail. After a discussion on what mobility is, we discuss its positive and negative effects. Then an innovative approach to the study of mobility is presented. We conclude with a discussion and indicate future research directions.

Mobility and accessibility

Before we discuss the effects of mobility, it is important to define it. But before we define mobility, we want to distinguish ‘mobility’ from ‘accessibility’ (Bertolini and le Clercq, 2003; Ferreira and Batey, 2007; Handy, 2002). Putting this into simple terms, accessibility to places and activities is what people want. These activities and places are frequently spatially disjointed. To travel between these, mobility is needed. Mobility is then a way to achieve accessibility.

Our understanding of mobility comprehends, but not in an exclusive fashion, physical movement in space. Commuting, for example, is a form of mobility, but there are other forms. Mobility can be seen as including (1) physical travel of people—the category in which commuting is included; (2) physical movement of objects; (3) imaginative forms of travelling, using images, films, and memories; (4) virtual travelling using information technologies; and (5) communicative travel through person-to-person messages such as letters and postcards (Larsen et al, 2006). We would like to add another form: (6) the crossing of boundaries imposed by classical disciplinary views. This would be a form of ‘intellectual mobility’. In line with this we define mobility as being:
“a relational concept characterized by the overcoming of physical, mental, conceptual or other types of distance, or by the transgression of a state or condition. To describe an activity in terms of motion is to declare that it implies the transgression of a difference. Hence it also involves the declaration of the relevance of certain types of distinction, such as the distinction between ‘here’ and ‘there’ or between different academic disciplines or different imaginary worlds. It is the distinction that constitutes the difference that is overcome by ‘movement’ ” (Frello, 2008, page 32).

Note that, when people generally address mobility, they are thinking mainly about the first and second types of mobility described by Larsen et al (2006): physical travel of people and physical movement of objects. This can be presented as a narrow definition of mobility, one basically focused on physical movement of people and goods. The positive and negative effects of mobility—discussed below—generally follow our broader definition.

**Positive effects of mobility**

The positive effects of mobility are many. We will present a short list—not aiming to cover all of them, but to show their relevance.

Firstly, social well-being and the economic prosperity of our societies are largely related to mobility. Individuals need mobility to have access to jobs, social networks, family members, information, goods, and basic services such as health and education. Accessibility to jobs is a particularly well-informed topic in this area of research (Cervero, 1989a; 1989b; 1996; Cervero and Duncan, 2006; Giuliano, 1991; Kain, 1968; Peng, 1997; Quinn, 1984; Sato, 2004). There is also a line of research concerned with the general relationships between economic development and mobility infrastructures (eg, Aschauer, 1989a, 1989b; Banister and Berechman, 2000; Glaeser and Kohlhase, 2004; Krugman, 1991; Limao and Venables, 2001; Preston, 2001; Rostow, 1971). This line of research builds upon the notion that mobility gives firms access to markets (eg, of employees, clients, business services, information, and material resources) and thus is a factor in the productivity of firms and local economies (Prud’homme and Lee, 1999). Mobility also promotes social inclusion and equality because it facilitates access to jobs, knowledge, and social networks (Cass et al, 2005; Gray et al, 2006; Kenyon, 2003; Kenyon et al, 2002; 2003; Lucas, 2004; 2006; Parkhurst, 2003; SEU, 2003).

Secondly, mobility promotes an enhanced understanding of the world. We easily take for granted practices and understandings which have shaped our lives from an early stage (Berger and Luckmann, 1985). The extent to which new ideological perspectives are developed and old perspectives are maintained is a partial result of people's access to new ideas, people, and places (Pred, 1981a; 1981b).

