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## Travelling the Journey: Understanding Mobility Trajectories by Recreating Research Paths

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### Introduction

One of the key ideas in mobility research, which differentiates itself from most urban and transport research, is the understanding of mobility practices and the way they are experienced along trajectories. For this, Ingold's (1993) idea of 'path' becomes useful as it allows for understanding individual and collective travel trajectories as indivisible and lingering, that is without a definite horizon of where they actually begin or end. It follows, therefore, that travel experiences often linger in a person's body, and this has implications for how the experience takes place. However, understanding this experience involves methodological approaches and devices to capture, analyse and represent such experiences and requires adopting and adapting methods as journeys take place and as research processes evolve.

Using ethnographic material from a research project on urban daily mobility experiences in Santiago de Chile,<sup>1</sup> the paper attempts to undertake both ideas: firstly, the way travel experiences can be explained through their trajectories and, secondly, the way research methods evolve as multiple experiences become unveiled. Starting from the text that emerges from ethnographies, the research uses photography, video, drawings and diagrams to explain the experiences and consequences of daily mobility in Santiago. Ways of representing were not previously defined but emerged as the need to explain the outcomes became more evident and mere text became insufficient to explain what was

beginning to unfold. In the process, questions of multiple forms of representation become central to the discussion. In this sense, representing trajectories become both meaning and practice in time-space. With this in mind, this paper first presents the way this research adopts the idea of trajectory and path from a mobility point of view. It then explains the research method and describes the case of Gloria, where problems of interdependence, motherhood and family links, social networks and risk become present when understanding her life story through trajectory. Finally, by using drawings as a way of unfolding analysis, the evolution of research analysis and representation are explained using the ideas of trajectories.

### Mobility practices, trajectories and paths

The mobility approach here presented attempts, amongst other things, to gain a deep understanding of multiple and hybrid mobility experiences, on the basis that mobility is a dominant and constitutive element of contemporary living and urban space (Urry, 2007). Mobility pervades contemporary urban life, be it physical or virtual, by bus or car, on foot or a bicycle. Mobile practices are not only related to the movement from a place of residence to a place of work or study, but also involve the multiple activities, strategies and spatialities required to undertake daily lives. The experience of such practice varies, and has multiple implications. Getting close to that experience requires new ways of understanding what is taking place and how. Upon close examination of such practices, ideas of fixity, permanence and duality present in most urban analysis start being questioned and mobile experiences emerge as fluid and multi-scalar processes in their situated complexity (Jirón, 2009). A comprehension of contemporary urban living presents a double challenge. On one hand, it requires approaching everyday time-space experiences by getting as close as possible to the experience, knowing the impossibility of ever fully grasping it. On the other hand, it requires understanding that current urban living is invariably linked to the various relations people have as these become embodied and spatialised, particularly with family members like children when dealing with day care and their various activities, or extended family when life-cycles evolve and taking care of parents becomes essential, or friends who contribute to a broader social network.

Urban daily mobility refers to the ways in which moving in the city impacts daily life and the way in which people relate socially, economically, culturally, politically, etc. to movement. This involves more

than types and forms of transport, as it encompasses analysing mobility practices including routines or trajectories, the experiences these trajectories generate and the consequences of trips. The research on which this paper is based aims to understand how inequality is experienced in movement using social practice, spatiality and embodiment theory (Cresswell, 1999; Jiron, 2010; Merleau-Ponty, 1962; Reckwitz, 2002; Rose, 1993; Schatzki, 2001; Young, 1990) to observe the rhythms, routines and habits that make up daily life in the city of Santiago.<sup>2</sup>

This practice draws specifically from Doreen Massey's (2005) conceptualisations of space. According to Massey, looking at spatiality requires broadening traditional approaches that see space as an absolute element, as a stage for the different urban spectacles, towards a social spatiality, through which space is seen as individually and collectively socially produced, in processes that are mediated by power relations and are materially or subjectively represented on space. Spatiality is produced within interrelations that oscillate from the global to the intimate (Massey, 2005), where everyday life is relational and takes place at diverse time-space scales that escape or overcome the residential, neighbourhood, borough or even nation-state limits. Along daily mobility practices, different trajectories coexist, allowing multiple and simultaneous existences and spatialities that are not fragmented or isolated for each individual. Massey argues that, in this sense, space is always becoming, never finished or closed and hence time is indivisible from space; some spatialities transcend time, whilst others are ephemeral and always changing.

This way of understanding space is not considered prior to those persons who carry out practices in it, but constitutes the practices in itself and is constructed from these. This interrelated condition between those who carry out the practices and spatiality and its link to the particular way of appropriation or place construction need not be observed from only one point of view. The construction of place is not a universal constant, and upon observation, the heterogeneous and diverse emerge, generating a multiplicity that according to Massey is in itself the recognition of spatiality (2005). Looking at spatiality from this notion of trajectories eliminates the idea of space as a container, as each trajectory generates multiple interconnections and interrelations in space. What emerges is that of a spatiality that is always becoming, never finished, as in each moment new connections are being made.

The idea of the trajectory is often associated with one form of representation, the urban map. However, as De Certeau (1996) contends, the process of registering the practice of walking through the city on

urban maps merely describes the figure in space but not the practice itself. In this sense, geographic information systems or transport planning simplify the trajectory of a practice in order to make it legible; they thus transform it into a trace, a graphic expression, that 'makes you forget a way of being in the world' (De Certeau, 1996: 109). However, trajectories of practices are not their mere static representation, as they are intrinsic and intimately linked to the person developing the practice, to the ways of being in the world. For de Certeau, trajectories are narratives and for Massey they are stories, and they take place in space and time.

