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Pedestrian assemblages: Blind people's walks as techno-sensory practices

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ABSTRACT
How do blind people walk and cross the streets? This has been the guiding question, only simple at first glance, of our ethnographic study at the crossroads of Sensory Anthropology and Science and Technology Studies (STS), undertaken in the last six years in the city of Barcelona. In it we have followed different activists for the rights of people with "visual diversity" in their everyday urban displacements, and in their politicizations of urban infrastructures. Paying attention to the multiple and distributed agency that equips and dis/ables modes of moving about in the city, this question allows a description of the embodied, social, material and technical complexity that this mundane act entails. Our inquiry foregrounds two main elements: (a) the description of the sensory practices unfolded in blind walks; and (b) the description and close examination of the role played by non-human actors — animals and technologies — which constitute the "equipment" to walk as a blind person. Deepening urban anthropology's material and embodied turn to the understanding of the circumstances of pedestrians, the present work wishes to highlight the relevance of considering pedestrian assemblages and the techno-sensory practices enabling particular types of displacements. A description around assemblages allows us to unfold a description of the city not as a place for the indifferent encounter of abled subjects, but as a complex ecology of supports and accompaniments to host bodily diversity.

KEY WORDS
Urban studies, sensory anthropology, pedestrian assemblages, equipment, techno-sensory practices.

ENSAMBLAJES PEATONALES: LOS ANDARES A CIEGAS COMO PRÁCTICAS TECNO-SENSORIALES

RESUMEN
¿Cómo andan y cruzan las calles las personas ciegas? Esa es la pregunta, solo aparentemente sencilla, que hemos abordado a partir de un estudio etnográfico en la encrucijada de la Antropología Sensorial y los Estudios de Ciencia y Tecnología (STS) realizado en los últimos seis años en la ciudad de Barcelona. En él hemos seguido a diferentes activistas por los derechos de la diversidad visual en su cotidianidad, así como en sus trabajos de politización de las infraestructuras urbanas. A partir de una atención a la agencia múltiple y distribuida que equipa e in/habilita modos de desplazarse por la ciudad, esta pregunta nos permite describir la complejidad corporal, social, material y técnica que encierra este vulgar acto cotidiano. Nuestra indagación gira en torno a dos elementos principales: (a) la descripción de prácticas sensoriales para caminar a ciegas y (b) la descripción y examen del papel que juegan conjuntos de elementos no-humanos (animales y tecnológicos) que conforman el «equipamiento» para andar a ciegas. Profundizando el giro material y corporal de la antropología urbana sobre las realidades y prácticas de los peatones, transeúntes o *flâneurs,* en el presente trabajo queremos resaltar la importancia de prestar atención a los ensamblajes peatonales y las prácticas tecno-sensoriales que habilitan particulares desplazamientos: unos ensamblajes que en lugar de una ciudad hecha para el encuentro indiferente entre distintos sujetos, nos muestran una ecología compleja de soportes y acompañamientos para acoger la diversidad corporal.

PALABRAS CLAVE
Estudios urbanos, antropología sensorial, equipamiento, ensamblajes peatonales, prácticas tecno-sensoriales.

Acknowledgements

We would like to thank the participating blind individuals for their collaboration, involvement, and activism. We dedicate this study on their blind walks to them.

Introduction: An ethnographic inquiry into blind walking

How do blind people walk and cross the streets? This question, only seemingly simple, is the central piece guiding the ethnographic inquiry of this study. Recalling various fragments of fieldwork developed between 2013 and 2016, alongside the users of the "voluntary service for daily accompaniments" from b1b2b3, a blind association in the city of Barcelona[1], the aim of this article is to contribute to deepening and broadening the practical, sensory, embodied, and material turn in socio-anthropological approaches to the pedestrian phenomenon. Thus, the paper displays different ethnographic vignettes about "blind walks" — part of a larger ethnographic project collaboratively developed by both authors on bodily diverse activism, and its impact on the (re)design of the city.[2] In this text, therefore, our main focus of ethnographic inquiry is the embodied or sensory analysis of the practices of blind people to move around and traverse the city. The work presented here more specifically examines the practices of b1b2b3 members, but these do not substantially differ from those of many other blind people with whom we have interacted in our fieldwork. The ethnographic involvement of one of the authors (Marcos) as a volunteer/companion for over three years allowed us to pay

1. b1b2b3 is formally an association composed of 300 individuals, categorised according to the prevailing biomedical institutional typologies which determine the forms of "visual impairment" or "low vision". For more information: https://www.b1b2b3.org/en/.