Thirdly, mobility facilitates surmounting boundaries imposed by disciplinary academic approaches which fail to be 'intellectually mobile'. Sterman (2002) claimed that people become particularly unaware of the effects of their actions when they fragment knowledge into compartmentalised disciplines. Sterman's ideas are in line with Morin's (1992) epistemological views. Lack of intellectual mobility is sometimes apparent among transport policy makers. Some authors have discussed this problem: namely, Ferreira and Batey (2010), Talvitie (1997), and Willson (2001).
Negative effects of mobility

We also present a selection of the most relevant negative effects associated with mobility, without aiming for completeness. Among the most commonly addressed negative effects of mobility are its environmental, social, and financial costs. We call these ‘direct negative effects’. We address them as ‘direct’ because they can be more or less straightforwardly measured (see, for example, the textbook of Meyer and Miller, 2001). Among the environmental costs we can mention are the use of nonrenewable energy and CO₂ emissions, while the loss of time due to traffic congestion and casualties resulting from traffic accidents are among the social costs. The financial costs are associated, for example, with the mitigation of the previous social and environmental costs, with the development and maintenance of roads and other infrastructures by the public sector, and with the acquisition and maintenance of cars by private individuals.

Secondly, we can address the almost irrevocable changes in land-use patterns resulting from physical mobility. Especially since the advent of the car, these land-use patterns have become ever more extensive and consumptive of nonrenewable resources such as open spaces or natural habitats. They also make people dependent on the car in order to have access to the places where they work, live, and meet people, resulting in a self-reinforcing feedback cycle. This is a less obvious, though important, drawback. A large amount of literature is available on this topic (eg, Ascher, 1995; Banister, 1999; Breheny, 1995; Buchanan et al, 1963; Burton, 2000; Cervero, 2001; Christaller, 1966; Ewing, 1997; Giuliano and Small, 1993; Gordon and Richardson, 1989; 1997; Hall, 2001; Hansen, 1959; Janelle, 1968; 1969; Kenworthy and Laube, 1999; Lucas, 2004; Martin, 1972; Newman and Kenworthy, 1989; Rickaby, 1987; Schwanen et al, 2004a; 2004b; Thomas, 1964). Despite all this excellent research, a consensus about how to deal effectively with this problem has not yet been achieved.

Thirdly, there are negative effects related to the emergence of a new ethic based on mobility and consumerism (Baudrillard, 1998; Bauman, 1995; 2005; 2007). Authors warn against the dangers of lifestyles in which mobility is used to achieve maximum self-enjoyment from dealings with new places, people, and events. When the potential for self-satisfaction of a certain situation decreases, the individual will move on as a new source of thrills is required. This lifestyle naturally represents a serious problem for those who cannot afford to be mobile. Sennett (1998) provides reflections which support these claims. This lifestyle is becoming increasingly more common because of the ubiquity of consumerism and mobility infrastructures—which is one of the reasons why we address the tyranny of mobility. The rise of the ‘network sociality’ (Wittel, 2001), in which human relations are deprived of depth and emotional meaning, is another risk associated with mobility. There are promising ideas for research in this area (see Bergmann and Sager, 2008).

Fourthly, we must mention the negative effects of ‘intellectual mobility’. Commenting on the motivation of people involved in urban and transport policies to have a broad understanding of reality facilitated by a vast interdisciplinary knowledge, Lynch and Rodwin (1958, page 203) stated that what is to be expected from them is “integrated, comprehensive incompetence”. Indeed, planning has become a highly interdisciplinary and multifaceted field of knowledge (Ferreira et al, 2009). Planners have some understanding about many disciplines. Planning theory is also based on a widely varied body of adjacent literature (Allmendinger, 2002; Allmendinger and Tewdwr-Jones, 2002). Planners are quite capable of performing ‘intellectual movements’ from one discipline to another. However, ‘we’ (all the authors of this paper are planning researchers) do not really know what a good city form is—despite the fact that we are supposed to be the ‘city experts’ (Talen and Ellis, 2002). Intellectual mobility can indeed
represent lack of rigour and ‘can do’ skills, as it can mean a lack of proficiency in a specific area. It should be noted, however, that much good work has been done on finding ways out of this problem (eg, Naess and Saglie, 2000).