The idea of trajectory linked to the experience of being in the world allows people to 'grow into a knowledge of the world around them, and describe this world in the stories they tell' (Ingold, 2007: 2). For Ingold, change becomes movement and growth, rather than being rooted in specific places. This echoes Massey (2005), who suggests that trajectories are different processes of change of phenomena. Ingold and Vergunst (2008) argue that experience anchors a person and the social to the world, where they establish interrelations with the ground they step on and the air they breathe. Life takes place through the mutual relations of these materialities; thus that which is not discursive becomes present in the body and its relation with its surroundings.

Hence, this trajectory which goes from one place to another as a way of being in the world generates paths, traces in the material world that for Ingold (1993) are the experience of creating or modifying the landscape whilst moving through it. Thus the path is the manifestation of a trajectory in space. This takes place both in the surroundings and in the body. Trajectories leave traces or footprints that 'should be likened to inscriptions, to lines traced in a surface' (Ingold and Vergunst, 2008: 8). For example, 'a path has been cut through the wheat-field, allowing sheaves to be carried down, and water and provisions to be carried up' (Ingold, 1993: 167). At the same time, this trajectory is related to the material reality of the body, for instance, 'through the exercises of descending and climbing, and their different muscular entailments, the contours of the landscape are not so much measured as felt- they are directly incorporated into our bodily experience' (Ingold, 1993: 166). Hence spatial experience is embodied whilst at the same time our bodies leave an imprint on space, creating a specific spatiality.

This research project draws from the conceptualisation of the trajectory as both meaning and practice and as productive of space, time and embodied mobile practices. For this, an ethnographic approach is used to understand daily mobility, using shadowing as the main

tool. Through this, the research attempts to capture the spatiality of movement: emotions, corporality, materiality, trajectories, meanings and strategies. It attempts to make visible aspects of mobility trajectories that are often invisible, to reveal not only that inequality exists, but also how this inequality takes place.

### Shadowing mobility practices

The research project involved a three-step case selection process, where the first step included selecting the areas/districts of the city of Santiago according to their dynamic location with reference to mobility patterns. Thus areas of the city corresponding to travellers' mobility on a daily basis were selected in terms of centre, peri-centre, periphery and extra-periphery. Next, sectors within these districts were selected according to income groups (low, middle or high) living in such areas; in some cases only low income areas were found, in others low and high, and in others low, middle and high income groups could be detected in such districts. Next, specific cases were selected with individuals who travelled daily, different cases were selected and these were further sampled according to sex and age. In total 76 cases emerged to become part of the ethnographic study.

The ethnographic approach involved the use of shadowing as a technique of apprehending everyday mobile experiences (Jirón, 2010). Shadowing mobile practices consists of accompanying participants in their daily journeys for a whole day. This mobile method draws from anthropological methods such as 'deep hanging out' (Geertz, 1998) during mobility or multi-sited ethnography (Marcus, 1995, 1998) and from the various developments in mobile methodologies including methods to capture multiple forms of mobility (Buscher et al., 2010) or methodologies that privilege researching everyday landscapes (Fincham et al., 2010), including go-alongs (Kusenbach, 2003), geographic mobile trajectories through diaries and photography (Latham, 2003, 2004; Meth, 2003) or biking experiences through video (Spinney, 2007).

In this research, ethnographers interview participants prior to the shadowing process, in order to gain an understanding of their potential journeys and also of their contexts in relation to household characteristics, social, economic and cultural aspects. Although there are indications of what the journeys would be like from the interviews, the actual journeys are often very different, particularly in terms of the precisions of time and coordination in executing them. Once the daily routines are over, participants are accompanied back home and

left only once they have confirmed that they will not be making another journey, which often involves staying with them until after dinnertime (Jirón, 2010). The technique requires being on time, so as to not delay participants and at the same time being flexible in adapting to their daily rhythms. In order to capture the various spatial and social interactions from the perspectives of different household members, different individuals from the same household were shadowed on different days.

Sensitivity to the unfolding situation is also important, as in many cases completely unexpected issues arise that require changing and adapting the method. This includes the need to change travelling mode; refrain from recording or taking photographs; collecting data solely by taking photographs with no speaking; or being required to carry out extensive conversations during the shadowing process. In some cases, issues began evolving as the cases began to unfold and in some, like the one presented next, unanticipated issues were encountered. Often what seems important at the beginning changes as the process evolves, requiring modification of the method as the ethnographic process takes place. Hence the importance of the ethnographer being open and ready to understand specific issues arising as the ethnography is being constructed. In general, ethnographies are carried out individually where the researcher has to construct a thick recount from his or her research as well as make this a reflexive process. This includes: the story emerging from the observation of the participant; an interpretation of the participant's context; and the researcher's own reflections on the process. To exemplify this, the case of the Ruiz family, composed of Fernando, his wife, Gloria and their three children, Sebastián, Javier and Paulina, is introduced in the next section.

### Case study: Gloria's story

The case was chosen due to the family's residential location in Santiago's northern periphery in an 'up and coming' area, slowly being gentrified, where 30-year-old social housing with very low income groups is juxtaposed with new gated communities recently built for upper-middle income groups. The Ruiz family lives in one of these gated communities and each member requires intensive movement about the city. The case was chosen mainly due to their location close to the very low-income housing and to Fernando's place of employment in Santiago's new business district.