2. More specifically, this work recalls fragments from Cereceda's doctoral thesis (2018), whose broader fieldwork focused on the movements and mobilisations of different civic entities concerned with visual disability in Barcelona, including the Catalan Association for the Integration of the Blind (ACIC), as well as a detailed analysis of the controversy around the redesign of Barcelona's Passeig de Gràcia in relation to the *Carrers per a tothom platform*. This fieldwork was carried out concurrently and in constant conversation with the work of Tomás Sánchez Criado, who, in the context of his postdoctoral research from 2012 to 2016, had been working on different forms of participatory design of urban infrastructures and assistive products in close connection with both the Independent Living Forum — and its defence of the rights of people with 'functional diversity' — and with the Municipal Institute of Disabled people of Barcelona's City Hall. For a more systematic presentation of the joint work, framed as an analysis of the struggles for urban accessibility and the democratisations of urban design that they have often involved, see Sánchez Criado and Cereceda (2016).

attention to these blind walks as sensory practices, as well as highlighting their complex relationship with a multitude of technological mediators that make up the city.

Thanks to the direct participation of blind individuals in defining the subject and object of the ethnography — guiding how to approach a reality we were unfamiliar with and to which we had no possibility of direct access, sharing their practices and knowledge for walking on the streets seeing nothing or very little — it became possible to deploy various "mobile" techniques of ethnographic research (Buscher, Urry and Witchger, 2011). That is, based on joint movement practices (go along) accompanying these individuals (Kusenbach, 2003). Initially practised as a form of "shadowing" (Jirón, 2011) — becoming the shadow of blind people — the progressive walks allowed us to generate and cultivate the necessary bonds of trust, friendship, and collaboration to carry out, for example, countless audiovisual recordings of journeys or daily mobility practices.

While joint walking allowed a "sensitive" take to the ways in which these blind individuals walked daily, it also became relevant to "walk with a video camera" (Pink, 2007) as an approach to note-taking in a context where the "participant perception" device (García Grados, 2017; Pink, 2009), which had been put forward to inquire on the meaning of blind walking 'from the body of the ethnographer,' made record-keeping impossible (imagine taking detailed written notes on the embodied practices required to cross a street with a blind person clinging to one's elbow on a busy street). Likewise, the research was complemented with participation in accessibility checks of new urban designs, interviews with association members about their activist strategies and participation in group activities of political mobilisation. But to understand what we are referring to, perhaps no one better than our colleague Ricard to explain it:[3]

> It's the winter of 2014. One of the most sensible and fruitful aspects of fieldwork throughout the last year has been conducting what we call "experimental routes": it involves going out for an unplanned walk with the a blind companion, recording with the camera what happens. In these situations, as we walk and chat, our companions elaborate and explain their issues in detail. In this way, they have been showing us the barriers they experience and have

3. For the sake of simplificity, in this work, only the first names of the participants in the study are mentioned. For more detailed information on their full names, see Cereceda doctoral thesis (2018), published in an open repository. While in other ethnographic fields it is common practice to anonymise participants, almost forcibly, in disability rights activism disabled people, this practice is often explicitly contested, if not discouraged (provided that the explicit consent of the participants is obtained, as is the case with this study). In these instances, anonymisation can contribute to the history of invisibility and symbolic violence that the collective has commonly suffered.

also been teaching us what it is like to walk and cross the streets. Although it became challenging to establish general or frequent patterns in these types of walks, it is true that blind people have been developing a series of knowledge, skills, or practices for blind walking that they deploy with utmost subtlety and discretion. However, today was one of those days where everything that this entails became evident: Ricard, a blind friend who actively participates in the research, went to great lengths to explain in detail how he does it. Walking towards Plaça de Catalunya, Ricard took a moment to explain.

Ricard takes out an indispensable tool from his pocket: the *comandament* (remote control). As he comments, when he is about to cross the street, he activates with his personal remote control the system of acoustic signals that almost all traffic lights in the city have incorporated: he presses a button and all the nearby traffic lights start to beep (indicating that they are active, and expressing through the variations of the sound their status). This helps him to get ready to enter the crossing. He locates the traffic light by making arcs with his cane. In this way, he looks for the tactile strips or surfaces: a system of signals on the ground emplaced in the city's pedestrian crossings [Image 1]. Once he finds them, he follows their directions until he finds the slope of the ramp in the pavement, a feature implemented, as well on all the city's crossings.