Exploring a new way to think about mobility
Mobility has several important positive and negative effects for contemporary societies. This makes contemporary transport policy making a particularly difficult task: for “urban transportation planners these are the challenging times” (Bertolini et al, 2008, page 69). The key problem seems to be that of how to overcome the implementation barriers and to improve the acceptability of measures which will promote sustainable trends in transport—that is, maintaining the benefits while reducing the costs (Banister, 2008; May and Marsden, 2010). Among these measures we can cite technological improvements which lead to increased efficiency, modal shift towards collective modes of transport, increased use of virtual forms of mobility, land-use policies which minimise travelling distances (eg, jobs–housing balance and retail–housing mixing) and transit-oriented development, congestion pricing, new institutional arrangements and policy integration, and the promotion of new cultural understandings (see, for example, Banister, 1999; Boarnet and Crane, 2001; Cervero, 2004; Cervero and Duncan, 2006; Ferreira and Batey, 2007; Giuliano, 1992; Handy, 2002; Handy and Clifton, 2001; Hull, 2008; May and Marsden, 2010; Rickaby, 1987; Rickaby et al, 1992; Zhang, 2006). Our argument is that, in order to address the key problem posed by implementation barriers, it is also necessary to achieve a deep, holistic, understanding about what mobility represents to people. This deeper understanding will hopefully provide the necessary insights to enable policy makers and researchers to move forward more effectively. Consequently, the objective of this paper is to propose a tool to help the development of holistic thinking skills. With this aim, we now present an original experiment. Our aim is to show that there is ‘room for manoeuvre’ in the study of mobility. Innovative techniques can allow us to sketch out innovative approaches for thinking about mobility. We continue this argument after the next section, in which the reader is invited to play a mobility game. First, however, we would like the reader to become immersed in some imaginative and cognitive travelling. Have a good journey and see you on the other side!

Playing a mobility game
The start: Place 1
You have moved to a different city because of your new academic job. You have come with your partner. You do not know this city at all, you have never been here until you got this job. The induction process finished today, this is the first day that you leave before evening. Your partner is expecting you to arrive home late. You have some time to do whatever you want. You go to the street in front of your department. You look to your right-hand side: the street leads to the city centre. On the left-hand side the street is more open: a few blocks away there are large trees on the pavement and the street becomes much less crowded. You decide to walk home. You can walk towards the city centre, or you can walk towards the greener area of the city.

While you think what to do, you might take into consideration that “what is available affects what we perceive to be possible and what we perceive as desirable can alter the [perceived] available options” (Hodkinson et al, 1996, page 3). You only have these two possible things to do, you might think that you are too limited in your “horizons of action”. However, that is not the case because reading this paper might not be perceived by you as a desirable option anymore, there are many papers available in the academic
literature. Actually there are so many, virtually infinite, possible things to do right now…

What are you going to do then?
Walk towards the city centre—Please go to Place 2
Walk towards the green area—Go to Place 3
Stop reading and do something completely different—Leave this here and come back to this point later.

Place 2
You are walking towards the city centre. The street offers a pleasant walk. A small building has a sign on the door. Music School. The walls of the building are painted with saxophones, harps, and all sorts of instruments. Do you enter?
Yes—Please go to Place 4
You continue walking—Please go to Place 5

Place 3
You are walking now through a green area. The trees substantially change the ambience. People look relaxed. There are cafes with people seated outside drinking wine. You see an art gallery. A sign on the door says that a free charcoal drawing class is just starting. What do you do?
Enter the gallery—Go to Place 6
Continue walking—Go to Place 11

Place 4
You enter the building. You can hear someone playing the piano. You go to the reception where a man is talking to a young lady. He leaves and the girl asks you if she can be of assistance. You say that you would like to know what the available classes are. She gives you a timetable. The only vacancies are in morning classes. During mornings you must be at the department. You say thank you and you leave. It is bad luck that there are no available classes, especially since the school is so close to the department: being near was not enough.

Accessibility to events and activities is dependent not only on aspects related to mobility and proximity, but also on the temporal dimension. Hägerstrand (1970) has addressed the significance of individuals’ continuous existence in time and space. This has several implications. One of them is that it is necessary to provide services in places which individuals can go to at times which are convenient for them, otherwise the existence of the service is of no use to them. The implications of this on biographies are germane (Martensson, 1979; Pred, 1981a; 1981b): professional and private arrangements might prevent people participating in the activities and events which would provide contact with different life-worlds. People might find themselves trapped in routines that they dislike.