Fernando is a graphic designer working for a construction company in Santiago's new business district, often referred to as Sanhattan<sup>3</sup>, and

Gloria is the primary carer for the children and homemaker. Together they have three children: 19-year-old Sebastián, who is about to start university and is attending entry exam preparation classes downtown; Javier, who is a teenager and attends a tenth-grade class in a boys' school in the district of Providencia<sup>4</sup>; and 10-year-old Paulina, who is in fifth grade in an all-girls' school in the district of Independencia.<sup>5</sup>

When Fernando was initially contacted as the main case to be shadowed, he agreed to an initial interview to get acquainted with the ethnographer. Upon arrival, all the family members were present and the three-hour interview turned out to be collective, with all of them explaining various issues of their mobile lives. It was agreed that the shadowing would take place on a specific day and the ethnographer arrived at 5:30 am to start the process after Fernando went jogging. The shadowing process started with all the family members leaving the house at 7.00 to drop off Fernando in the car. Since his trip was finished early, the ethnographer remained with Gloria for a few hours and picked up Fernando at 18.00 to take public transport back home and later on drive with his son to a football match. After talking to all the members and spending time with them, it became apparent that Fernando's mobility story, though relevant and useful for research purposes, was less interesting than Gloria's. Slowly Gloria's issues began revealing aspects of mobile lives that were not necessarily expected and hence it unfolded that Gloria became the centre of this family's mobility story. Aspects of interdependence, motherhood, risk, automobilisation and gender inequality began to emerge.

Observing mobility practices involves looking at not only adults' mobilities, but also those of other household members or networks, as they are inherently linked to individual mobilities. When referring to children's mobility, it is common to state the difference between dependent and independent mobility (O'Brien, 2000), in relation to parents or close adults. However, observations made through this project reveal that children's relationship with adults in mobility is not unilateral; not only are children dependent on their parents to reach childcare or school; their parents are also dependent on them to be able to accomplish productive, recreational, reproductive and other activities. In this sense, it seems more pertinent to talk about interdependence instead of in/dependence.

Until recently (three years ago), Gloria did not drive; she carried out all her chores on public transport, including shopping at the market, running errands, picking up her children at school or visiting her family by bus or collective taxi. Overall, this meant long and tiring trips, but

it also meant that she needed to organise her time very well, including her travelling time and the time spent at home or at her mother's place. When she learned to drive the family bought an automatic car to make her driving easier, as she was reluctant to drive, scared of dealing with highways, the possibility of crashing or the car breaking down. In time, she started driving. At the beginning she was scared and embarrassed, and felt intimidated by her husband, who constantly criticised her; but little by little she let go of her fears and started taking longer routes, and soon she was driving on motorways without hesitation. Driving has been an important challenge for her as it gave her independence and made her feel that she conquered a great fear; it empowered her as a woman, gave her freedom to move and provided her with a greater level of movement independence.

Simultaneously, having a driving permit provided her with the title of 'official' family driver, complementing her mothering roles and gender roles (Bostock, 2001; Priya Uteng and Cresswell 2008). Given this is a dynamic family, with diverse daily activities, for them to move, soon Gloria became a slave to the car. Although she has always been the centre of the family, this new ability made her essential, not just for her direct family, but also for her extended family. Gloria lives at the mercy of others' activities. Since they only have one car, she drops her husband off in the mornings, and to avoid traffic jams, they must leave the house before 7.00 am. She gets up early to prepare breakfast for everyone along with their respective lunch boxes. Generally, they also take the youngest children, often half asleep, to school. The children eat breakfast or listen to music on their earphones whilst in the car. On this part of the drive Fernando is at the wheel and they initially take the highway, and then small roads to reach Fernando's work in Sanhattan. When Fernando gets out of the car, Gloria takes over at the steering wheel. The trip is comfortable: despite the rain, car heating masks the cold outside. Gloria continues her journey to drop her children off.

Javier is a teenager; his mother still sees him as a child and pampers him, or more likely, she perceives the risks her children may face when moving (Murray, 2008). Every day she drops him off at school after dropping Fernando at work. In the afternoon he takes the metro on his own as he is considered old enough. He often travels with his schoolmates to a metro station where Gloria picks him up after she has picked up her daughter, Paulina, from school. Other times Javier takes the bus and Gloria meets him at the closest stop. Paulina is ten years old and goes to school and also to gymnastics and music classes. In addition, almost every day she stays after school until 17.00 to carry

out one of her extracurricular activities, and Gloria picks her up at that time. Gloria does not like her travelling around on her own. Gloria's other son, Sebastián, is attending university preparation classes downtown and although it makes him early for class, he takes advantage of his mother's trips to pick up his brother and sister, and gets dropped off downtown, close to a metro station. Although Sebastián uses buses and metro, he often calls his mother to give him a lift, if not to the downtown area then at least to a metro station close by.

Interdependence does not refer exclusively to the relationship between children and adults, but also to the diverse degrees of kinship, friendship, neighbourliness, comradeship and also work links or service provision. For this family social networks are crucial to their everyday living. Before moving to their current house, Gloria and Fernando always lived close to both of their parents' neighbourhood, about a 20-minute drive from where they live now, and helped out their respective families with their household chores. Gloria's mother has a vegetable stand at her local food market on Fridays and Gloria helps out with the sale. Two of her sisters live next door to her mother's house. Hence the neighbourhood is quite familiar to her. A few months ago her mother was diagnosed with breast cancer and Gloria takes her to the doctor every time she needs to go. She is very concerned about the situation, and her best way to be close is to take her to her exams, so the car eases this process. Indeed a large part of Gloria's family activities is concentrated around her parents' neighbourhood as this is where her family and friends live. Her way of staying closely linked to her and Fernando's family and friends is by offering rides every time they ask for help. For instance, a few days ago, her grandfather needed to buy his medicines, and she gave him a lift to the pharmacy. Also, at least once a week she transports one of her family members or friends to various locations in Santiago so they can visit doctors or supermarkets, go shopping, run errands, etc. However, at the same time, she is her immediate family's housekeeper, so aside from taking them to and picking them up from their respective activities, she also goes shopping and runs the family errands.