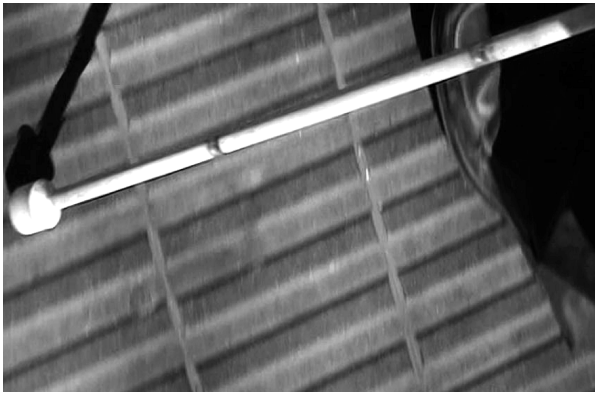

Image 1. Knowing how to read pavement textures. Winter 2014. Source: The authors. Alt-text: the image shows a capture of the video recorded during the route. Ricard drags the cane, which vibrates resonating with pavement textures. The image being a capture of a video is a bit blurry due to vibrations of the cane, which Ricard interprets to know if he is near a crossing.

Then, he stops. As he points out, he learned to cross the streets by paying attention to the sounds of the vehicles:

Ricard.— It's this, when it turns red […] they will stop going through… [But] now I'll tell you what the risk is… — he says while attentively listening

> to the sounds. […] The risk… is that I can't cross because cars are passing, I wait and listen as they stop and now, I will listen (in the opposite direction of the crossing) that there they start [the cars]… But if there are no cars passing, it is still red and… now, yes — he says as the cars start moving in the perpendicular direction of the crossing. Well, here the problem is that there is a moment where I don't hear cars. This is the problem… I can't trust these [cars that have stopped or are turning]. I can hear an engine here that stopped and I think that it is green [for me], it could be a taxi that is dropping someone off. This helps. Hearing that the engine stopped helps me, but it is not dinal. What assures me that it is green here is that the cars are passing on Via Laietana — the street we are crossing in its direction.
>
> Marcos.— Ah, of course… — I agree while trying to understand the complexity of the sound references.
>
> Ricard.— Okay? The ones on the side are always the definitive ones… Both [directions of car circulation] help me [to orient myself]… This is the way. Therefore, it means that on normal streets it's not essential to use the the remote control and that "the traffic light is active", because sometimes it is not. Although I avoid the stress, so to say, that I don't miss someone by not paying attention, because I get here [he points where we are] I hit the traffic light [he presses the button: "beeep"] and, quite easy, it will warn me, but it is essential [that it works].
>
> Ricard emphasizes that it is important to pay attention to the noise of cars in both directions of a crossing, although the important thing is to trust that the ones in the direction that cuts your path work: "this is the idea, always remember this". Once the traffic light begins to beep at regular intervals, cane in hand, Ricard prepares to cross. Before starting to walk, with the tip of his cane, he identifies the slope of the pedestrian ramp that leads to the road, drawing a straight line into the crossing. Then, holding onto my arm, he follows that same straight line with his cane dragging along the ground until we reach the other end (field notebook, transcription of the audiovisual records made by Marcos Cereceda; February 15, 2014).

In a way, what Ricard did that day was lecturing us on how a person can cross the street without seeing. A situation that, as he shows us, leads him to establish different types of interactions with various urban elements: some as ordinary or common as the sound of vehicles; others more unique and sophisticated like the acoustic signal of traffic lights. Ricard manages to cross the streets: he does this by linking with specific technologies (cane, remote control, traffic lights, urban designs), mundane elements of which only some initiates know their function. These elements help him to cope spatiotemporally, through relations of tactile contiguity and sequences of auditory references, with the city he traverses. And, specifically, as in the case we started with, they help him cross the streets with a certain level of safety.

How to study the pedestrian condition of the blind?

However, this account of blind walks that Ricard made palpable to us does not seem to be easily apprehensible with some of the conceptual figurations about the pedestrian condition that urban studies and socio-anthropological approaches to the urban phenomenon have made famous: from Walter Benjamin's famous *flâneur* (2005), a stroller who wandered through the tedious streets of 19th century Paris, opening the city to interpretation from his unexpected astonishment, to the "poets of their affairs" who populate the works of Michel de Certeau (2000), who focuses his observations on the unique tactics that pedestrians trace, often disputing the ways in which urban space has been constructed in their displacement. In fact, for de Certeau, pedestrians thus produce, through "microbial" knowledge that escapes discipline and its mode of spatialization, a "transhumant or metaphorical city that insinuates itself into the living text of the planned and legible city" (2000: 104). Manuel Delgado's work (1999) is also important, since the walker is placed at the center of his discussion about the urban as a space of movements and displacements that, in turn, move and displace the planned city; a discussion that situates the street as a social space where crowds come and go unpredictably, developing ways of appropriating social space, sometimes in the form of festivities or barricades.