Please go now to Place 5

Place 5
You continue walking. After some blocks the street becomes quite different: you are entering in a red-light district. What do you want to do?
Go back to the green area of the city—Go to Place 3
Continue your way through the red-light district—Go to Place 7

Place 6
You enter and you bump into one of your colleagues. She seems very surprised to see you and asks whether you are there to attend her class on charcoal drawing. “It is about to start”, she says. Do you go for the class or do you say that you are in a hurry and leave?
You will attend the class—Go to Place 8
You leave—Go to Place 11
You are walking through the red-light district. Sex shops, strip clubs, and escort agencies are everywhere. Most cars that are passing by travel slowly, the men inside are looking at the prostitutes on the sidewalks.

Prostitution and red-light districts are neglected subjects in geography, and according to Ashworth et al (1988) that is regrettable because they provide relevant insights about the economic and social functions of the city. These authors show that the extent to which prostitution is noticeable in each city depends on three aspects: accessibility, opportunity, and constraints. These aspects are dependent on a wide variety of variables; for instance, mobility patterns, availability of places in which to undertake the transaction, and local community responses. Sibley (1995) suggests that individuals who do not conform to approved standards of morality are seen as ‘dirty’ and ‘pollutant’; therefore they are spatially segregated to maintain the ‘purity’ of the dominant groups and the places where they live. Hubbard (1998) claims that prostitution is not necessarily a generator of violence, drug use, or other criminal activities. Nevertheless, communities view this practice with anxiety because the idea of sex as a commercial service is normally perceived as upsetting. The place where prostitution occurs is therefore an outcome of the relative capacity that communities have to segregate it from their areas. Marginal groups, among them prostitutes, do not have capacity to determine where their activities take place. Their activities occur in places defined by other groups—generally those who control the capital (Winchester and White, 1988). Unfortunately for prostitutes the places where they are allowed to work affect their chances of being brutalised (Kinnell, 1993).

You stopped walking. You must decide what to do next.

Keep on walking along the main street—Go to Place 9
Explore the narrower streets and alleys—Go to Place 10
Go back and head to the green area—Go to Place 3

You say to her that you want to give it a try. She is flattered. The class turns out to be fascinating. In the end she says that she is impressed with your drawings. She wants to introduce you to some people in the university. They are looking for someone creative for a new project. She believes that you are the right person. Happy with your good luck, you say goodbye and leave.

When two people play more than a social role in each other lives, their linkage is described as ‘multiplex’ in social network analysis. Multiplexity can provide an “index of the strength of the relationship” (Kapferer, 1969, page 213). Your colleague appreciated that you had shown interest in her class, she was then happy to help you professionally. However, the strength of multiplex linkages must not be taken for granted. This strength is just a hypothesis, and therefore it must be tested: “people sometimes detest persons to whom they are bound by multiplex relations” (Boissevain, 1974, page 32). This makes the case for the influence of individuals’ characteristics on social networking (Burt et al, 1998; Kalish and Robins, 2006; Klein et al, 2004; Mehra et al, 2001). However, Putnam made an important statement when he claimed that frequent contact is fundamental for the development and maintenance of strong friendship ties (Putnam, 2000). This is where mobility issues have a role to play. Actually, the possibility of your continuing the drawing classes, and through this the maintenance of a multiplex linkage with your colleague, is dependent on your capacity to come regularly to this place.

Please go to Place 11
A young man gives you a leaflet inviting you to go to a strip club. It is just around the corner. What do you do?  
Go to the strip club—Go to Place 12  
Continue along the street—Go to Place 13

You are walking along a narrow street. There are signs for seedy clubs and untrustworthy services pointing to dirty alleys. This is a less touristy part of the red-light district, which is much less crowded than the main street. You can see used syringes on the floor. You decide to turn back but someone blocks your way. They are two men armed with knives. You hand over your wallet and mobile phone. “You are lovely”—one of them says ironically, and punches you in the nose. They walk away. It was a risk coming to this place, it went wrong this time. Your evening finishes in the hospital because of your broken nose.