Ultimately, Gloria spends a large part of her days transporting people, and the few hours left are dedicated to tidying up her house, cooking, washing, ironing and dedicating herself to her people. It is in this way that she has become enslaved to her car; the possible freedom provided by learning how to drive and using a car (Urry, 2007) has been greatly restricted by her responsibilities as a mother, wife, daughter, granddaughter, sister and friend.

From an interdependence perspective, mobility appears as a network that articulates the various productive and reproductive roles, routines and needs of a varying number of persons. These persons are related amongst themselves through essential emotional and/or practical links in the organisation of their daily lives, lives that are currently inconceivable without the existence of the other members of these networks.

The diverse positions people may have within these networks – or even outside them – depend to a great extent on the generational categories or lifecycle stage in which each one is immersed. In this sense, there are stages with notoriously more responsibilities than others; this translates into more burdened roles, in which interdependence becomes a daily experienced phenomenon and clearly determines people's organisation and practices, modifying mobility behaviour and modes (Jirón and Cortés, 2011) – as happens in Gloria's life. Her interdependent mobility is clearly gendered (Priya Uteng and Cresswell, 2008) and has important implications in her own life.

Unravelling these issues, which was not precisely intentional when the case was chosen, began taking place during the research discussions sessions and, particularly, as the need to represent Gloria's consequences of mobility practices became relevant. The following section explains how the use of the idea of trajectory contributes to understanding Gloria's experience of mobility and the implications driving has for her life. This idea becomes clearer in our understanding of Gloria's life as the drawings evolve along the research analysis.

### Drawing the trajectory

As discussed, if, following Massey (2005), spatiality is always becoming due to the multiple trajectories that give it shape, space is 'not just a matter of lines on a map' (Massey, 2005: 85). Similarly, for Ingold (2007), a drawing that evolves as the trajectory evolves is more likely to represent those practices that make up the trajectory than lines traced on an existing map. Therefore drawing became a key tool used to understand and communicate the experience of the trajectory. Here a trajectory involves the implications of the journey in a person's life. Unlike the example of the static map discussed previously, drawings can be mobile as they can be modified over time and evolve. Drawings are responsive to sudden inspirations, and can be transformed to represent practices in time and space including those that are in constant repetition (Sennett, 2008). In this way the drawings, as representations,

become practised. The sketching and modification of the drawing, making it evolve, bring it close to the narration of the experience, unveiling the context in which both the story and the drawing have been produced. Hence, drawing these diagrams 'does not tell you where things are [...] the lines on the sketch map are formed through the gestural re-enactment of journeys actually made, to and from places that are already known for their histories of previous comings and goings' (Ingold, 2007: 84).

In keeping with this set of arguments, we propose the construction of diagrams as a way of selecting specific characteristics of the implications of the journey in Gloria's life, following Vitta (2003), and expressing them in the most illustrative way possible, rather than creating an illustration that intends to integrally restore the journey, thus affecting its legibility. The following diagrams or map sketches were constructed from the interdisciplinary and multidimensional analysis of the shadowing results and other data from Gloria's trajectory, as well as others' from the project, through which a better understanding of Gloria's life was conceived. In this way, the drawings explain Gloria's trajectory by representing parts of the experience of her daily mobility practice. At the same time, they modify and become more complex as new appreciations of her trajectory emerge in the research. This evolving process simultaneously unveils the trajectory in which each drawing was constructed in time. Illustrating the steps involved in drawing Gloria's trip, they show the discussions and appreciations that emerge as the research evolves. The path in itself, shown as a line inscribed in the surface of the paper, represents the continuity of the trip and the interrelations (or interdependencies) with the different journeys of Gloria's family (husband, children, etc.); as the implications of the journey in Gloria's life became clearer, the trajectory evolves (Figure 9.1).

The first of Gloria's drawings was called 'The Flower' for its obvious likeness (Drawing 1). This analogy made it possible to establish a more simple communication without having to look at the drawing, but through thinking about the idea of the drawing. The first approximation to the story that Gloria was narrating was the notion of her spatiality being contained in many spaces during her day, having to display a series of mobility tactics to carry out the various activities. This is why the drawing was linked to the relation she establishes with the different spheres in which she moves during the day. However, the construction of this drawing emerged within the interdependent mobility observation methodology. This provided the story in great detail