However, are the blind this type of pedestrians? The way Ricard and others have taught us to cross the streets forces us to go beyond the "view" of pedestrian life that these authors put forward. Most of these works talk to us — although not explicitly — of a standing, sighted and capable pedestrian who moves autonomously through a city. However, blind people's urban practice, and the shift of gaze as the primary sensory domain of ethnography that they urge us to undertake, highlights this particular "body bias" about pedestrian life. This has caused the notion of *flâneur*, for example, to receive strong criticisms. From a gender perspective, Wilson (1992), for example, shows how women have been *flâneusses* who have remained invisible in the theorization of walking and public space, having been relegated to domestic space until recent decades; but also Serlin (2006), from disability studies, argues that the centrality that the classic figure of the *flâneur* has acquired, even impacting urban planning, can lead to the exclusion of disabled people from public space (as they are not considered and are imagined to be confined to domestic spaces, residences, asylums, or mental hospitals).

Following this path, our work is part of an effort to expand the ways of investigating the pedestrian phenomenon centering other "ways of

walking", a term developed by Ingold and Vergunst (2008). For this, we not only want to connect with the crucial contributions of feminist geography and urbanism (Col·lectiu Punt 6, 2019; Jirón and Lange, 2017; Middleton, 2010 and 2011; Sheller, 2018), which have sought to complexify the analysis of the different corporealities that the streets and their legal or architectural designs (Blomley, 2011; Valverde, 2012) inscribe, host, and displace. In this text, we would particularly like to situate at a theoretical crossroads of sensory anthropology and the crucial contribution of Science and Technology Studies (STS) for the study of technical mediations and arrangements (Latour, 2001 and 2005) or urban assemblages (Farías, 2011) that enable or facilitate, but also impede blind walking, often remaining invisible in accounts of city life. Within this working framework, we have been able to gather ethnographic stories that account for configurations of the pedestrian phenomenon that would help, in our opinion, to broaden the notion of what contemporary pedestrians are or could be. Allow us to unfold what this entails in a more specific way.

In our fieldwork, we have been able to document how different people — like Ricard or Jenar, whom we will discuss later in detail, together with a long list of other blind individuals — deploy different techniques and equipment to walk and cross the streets, also relationally experiencing difficulties or barriers which, ultimately, might be related to the scarce available knowledge about blind pedestrians. That is why in this work we want to make room for the description of the knowledge they display: how they perceive or experience a city not designed for them (with cities being designed up until very recent times from the centrality of vision), and how they get by with a non-visual urban fabric.

Therefore, in this article we would like to empirically demonstrate the complexity of sensory techniques and non-human actors involved in these seemingly mundane everyday acts. These acts provide us with another image of the city: a city fractured by the injustices of architectural design; but also, an urban life rich in non-human supports and companions, often also planned and designed by architects who, in response to the politicization of our blind peers[4], have become sensitised to the multisensoriality of the city, hence enabling a richer experience, deploying various techniques to merge with aromatic, sonic, or tactile elements[5].

4. For a more detailed analysis of urban accessibility activism and its impact on urban design practice, see Sánchez Criado and Cereceda, 2016.

5. Albeit in a more generic fashion, a good example of this might be the Finnish architect Juhani Pallasmaa (2012): a fierce critic of Western modern architecture given its visual and

In what follows, the article is divided into two sections, where we present ethnographic cases, and a conclusion. In the *Sensorialities* section, we highlight the sensory features of blind walks or displacements, focusing on the practice of moving with a guide dog. In the *Assemblages* section, we focus on the technical mediations, personal supports and city designs that either facilitate or hinder the sensory practices of blind walking. In the conclusions, we emphasize the need to expand or reassemble the pedestrian phenomenon, paying attention not just to its sensory dimensions but, more importantly to its more-than-human complexity.

Sensorialities

Our observations surrounding the practices of walking and crossing the street of blind individuals have brought us closer to the vindication of the senses in anthropology. As Constance Classen and David Howes (2013) pointed out, since the early 1990s, the "anthropology of the senses" has generally dedicated itself to the study of different cultural groups, paying attention to sensorial records or patterns, a matter generally undervalued or unconceptualized in many ethnographic works up to this date. In this regard, Classen, Howes and Synnott (1994) highlighted that in all cultures, there have been and continue to be sensorial value systems that are relative to times or contexts. This led them to compare the symbols and practices through which a certain hierarchy of the senses is produced, which acts on the sensorial preferences of different human groups. Thusly, the senses become relevant for anthropological inquiry: each culture, they say, has a symbolically-mediated sensory model, among other things, by its conventional cosmological definitions.