Many comments can be made about the incident that you have experienced. “A crime occurs when four things are in concurrence: a law, an offender, a target, and a place” (Brantingham and Brantingham, 1981a, page 7). These four elements provide different viewpoints from which to analyse a criminal event. In terms of urban environment analysis the most relevant aspect is probably the fourth: place. Brantingham and Brantingham proposed the concept of criminals’ ‘awareness-space’, which is “the parts of the city they have some knowledge about” (Brantingham and Brantingham, 1981b, page 35). This space is largely shaped by the criminals’ mobility patterns. Criminally motivated individuals will undertake their offensive practices in places which they know reasonably well because they travel through them with some frequency, if suitable opportunities emerge there during an appropriate time interval. It is in well-known places where people feel more comfortable: they provide security to the criminal when he or she decides to take the risk of offending.

You are walking through what you think is an unknown area. There is a boot sale along the street. You start talking with someone and the person says to you that there is a boot sale here once a month. You are already in your neighbourhood, the presence of all these people meant that you are unaware of where you are. You are surprised: you have walked a relatively long way, but it was effortless. First, the presence of the trees and the variety of cafes and people, and then the boot sale, made your walk very relaxing.

Environments with diverse characteristics which can be perceived as sequential stages as people walk about the city facilitate a much less strenuous walking experience than homogeneous paths (see Gehl, 1971, page 139). People enjoy diversity and variations in the urban landscape while walking. However, that diversity should not impede a clear understanding of the city. The reason for this is that, as Lynch (1960) notes, being lost is hardly perceived as pleasant. Lynch suggests that the city must have a readable structure, which provides for the individual a “starting-point for the acquisition of further information” (page 4). Nevertheless, he recognises that “there is some value in mystification, labyrinth or surprise in the environment” (page 5) but that “chaos without hint of connection is never pleasurable” (page 6). However, as Lynch also points out, the city is not just composed of stationary elements: people and activities contribute to this spectacle in which we are simultaneously observers and participants. Batty (2002) proposes the idea of the city as a ‘cluster of spatial events’: the increasing speed with which structural changes are occurring in cities demands a more temporally aware view of the urban realm. Your character
didn’t realise that he or she was in his/her neighbourhood because of the different atmosphere induced by the boot sale. This suggests the need for concepts such as awareness time – space. This concept has elsewhere been defined as “a kaleidoscopic mental representation of the locations about which an individual has some knowledge sensitive to the changing characteristics of space across the time dimension” (Ferreira and Batey, 2007, page 434). We can address here the idea of pacemaker: “an entity controlling or influencing rhythmic activity” in the city (Parkes and Thrift, 1980, page 20). The boot sale can be considered one, every month people gather in this street to sell and buy. The relevance of pacemakers is high: they change the characteristics of places. Therefore, someone who has no knowledge about them necessarily has a lack of information in his or her awareness time – space. However, this can be positive as it makes the experience of the city more varied and interesting.

You are quite near your house. Go home now—Go to Place 14

Place 12
You enter in the strip club. You are enjoying the place when you come across a group of drunken undergraduate students from your department. They recognise you and seem very amused to meet you there. You decide that it is best to leave. You don’t find any reason to be happy with this random meeting which might complicate your professional life.

Members of hierarchical organisations such as universities might expect that their superiors play an ‘idealised role’ (Kemper, 1966). For these undergraduate students your idealised role did not include the possibility of finding you in a strip club—hence their surprise. When the role player fails to “live up to the ideal image, the expectations are frustrated and deviance on the part of the organization’s members is thereby legitimated” (Kemper, 1966, page 293). Although you were perceived as a deviant academic by your students, you served to legitimate their presence in the place. To what extent this is negative is a relevant question because academics are expected to have high moral standards; this might conflict with spending free time in strip clubs. However, this view will impair accessibility levels to places where researchers on urban issues will obtain relevant insights for the improvement of academic knowledge (for an example, see Bain and Nash, 2006).