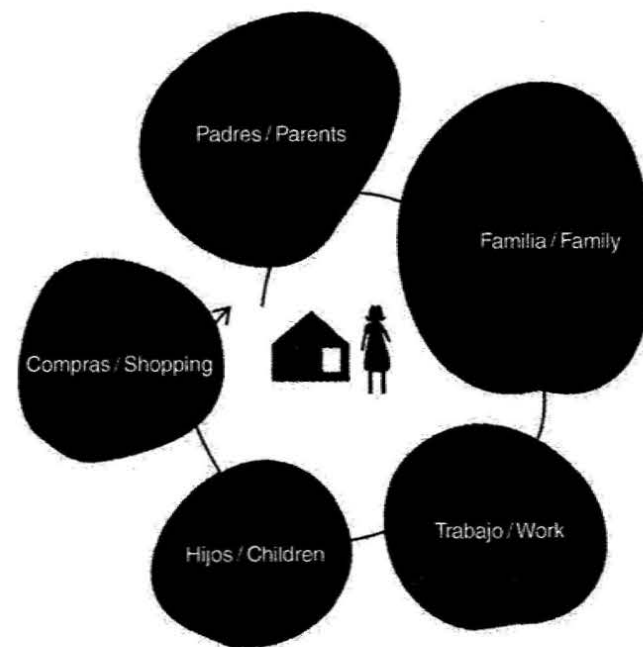


Figure 9.1 The flower (Drawing 1)

based on the actors involved in Gloria's trip, more than on the specific locations travelled to.

Therefore the drawing of the flower was left aside in order to understand Gloria's interrelations with the different people on her journey (Drawing 2. Interdependence and positions). In this sense, Gloria's interdependent mobility is drawn in space by her body and its movement, which becomes a drawn path. Representing this movement by a line leads to drawing the different locations where she travels and their connection by a series of geo-referenced elements become relevant, localised on a surface as if attempting to inscribe a line on a plan.

In this drawing, persons are associated with names and places in the order of their trips. The persons related to Gloria's mobility are grouped according to their spatial nearness and the names of the districts where they belong (live) and appear (Huechuraba, El Golf, Providencia, Santiago, Independencia<sup>6</sup>). For Harvey (1989), time-space relations are fundamental in social relations; however, time has received more attention than space; making a path on the drawing that links Gloria with her

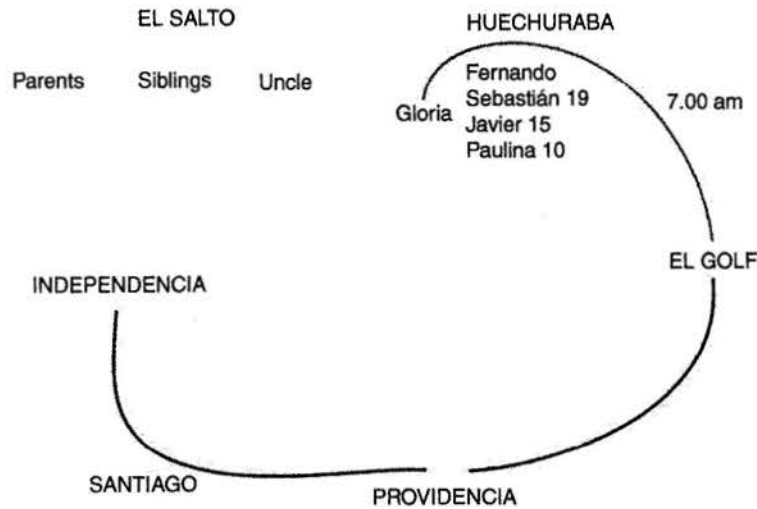


Figure 9.2 The flower. Interdependence and positions (Drawing 2)

movement through the city makes the link, or interdependence, visible as a representation; thus the path is no longer a symbolic drawing of the relation, but takes the form of her position in the city, making part of her spatial trajectory visible (Figure 9.2).

This allows for a rereading of the flower and assigning these variables in Drawing 3 (The Flower. Interdependent Mobility), where participants in Gloria's trip are displayed in the manner that they interact during the trip and the day. Drawing 1 places on paper a graphic representation of the spheres of relations amongst Gloria's relatives and their daily mobility practice. These spheres are established as moments during the trajectory but are not linked to a particular time. Drawing 2 contextualises in a basic manner the spatiality of this path, and assigns value or hierarchy to the location of persons or places in the constructions of her trajectory; thus each one of these spheres is decomposed in its constitutive elements (names of persons and places) and those relevant elements are chosen for the compression of the trajectory through a reconstruction of the whole trip. Drawing 3 introduces the car into the graphic representation as a central element, an issue that becomes evident from the discussion of the ethnographic material from the ethnographic team; however, the drawing manages to capture this appreciation and allows for reinterpretation with a greater importance in Gloria's story. Through repetition and representation of its use in

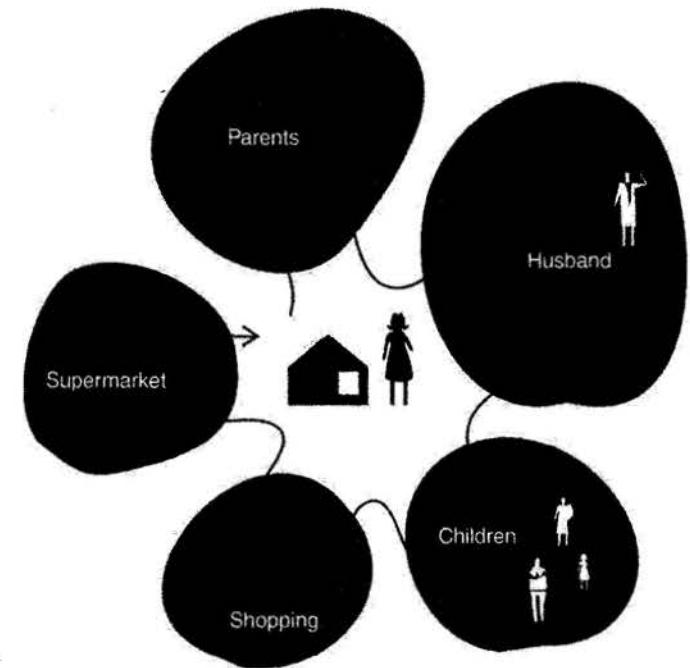


Figure 9.3 The flower. Interdependent mobility (Drawing 3)

different moments of the mobility practice, the car becomes the element that articulates and provides sense to the continuity of the story. Gloria, her house and her car appear linked up to her path through the car (Figure 9.3).