In contrast to this culturalist and symbolist version of the anthropology of the senses, another version, called "sensory anthropology", emerged as a reaction in coming years. As Sarah Pink (2009) points out, the approach of the anthropology of senses is not relational — perhaps making an exception with Classen's work (2005) *The book of touch* — since sensoriality is not examined as a bodily and situated practice of specific actors under particular conditions, but within a symbolically regulated system of categorisation and modelling. In a similar sense, Pink's work draws on Tim Ingold's critical reflections (2001 and 2011),

retinal character, instead of considering the constitutive multisensoriality of human life, which Pallasmaa vindicates as a cornerstone to rethink architecture.

who distinguishes his work on sensoriality from that of the anthropology of the senses. In his opinion, the latter proposes artificial divisions that, although they illuminate some aspect of the reality of the senses, they obscure others: for example, individual sensory experience is lost in the classification of a pre-established or modelled sensory system (Ingold, 2001: 28). This approach has been enormously fruitful in approaching ways of walking, the central theme of the compilation by Ingold and Vergunst (2008), where the situated sensory practices of different actors are explored.

These works have been greatly inspiring to be able to focus on blind walks, but also for remaining true to the self-perceptions of blind people in the practical context of walking and crossing the streets: what they say they do or their explanations on how they do it while walking and crossing blindly, learning in situ the meaning of certain urban sounds, the textures of the pavement, the smells of a bar or a bakery in their own everyday movements. Thus, our blind counterparts have "educated our attention" (Ingold, 2001), training us to understand the role of the senses in their exploration of the city — for example, how to pay attention to any sound (the noise of vehicle engines) to cross the streets — in order to try to understand their situated urban practices beyond vision.

In some very relevant passages for us in *The Perception of the Environment*, Ingold (2001) deals with blindness, although he stresses that he refers to the case of a totally blind person (there are, in fact, very different ways and gradations of "not seeing", as well as different ways in which various medical perspectives have rendered legible blindness and the visually impaired body). Among his arguments, a reflection on how blind people construct tactile space stands out: little by little, from the particular to the general, in a sequential and repeated way, linking haptic clues by contiguity or adjacency to get an idea of spatial connections, more topological than Euclidean. But also constructing auditory spaces, paying attention to ephemeral acoustic clues, their sequence, their echoes and their potential recurrence, since auditory perception is deeply temporal. This does not hinder that a blind person's perception, as Ingold points out, is as multisensory as others', although the particular mix of touch, echo and movement may be really difficult to understand for sighted people (2001: 274). For this, Ingold draws on Merleau-Ponty's phenomenology (1970), placing the body and its movements as enablers of action. That is, he considers perception as a mode of action that changes in relation to the connections of the body and environment.

With these considerations and from the countless examples we were documenting in our fieldwork, the city of the blind, but perhaps also that of all its pedestrians, began to appear before us as a peculiar sensory environment: a relational topological construction that emerges from the synergies between organisms and the materials with which they relate, both being constituents of what Ingold (2001: 9) calls an "ecology of life". The city, therefore, appeared as a web of sensory engagements, the result of activities by which living beings are building and repairing their habitat, defining as a result a landscape of multiple temporal activities or a 'taskscape', hence leaving their mark on the materiality of the environment. However, in contrast to phenomenological analyses, commonly focused on a human sensoriality that is always accessible and articulable, this sensory landscape, as evidenced in the initial vignette of Ricard, is commonly speckled and interwoven with countless non-human presences (animals and technical equipment), in a wide variety of circumstances that would rather suggest the relevance of a post-phenomenological approach to sensoriality (McCormack, 2017): something relevant when dealing with sensory relations and networks from which it is very difficult to have direct and easily describable access beyond certain clues in practice. Allow us to provide an example:

> Autumn 2014. Today Marcos has arranged to meet with Jenar and Taysson (his guide dog), to perform a filmed route of a conventional walk through the Badal neighborhood. We are walking:
>
> Marcos.— Above all, you go with more peace of mind, right?
>
> Jenar.— And faster… Look, this pace, this speed I can perfectly maintain, but with the cane I would not even be able to go at half this speed… But it's normal, because you have to recognize [the terrain] with the arch technique.
>
> We reach a crosswalk, with a more or less irregular design. Taysson stops at the intersection. Jenar, who recognizes the situation, takes the remote control out of his pocket and listens to the sound of the cars.
>
> Jenar.— See… Now he stops because he, these crosswalks he already knows, there are cars, maybe I could pass, but I don't know if I would have time… So I will activate this traffic light, which is here… One of the problems with these traffic lights is that when it's green… it doesn't do anything, it doesn't signal anything… but now it's red… I activate it.

Image 2. Taysson and Jenar walking together, joined by the harness. Source: The authors. Alt-text: an image from the audiovisual record showing Jenar's hand grabbing Taysson using the harness, ready to start walking.