We should add that the hitherto nondeviant individual needs to “move into a new environment if he is to obtain access to… illegitimate means and opportunities… since it is only in these areas that learning structures and opportunities to play such roles exist” (DeLamater, 1968, page 451). DeLamater considers that the “reason why deviance rates are not as high among those with middle-class backgrounds is low access to deviant learning and opportunity structures” (page 451). The pressure to maintain a respectable image might therefore be a negative feature in the development of academic research: moral and image-related constraints reduce levels of accessibility to learning structures. As a result, the academic will fail to understand certain phenomena and their relationships with the city as a whole. We can hypothesise the reason why subjects such as economic development and its trickle-down effects are so frequently addressed in academia: they do not demand the immersion of the researcher in deviant places and subjects. Well-known models accept that academics should engage with economic forces and established institutions (for an example, see Etzkowitz, 2003; Etzkowitz and Leydesdorff, 2001; Etzkowitz et al, 2000). Meanwhile, the ‘tricky’ environments of deviant places are much less frequently addressed. It is academics’ responsibility to assess whether this is positive.

Please go to Place 13
You continue walking out of the red-light district. Here the streets make a complicated web. You are lost. There is a tube station ahead, you know that quite near to your home there is another tube station. This place might be dangerous; you do not see any women around; men look hostile. What do you want to do?
Continue walking—Please go to Place 10
Take the tube and go home—Go to Place 14

Your partner is talking to a neighbour in front of your house. You engage in a cordial conversation and in the end she invites you for a barbeque; several neighbours are coming too. You and your partner are happy with the acquaintance. “I hope that people here are not overfriendly, though” your partner suddenly says when you enter the house.

The neighbours in the contemporary urban environment are less important people for social interaction than they were in the old rural communities. However, small services such as lending household goods continue to take place within the neighbourhood (Wellman and Wortley, 1990). There is evidence to show that weak ties between people can be very helpful, and that strong ties might contribute to excessive local cohesion and subsequent ‘overall fragmentation’ (Granovetter, 1973, page 1378).

The rule for obtaining support from acquaintances is just to reciprocate the services (Plickert et al, 2007). Engaging in social interaction requires time and attention: people must be capable of reciprocating the help provided by others. Time is a very important aspect here because attention must be provided in a certain temporal horizon otherwise the bond between the people involved will experience a decrease of intensity (Licoppe and Smoredab, 2005).

The concern of your partner is therefore understandable: friendship with neighbours might lead to excessive intimacy. In reality, a certain level of sacrifice might be necessary to maintain the connection (Fischer, 1982). The fact that people nowadays look for friends beyond the neighbourhood can have two interpretations: people are passively accepting the breakdown of the neighbourhood as a place for social interaction; or people are choosing to gain access to a vast array of social resources without having to cope with the drawbacks of intimacy.

The end. Please go to the Discussion.

Discussion and conclusion
We have presented to the reader a ‘role-playing game’ (RPG). An RPG is a type of game in which the player assumes the role of an imaginary character in a story-bound setting. We did not introduce the game before because we aimed to take the reader directly into an unorthodox way of thinking about complex, multifaceted issues such as mobility. We have chosen to do this because we did not want our theoretical views about the game to interfere with the reader’s unique way of role playing.

A distinction can be made regarding the uses of academically informed games. The first type of use comprehends games which have the main goal of facilitating decision making (see Mayer, 2009). The second type of use aims to facilitate learning and knowledge exchange (Charoenying, 2010). The game shown in this paper should be included in this second category. Note that these types are not mutually exclusive or antagonistic. Indeed, a game can be made in order to disseminate certain knowledge and this might influence how people will engage in policy making, and vice-versa. This distinction between types is useful, though, because it makes the purpose of the paper
clearer: to enhance our understanding about how to think about mobility. This purpose is achieved through the visualisation of an imaginary environment which the player is moving (in this case, walking) through. This visualisation allows the player to think about mobility in its conventional sense (eg, commuting) and in its intellectual sense (eg, interdisciplinary thinking) because this ‘walk’ leads not only to different places, but also to reflections related to different disciplines. The game aims to facilitate the removal of ‘artificial disciplinary divides’ (Cresswell, 2008) which the reader might have created in his or her intellectual world; and to show the central role which intellectual mobility can potentially play in this process of reunification of knowledge. Other authors have also made use of less restrictive literary structures in order to expand the possibilities of readers’ cognitive process (Deleuze and Guattari, 1988; Pred, 1997). Our main inspiration to do this was Kwan (2007).