For de Certeau, there is a series of daily situations that escape geographic drawings or precise measurements, but are nevertheless significant in that their understanding carries with it a new way of understanding ways of doing, of practice. This then makes a different sphere of spatiality visible. In Gloria's case, this was the understanding of the role of the car in her daily mobility practice. In drawings 4 and 5 (The Flower. Slave to the car (a) and (b)), the car condition emerges in her story and as such it transforms the predominant spatiality of trajectory. It also displays her husband's path and his mobility practice, her children's paths also appear, as well as the relation with her relatives. All these interdependencies are drawn as paths that mark in the drawings the spatialisation of the interrelations; this way, the path travelled through and the car, are elements that exist in Gloria's life to establish

this interdependence. At this point, it is difficult to assign the real importance of these parallel stories in relation to Gloria and the drawing of her trajectory; however, they are left on the drawing, in the hope that their significance will emerge, in future discussions of the case, from now on in the drawing of Gloria's life.

Both Drawings 4 and 5 correspond to variations in the representation of Gloria's trip, which emerge from the discussion of the case based on the drawings. In both, two different interdependent relations emerge: on one side, her relation with the immediate family which depends directly on her for their daily transport is drawn in the path by the lines that connect and spatialise this practice in relation to the car. On the other side, her relation with her extended family, those not directly related with daily transport, are expressed by a 'stain' that marks the link in a more diffuse manner, not as clear as path lines. Gloria's trajectory is made up of the interrelation of these two interdependences during her day.

The graphic representation of these two scenarios evolves, passing on a first instance (Drawing 4) where interdependence with her non-dependent relatives is a 'stain' that links Gloria's housing with her relatives housing, to a second instance (Drawing 5), where the 'stain' follows Gloria's daily travel. Through this, a difference between the 'stain' and the path is made: one marks a diffuse presence in Gloria's trip, whilst the other marks a direct spatial representation, thus returning to the idea of path as a manifestation of the trajectory in space (Figure 9.4 and Figure 9.5).

In Drawing 6 (The Flower. Gloria's story), many of the previous questions on interdependence are resolved. In order to understand Gloria's trajectory, in order to tell her story, it is necessary to focus attention on the fundamental use of the car, and on the forms of interrelation with time-space. Drawing 6 represents on the drawing the different forms in which the concept of time-space is practised and imagined in the same sense expressed by May and Thrift (2001), thus making reference to the sense of time as a series of responses to schedules and rhythms, as well as a sense of time shaped through a series of systems of social discipline, and as a sense of time related to a series of instruments and devices.

In the drawing, it is the presence of time along Gloria's journey that articulates her interdependent mobility in relation to a particular rhythm, where her husband and children's schedules, at times, constitute her daily route and contribute to the production of her story. This is because time appears as a series of reference points, letting us know where in her journey Gloria is, and if her trajectory is going or coming

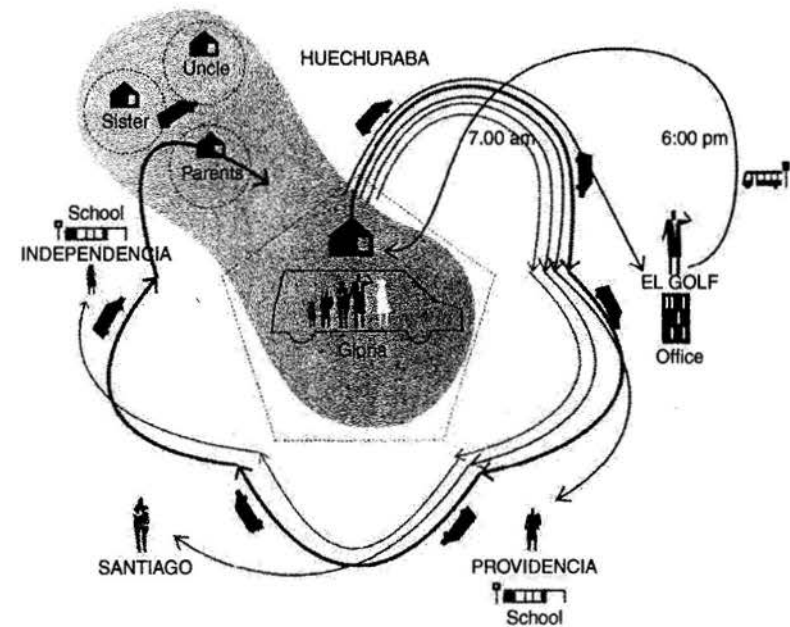


Figure 9.4 The flower. Slave to the car (a) (Drawing 4)

back. This series of reference points is expressed on the drawing in a non-traditional manner in the sense of habitual time-space maps; time is not related directly to her movement points, but it is constructed as a time experience, a constant always present in Gloria's trip, not just at key points. This diverges from the traditional conception of a time-space map where the position of individuals in space is marked (Jirón, 2009); in fact, time appears related to the time-space constituted by May and Thrift (2001), where Gloria acquires a sense of time in response to a series of schedules (her family schedules). Gloria establishes a social discipline, which is developed in relation to her car as an instrument or device that impacts on her relation with space and time (May and Thrift, 2001).