> We cross. The street is narrow. The dog is always walking with almost half his body ahead, his mouth slightly open [Image 2]. Almost imperceptibly, he now avoids a garbage can, then bicycles, pedestrians walking in the opposite direction, an older woman. Then he moves towards the sidewalk wall, then next to a series of trees. All this while Jenar hardly notices, talking carefree as he walks. As we chat, he tells me: "Of course, and now we do all this… I realize when I pass by neighborhood stores, by smell… Now, for example, I know we have passed by a Chinese store, or a nuts store…" After a while I notice another one and tell him: "Look… See?" Jenar and Taysson stop right at the exit of a supermarket:
>
> Jenar.— A cold air stream comes out of here — he raises his hand towards the door. So of course… it tells you something, doesn't it? What in particular? Well we would have to go in to know.
>
> Marcos.— It's a supermarket —we keep walking.
>
> Jenar.— See, that's why I tell you, you already know that there is something there and you assume that if it has air conditioning… Well, it must be something big (field notebook, transcription of audiovisual records made by Marcos Cereceda; November 12, 2014).

Jenar and Taysson's mode of travelling involves different sensory practices from the *práctica bastonera* (cane practice, that is, linked to the use of a cane, in the jargon of our blind companions) example with which we started our text. Here, rather than exploring a place to move through safe environments, paying attention to every inch of the ground, and sometimes

not being able to avoid the bump on the head, Jenar lets himself be led. He walks carefree, a bit faster, taking short steps, synchronized with the dog's steps; trusting in his dog's qualities which, alert, focused and with tongue out, is at once guiding the march and following his "master's" instructions. Taysson moves well between known points (the routes learned by the dog) or following a certain directionality marked by Jenar, where, paradoxically, Taysson guides, dodges one obstacle or danger after another, but also where sometimes he changes course as Jenar asks him to, either with verbal orders or with subtle pulls of the harness. Together, Jenar and Taysson form an alliance of sensory practices that allows the blind person to experience displacement as a walk: a set of knowledges to move and cross the streets blindfolded, interpret the sound of cars and contrast them with the acoustic signals of the traffic light, the air, or the smells. A set of knowledges that are learned and standardized. Unlike cane practice, Jenar, as most guide dog users in general, can walk more or less carefree and confident, like a sort of *flâneur*, but one who does not observe, but rather lets himself be intoxicated by that amalgam of sounds, smells, and tactile experiences of the city. In fact, it is often confusing to define who is leading whom: The master leading the dog, or the dog leading the master?

In a similar sense, sociologist Rod Michalko (1999) reflects on the bond he (a blind person) has with his dog Smokie. For him, this relationship results in a kind of sensory symbiosis between a human and an animal. A guide-dog unit in sometimes unstable equilibrium, but whose stability — for it to practically operate as a unit — requires in-depth training to set up the dog 'technically'. Indeed, the dog must be capable of taking responsibility for the life and safety of the blind person, learning what the trainers call "intelligent disobedience" (not paying attention to the "master's" instructions when these could endanger their life; for example, refusing to cross a street when cars are passing). This relationship underscores the significant role of the non-human actor in mediating and shaping the sensory experiences and practices of blind individuals in their daily navigation and understanding of the urban environment.[6] The training process also seeks to ensure that blind people are prepared and responsible enough to be guided by the dog. Between the blind person and the guide dog, a process of what Haraway (2006) calls "becoming-with" must therefore occur, requiring many permanent adjustments. However, to make this possible, the guide dog, a very particular animal, has to undergo a nature-cultural technification process (Haraway, 2003). Guide dogs are unique hybrid breeds, over which there is a dispute as to wheth-

6. For a detailed introduction to this process, see the Guide Dog Foundation ONCE's video: https://www.youtube.com/watch?reload=9&v=fFOUGxUNgEg (accessed on January 1, 2020).

er they are subjected to processes of objectification as a kind of "dog-machine". In fact, from the organizations providing these dogs and their training, it is usually emphasized that the user cannot dispose of the dog's life as if it were a beast of burden. These types of dogs are subject to policies regulating the norms of use and the treatment they must receive. These mandate that the relationship should not be one of exploitation (for instance, the dog is only 'granted' for a maximum of 10 years)[7].

Taysson (who passed away recently at the time of writing this study, after 8 years of service) must think and pay attention to the different objects on the road: obstacles, generally mobile or unstable, which appear and disappear during the journey. In addition to this skill, he also needs to be able to calculate the space through which he and the blind person can pass in the most effective way possible. Taysson is a dog trained to work with the sensory and mobility skills of a human (with total blindness or partially sighted); something that materializes by altering or intervening in the centuries' long bonds between dogs and humans, based on the specific needs of the user. The life of a dog like Taysson, therefore, cannot be understood as that of a friendly "pet" figure. Nor can we certainly refer to this process as one of "domestication" (Haraway, 2003), as they are not wild dogs. Rather, they are dogs that have been carefully selected based on specific genetic characteristics (Carmona and Ortega, 2009), on which an intensive training process is practiced, which minimizes the dog's instinctive impulses and transforms it into a complex sensory technology for blind walking.