The game also shows why it is so important for mobility policy makers and researchers to be holistic thinkers: the physical environment exposes people to such a large number of situations that it is necessary to use multiple sources of knowledge in order actually to understand what it means to travel there. Additionally, different readers have followed different paths and have thus read different material. These choices might change the decisions that the readers will make in the future—either as policy makers or as researchers.

This game suggests that both the academic researcher and the policy maker should think about their own experiences and ‘movements’, and the extent to which they are not consciously or unconsciously influencing their agendas. Mobility can either be a source of innovative ideas, or an activity which reinforces preconceived notions without our awareness (McLuhan, 1995). A critical view is indeed necessary because mobility can become such an important aspect of one’s life that one can fail to see its role in the development of one’s ideas (for further insights, see Barnett and Silverman, 1979; Berger and Luckmann, 1966).

For the purpose of solving the dilemma of mobility, we believe that what is particularly needed is the development of ‘intellectual mobility’ skills. For instance, policy makers and researchers who have travelled all their lives by car might need to sell their cars and to start using a bike, or to walk, in order to understand the possibilities and constraints of that alternative mobility. Conversely, policy makers and researchers who have lived all their lives in a walking-friendly or cycling-friendly environment might need to experience in their daily life what it means to be utterly car dependent if they want to free others of that dependency. Of course, the practicalities of our daily lives might impede our undertaking these physical moves and this is when the role of imaginary mobility and intellectual mobility becomes central. In our game, we have facilitated some of this travelling. Of course, different possibilities can be added by the reader in his or her imaginary travel experiences (for instance, moving by car, or through a suburban environment). Indeed, new movements can be easily integrated in the game: it is just necessary to add a section describing it, and the links which allow the reader to move into the added section and back to the existing narrative. Virtually any experience imaginable can be added to the game, and that is the literary potential, or maybe the ‘imaginative travelling power’, of this approach.

It is relevant to acknowledge that, if we impose on ourselves disciplinary, moral, and emotional boundaries which obstruct both physical and intellectual mobility, the insufficiency of our ideas cannot be significant. Indeed, we should not underestimate the role of emotions both in decision making and in academic research (Hoch, 2006; Letherby and Reynolds, 2009a; 2009b; Thrift, 2004). The lifestyle and personal mobility patterns of the policy maker or researcher will play an important role influencing his or her views about what problems exist and what kind of solutions are needed. That is
the reason why some researchers choose to experience the phenomenon being studied personally (an interesting example is Bain and Nash, 2006). As this is not always possible, we suggest that playing this type of game should be common practice among policy makers and researchers. This is our central point. Our argument, based on others' work (Cresswell, 2008; Cresswell and Uteng, 2008; Urry, 2000), is that when people have a more intellectually mobile understanding of reality, it will be much more likely that (i) effective approaches will be envisioned to solve the dilemma of mobility and (ii) the process of implementing solutions will be easier. Indeed, one can only provide an insightful solution when one has fully understood the complexity of the question (or, in this case, the complexity of mobility and how to implement changes). We propose to explore the use of RPGs both by academics and by practitioners as a way of facilitating this understanding. In line with Urry (2000), we believe that, to achieve this understanding, intellectual mobility should become a central epistemological concept in sociological thinking. The work of Davy (2008) on polyrationality; the work of Ferreira et al (2009) on the 'hydra model'; and the work of Abbot (2001) on interactions between academic disciplines can provide further insights on how to achieve intellectual mobility.