The car is a central element in the drawing; it is the repetitive and generating element of the spatial path, fundamental in Gloria's experience. From it, different trajectories are traced, expressing the spatial construction of interdependence. The lines come and go from the house as a repetitive situation, where the car is presented as the anchor point, a place where Gloria's daily trip takes place. However, as in the evolution



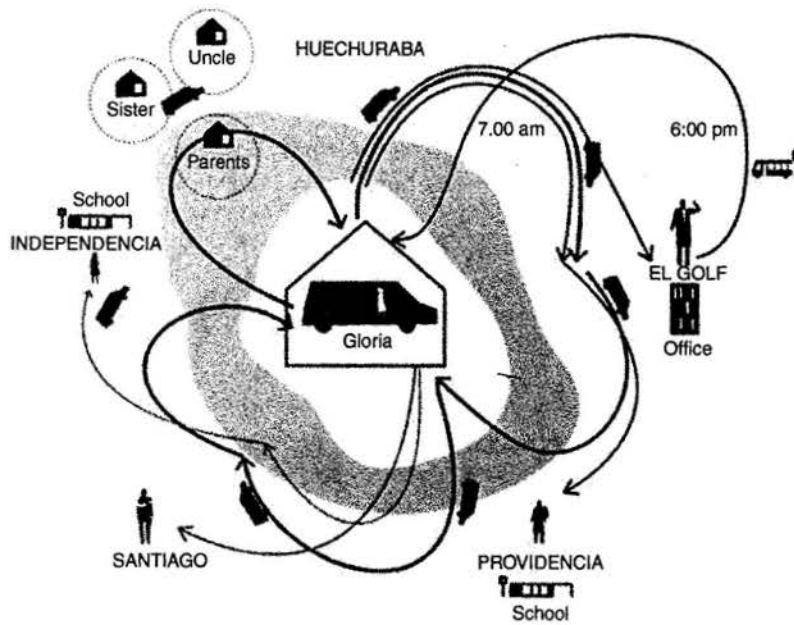


Figure 9.5 The flower. Slave to the car (b) (Drawing 5)

of the drawing, these lines are not the only form of interdependence Gloria manifests in her day; her relatives are an always present element; the lines constitute Gloria's travel experience, cutting across the more diffuse interdependent relation, especially with her relatives. Gloria's trajectory in lines and the stain that follows her during her day become an inseparable and ineludible condition.

Thus, the drawing links this condition from a series of elements that cohabit and complete Gloria's experience; not only interdependence, but also shopping and the elements she buys, the things in her trip that make reference with the different activities in the city and the persons in her day, which are printed in Gloria's experience. All this cohabits in the same drawing, and constitutes a wordless representation of the trajectory (Figure 9.6).

The series of drawings evolve and change with each new piece of information that emerges in Gloria's story; thus the narrative of Gloria's trajectory is constructed in the making of the diagrams.

Drawings evolve, and always acquire more complexity, just as in Massey's (2005) notion of space; they are an always becoming process. In this sense, the construction of these diagrams, as well as the

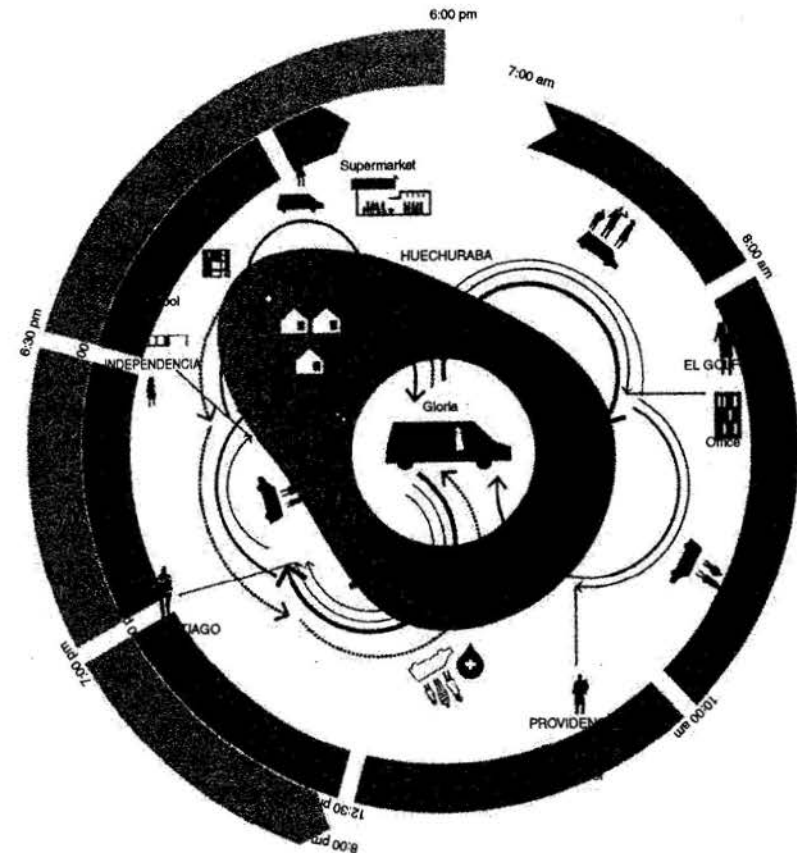


Figure 9.6 The flower. The story of Gloria (Drawing 6)

case analysis, gets constructed in a dialogue and is receptive of new entrances; its lack of definition allows for the incorporation of new elements that emerge in time.