What kind of pedestrian are Jenar with Taysson together? Rather than a *flâneur*, or a pedestrian conceived in its individual phenomenological dimension, Jenar and Taysson could be considered as a sort of hybrid sensory human-animal entity. Or, better said, according to Vinciane Despret (2008), their walking is the result of a well-worked "anthropo-zoo-technics" that allows them both to walk and cross the streets, without risks and orienting themselves through complex sensory practic-

7. In Spain, the first law in this regard was the Royal Decree 3250/1983, which regulates the use of guide dogs for the blind. This establishes the conditions for accessing spaces, both dwellings and institutions, as well as the conditions for the accreditation of training and the concern for its health. The subsequent Royal Decree 1570/2007 on the possession of dangerous animals, exempts guide dogs from this category. Spanish Autonomous Communities have the competence to further regulate in this sense. In the case of Catalonia, the Law 19/2009, of November 26, governs access to the environment for people accompanied by assistance dogs. This law not only covers blind people, "it also extends to all those people with hearing, physical disabilities, autism who can be assisted by other trained dogs". Apart from these institutional regulations, it is the National Organization of the Spanish Blind (ONCE) that acts in practice as a large accrediting body, which has been developing "internal regulations" that regulate the granting and accreditation of guide dogs: from the requirements of granting to the processes of access, definition of priorities, preparation of reports and courses.

es and in interaction. Jenar walks looking through the body of Taysson, who accompanies and protects him from a multitude of urban life dangers. Together they collaborate, perhaps, in the construction and maintenance of a safe space to move around, accompanying each other. In contrast to the disembodied notion of the modern *flâneur*, Jenar and Taysson or Ricard have helped us to bring out the figure of a pedestrian within what Ingold (2001: 24-26) would call a "sentient ecology", a fabric of complex sensory relationships. These, as we already saw in the case of Ricard at the beginning, are not limited, however, to the case of animal entanglements. In what follows, we will describe how blind pedestrians should also be considered as part of intricate urban assemblages.

Assemblages

Indeed, more actors are involved in the dense web of situated sensory practices of blind walking. A complex element to which we must pay attention to in this work is the typical pedestrian crossing in Barcelona (Image 3). And, specifically, one of its elements: traffic lights. The municipality invested 40 million euros in 2008 to funds its design and implementation it in the city's streets. The design that won the competition was the one from Tandem Company. It is a device that incorporates LED screens, in whose casing lie different modules for Wi-Fi signal devices, also hosting the Ciberpas system for blind people. It is also prepared to work with photovoltaic panels. In addition to this audiovisual technology to regulate traffic, the pedestrian crossing is equipped with "tactile pavements" in its design.

Image 3. Gual 120 (Crossing 120 or Barcelona Crossing), located on Trafalgar Street in Barcelona. Source: own elaboration. Photo taken on December 16, 2015.

Together, this assemblage of components forms the standard crossing known as Gual 120 (in Catalan, or Vado 120 in Spanish; also known as "Barcelona crossing"), designed in 1991 by Màrius Quintana and Montserrat Periel, as part of their work at the Area of Urban Elements of the Barcelona City Hall (IMPD, 2009). It is made up of three to eight granite pieces that are 120 cm long with a maximum slope of 12%. This design has been adapted as an urban standard in all areas of the city where the terrain permits. From the facade line to the start of the ramp, a path of tiles with a relief of lines or stripes with a width of 100 cm extends. These "tactile" or "podotactile pathways" are designed to inform, via the contact of the ball located at the tip of the cane (*contera* in Catalan, ferrule) with the tactile material, the location of the ramp. Along with the traffic light, and as a gate-like structure, a bin is installed on the left side of the ramp. Its perpendicular arrangement to the crossing is designed to prevent collisions with it by blind and partially-sighted people, whose cane would tend to slip underneath it. It's worth noting that the "Gual 120" in Barcelona was the result of meeting the demands of the disability advocacy movement within the Municipal Institute for Disabled People (IMPD) of the Barcelona City Hall. As of today, the "Gual 120" in Barcelona is fully incorporated into the orientation practices of blind residents. Let's see how.

> Autumn 2016. Ricard takes out his cane and starts walking: "We're going to the Palau Macaya, where I used to work. First we go to the bus stop." Ricard starts walking towards the corner. He has one hand in his jacket pocket (where he keeps the remote control). With his right hand, he swings the cane in arcs. It vibrates to the rhythm of the textures of the modernist tiles in the Sant Antoni neighborhood. Ricard walks silently and focused. Every so often or suddenly, the noise ("tap-tap-tap") of the cane's vibrations changes for a moment: it's a signal that the cane has just rubbed a podotactile pavement that crosses the sidewalk, from the facade line to the start of the crossing ramp. Ricard continues walking, making arcs, identifying the podotactile lines (and probably counting the steps or listening to sounds). He finds another podotactile strip: he stops, turns and follows it until he finds the slope of the crossing. There, he takes out the remote control [Image 4] and activates the traffic light's sound signals: "pa, pa, pa" (activation sound, slow). He waits until the signals indicate that he can cross "pi-pi-pi-pi-pi-pi" (at rapid intervals).