A final remark on the drawbacks of interdisciplinary approaches is needed. The very nature of mobility requires professionals to be interdisciplinary, comprehensive, and even ‘polyrational’ [Davy (2008), in this regard, see also Alexander (1965a; 1965b)]. There is, in our view, no escape from this. Very different experiences and impressions result from our movements through the urban environment. We therefore suggest that future policy makers and mobility researchers should, in principle, be trained in a comprehensive, nondisciplinary, way. We should, however, still be aware of the danger of people becoming “integrated and comprehensive incompetents”—as feared by Lynch and Rodwin (1958, page 203). Strategies to reduce the risk of professionals becoming comprehensive incompetents are, hence, also needed. This seems to us a promising line of research, which we will be exploring in the future. Experiments will be made to assess both the usefulness of RPGs to enhance cognitive skills, and the risks associated with comprehensive incompetence that might appear alongside the enhancement of intellectual mobility skills. In these future experiments policy makers and researchers will have the opportunity to play the game and to expand it according to their imagination beyond the setting which we provided above. We will be evaluating what kind of places and modes of transport are added to the game as a result of this. Indeed, as the reader has probably noticed, the game takes place in the city centre and the character makes the majority of the movements walking. As mentioned above, we will also evaluate the consequences that playing the game and expanding it will have on the participants’ capacity to think about complex mobility problems. Hopefully, we will bring new insights for discussion in the near future.

References
Abbot A, 2001 Chaos of Disciplines (University of Chicago Press, Chicago, IL)
Alexander C, 1965b, “A city is not a tree, Part 2” Architectural Forum 122(2) 58 – 61
Allmendinger P, 2002 Planning Theory (Palgrave Macmillan, Basingstoke, Hants)
Aschauer D, 1989b, “Public investment and productivity growth in the Group of Seven” Economic Perspectives 13 17 – 25
Ascher F, 1995 MétapÔolis ou l’avenir des villes (Odile Jacob, Paris)

Banister D, 1999, “Planning more to travel less: land use and transport” *Town Planning Review* **70** 313 – 338

Banister D, 2005 *Unsustainable Transport: City Transport in the New Century* (Spon, London)

Banister D, Berechman J, 2000 *Transport Investment and Economic Development* (Routledge, New York)


Batty M, 2002, “Thinking about cities as spatial events” *Environment and Planning B: Planning and Design* **29** 1 – 2


Bauman Z, 1995 *Postmodern Ethics* (Blackwell, Oxford)

Bauman Z, 2005 *Work, Consumerism and the New Poor* (Open University Press, Maidenhead, Berks)


Boarnet M, Crane R, 2001 *Travel by Design: The Influence of Urban Form on Travel* (Oxford University Press, Oxford)


Davy B, 2008, “Plan it without a condom!” Planning Theory 7 301 – 317


Dennis K, Urry J, 2009 After the Car (Polity Press, Cambridge)

Elliott A, Urry J, 2010 Mobile Lives (Routledge, Abingdon, Oxon)


Fischer C S, 1982 To Dwell Among Friends: Personal Networks in Town and City (Chicago University Press, Chicago, IL)


Granovetter M, 1973, “The strength of weak ties” The American Journal of Sociology 78 1360 – 1380


Handy S, 2002 Accessibility- vs. Mobility-enhancing Strategies for Addressing Automobile Dependence in the US (European Conference of Ministers of Transport, Paris)


Letherby G, Reynolds G, 2009b *Gendered Journeys, Mobile Emotions* (Ashgate, Farnham, Surrey)


Morin E, 1992 Introduction à la pensée complexe (ESF, Paris)
Runco M, 1994 Problem Finding, Problem Solving and Creativity (Ablex, Norwood, NJ)
Sibley D, 1995 Geographies of Exclusion (Routledge, London)
Sterman J, 2002, “All models are wrong: reflections on becoming a systems scientist” System Dynamics Review 18 501 – 531
Talvitie A, 1997, “Things planners believe in, and things they deny” Transportation 24 1 – 31
Urry J, 2000 *Sociology Beyond Societies: Mobilities for the Twenty-first Century* (Routledge, London)
Urry J, 2010, “Consuming the planet to excess” *Theory, Culture and Society* 27 191 – 212
Warntz W, 1967, “Global science and the tyranny of space” *Papers in Regional Science* 19 7 – 19
Zhang M, 2006, “Travel choice with no alternative – can land use reduce automobile dependence?” *Journal of Planning Education and Research* 25 311 – 326