For Ingold 'to lay a path through the world is to dwell; to dwell is to live historically' (2011: 4); in this same sense, Massey (2005) establishes the story, as a change, a movement in the things in themselves, which talks about a process of change of a determined phenomenon. The construction of the drawings tells a story or represents a phenomenon that evolves in time.

Again, for Ingold (2011), the drawing is more an information-gathering tool than a projection of an image. To draw is to generate a way of communicating in which lines and traces are expressed on a

surface and in this sense, citing Bryson, 'The last line to have been drawn is never the last that *could* have been drawn: even that final line "is in itself open to a present that bars the act of closure"' (in Ingold, 2011: 221). Thus, drawing is a form of description that is not yet broken by observation; that is, drawing evolves and changes through time and as a form of representation is capable of retaining the 'generative dynamic of a world-in-formation' (Ingold, 2011: 224). However, this world-in-formation develops in a material universe, and this is what the drawing, as a form of representation, is capable of rescuing, just as when drawing on a plan:

Drawing in bricks by hand, tedious though the process is, prompts the designer to think about their materiality, to engage with their solidity as against the blank, unmarked space on paper of a window. (Sennet, 2008: 41)

Thus, the tactile, the relational, the incomplete, are physical experiences that take place in the act of drawing. An act as a process carries with it the condition of becoming, more than as an image of what it is (Ingold, 2011).

## Conclusion

Mobility experiences can shed light on specific processes regarding how people organise their daily life, the complexities faced or how the city and transport means accompany them or not in this process. This paper explains how trajectories can be helpful in explaining mobility practices. Moreover, it describes the way research analysis evolves when using the construction of images to contribute to the analysis of trajectories. This form of representing trajectories becomes both meaning and practices in time-space. From the case presented here, it can be observed that a research method goes through a process of evolution and often methods, tools, timings and even cases need to be reconsidered as information from the cases becomes more or less relevant. The observation of mobility trajectories evidences a process that is always becoming; thus its representation is also a process that evolves with each new information contribution, but at the same time, the questions posed on the observed practice evolve. Hence the drawing, whilst producing variations that can be explored and compared, permits the incorporation of these as part of the process through which the trajectory is understood, not just explained.

In this way, the construction of drawings becomes a practised process simultaneous to the development of the observed mobility practice. This process, in its synthesis, places hierarchy to the information displayed and creates the scenario to establish relations that may not have been described in an explicit manner in the initial observation. Through a drawn line, the representation constitutes a path; it reconstructs on a new surface (paper), that which the inhabitant developed through his/her body in the mobility experience, something that ethnographers had revealed through words and gestures. Observing mobility trajectories necessarily presents the problem of the reconstruction of research paths. The constant rereading of research material and information forces understanding research as a process into an unfinished state, always becoming and in formation, open to new entrances and exits. This situation is part of the structure of the process of drawing and redrawing.

In the case of Gloria, the issues that became central as the research evolved were that mobility decisions are not individual, and are strongly imbricated with other family members, relatives and friends who make each decision appear at times irrational if observed from the point of view of the efficiency of the system, but completely rational if understood from the logic of the household. This implies that people's mobility is interdependent; that is, each decision is linked to the responsibilities, chores and desires that are orchestrated daily. This shows how interdependence takes place not only with small children and their parents, but also amongst different social groups. In the case of Gloria, decisions regarding the purchase of the car, its use and use times are closely linked with what she and her husband can do. On the other hand, her children and she are interdependent, even though they are not so young anymore; there is still special care for them, particularly for her daughter, who she is more apprehensive about given her gender. Parallel to this, she and her mother have an interdependent relation given her age and health that require Gloria's mobility decisions to be closely linked to what happens to her mother. In summary, this interdependence makes her daily planning interconnected to others' decisions.

This finding did not emerge automatically. As the shadowing exercise took place, interviews and issues began to arise, and when the analysis began, so the questions were brought to bear upon the drawings. The focus of the story being told by this case began to change, from Fernando's commuting story to Gloria's slavery to the car. The case presented here shows how a methodology, which included data gathering,

analysis and representation, adapts as the research evolves and results 'become' as the research unfolds and analysis requires changing the focus. Parallel to this, as questions in relation to the initial findings start emerging, the use of images becomes helpful in providing a better way of explaining a trajectory and its meaning. Drawings evolve as the analysis of the results start changing. The idea of trajectory provides a rich way to apprehend mobility experiences, which are more related to the complexity of what takes place in the practice than to a specific route taken.

However, trajectories of practices are not their mere static representation, as they are intrinsic and intimately linked to the person developing the practice, to the ways of being in the world. Drawings do not just complement the story, but actually contribute to its analysis and provide a way of understanding this trajectory that enriches the issues being explained. Issues of representation require further discussion, as what is aimed at being represented here is not the exact way she undertakes the trip, but the way the trip is experienced and thus its complexity.

## Notes

1. FONDECYT financed research project N° 1090198 'Urban Daily Mobility and Social Exclusion in Santiago de Chile' [www.santiagosmueve.com](http://www.santiagosmueve.com)
2. For further information see [www.santiagosmueve.com](http://www.santiagosmueve.com)
3. The Santiago version of Manhattan
4. Providencia is a middle to high income district located in the central area of Santiago
5. Independencia is a middle to low income district located in the central area of Santiago
6. Different boroughs in Santiago