Image 4. Remote control activating the Ciberpas system. Source: The authors. Alt-text: In the photograph, Ricard grabs the remote control activating the acoustic signals of the traffic lights, called Ciberpas.

> He quickly crosses to the other side of the road, where he is greeted by another Vado 120. He climbs the slope and continues walking a bit further and says, "And here is the 55 bus stop." Indeed, we approach a bus stop where there are hardly any people. Ricard quietly enters the shelter area, takes out the remote control from his pocket, presses the button, and activates the public address system of the bus stop. From somewhere in the shelter, a male, metallic, and friendly voice emerges, saying, "55, two minutes; 41, nine minutes; 13, eleven minutes." The display board shows the bus routes and the waiting time. This synchronization is not always accurate. Sometimes, the exact calibration between the bus arrival announcement and the "imminent departure" sound announcement fails, and people get annoyed.
>
> Ricard waits. Suddenly, a bus appears from around the corner and stops right in front of Ricard. He calmly takes out the remote control again, points it towards the bus, and presses the button. From the depths of the bus, a loud, deep, and masculine voice, reminiscent of the Transformers movie, says, "Line 55 Collblanc-Trinitat Vella." Ricard stands still and does not board. He waits for the next one.

Much of our fieldwork revolved around the Gual 120 in Barcelona: the setting for the complex ensemble of actors that enable the deployment of countless "scripts" — to paraphrase the works of both Goffman (1963) and Akrich (1992) — for moving through the city's public space, as we have described earlier. But within this broad and complex framework, the most curious actor, whose small size contrasts with its importance, has been the remote control, with which blind people not only activate the

traffic light but also access the audio-described information about certain bus stops and the fleet of buses operated by Transports Metropolitans de Barcelona (TMB). In our view, these technologies are not merely intermediaries between an individual and the world but "mediators" (Latour, 2001) that intervene in shaping who can walk the streets of Barcelona and how.

In this regard, we believe that blind walks could be analyzed through the notion of "urban assemblage." Developed within the field of actor-network theory by Ignacio Farías (2011), among others, the term suggests adapts the poststructuralist notion of "assemblage" to study of urban realms or, more specifically, urbanism. As Farías (2011) points out, applying the notion of "assemblage" to the study of the urban allows to produce descriptions attentive to the constitutive ontologically multiplicity of the city, as well as to the distributed forms of agency that inhabit it. It focuses on how the city is produced and coordinated through multifarious devices, processes and associations of heterogeneous elements, including practices, documents, regulations, standards, and technologies.[8]

However, the concept of "assemblage" should not lead us to think of perfectly coordinated or "machinic" urban environments, but rather of processes of coordinating multiplicity that often fail. Moreover, paying attention to cities as subtle and complex processes of assembling the urban foreground how these spaces are not mere surfaces that allow the creativity of their pedestrians, but deeply affect their uses and conditions of possibility. In fact, every form of city design involves delegating to matter, "inscribing" or "prescribing" scripts of use in a material way (Akrich, 1992), thus producing different technical sensations and urban possibilities. Furthermore, a large part of the sensations we experience when walking through what we call "cities" are to a great extent, more or less intentional, designed effects: in fact, they constitute a significant part of the work of urban planners, architects, designers, or are coordinated by the efforts of different municipal technicians.

8. Following philosophers like Gilles Deleuze, assemblages can be understood as processes of contingent composition or co-functioning between varied entities that, nonetheless, maintain a certain relationship of exteriority between the parts. The introduction of this notion into urban studies, however, has not been without controversy. For example, in a now-classic debate that took place in the pages of the journal *City*, Brenner, Madden, and Wachsmuth (2011), from their Marxist critical urban theory standpoint, expressed skepticism about the application of actor-network theory to urban studies, as they perceived an ambiguous stance when explaining crucial economic and political processes that affect the materiality of cities. However, authors like McFarlane (2011) emphasized that this analysis in terms of assemblages is rooted in a critical line of thought, as it helps us consider how urban forces are assembled or can be assembled in different ways, with that productive ambivalence uncovering aspects that are not addressed by Marxist approaches.

Therefore, every city is fundamentally a concatenation of complex scripts materialized through which our movements are mediated, requiring us to take charge of them, whenever possible. Thinking in these terms is relevant to emphasize how in these processes the streets become relevant as what Guattari and Rolnik (2006) would call "collective equipment," where not only the environment but the individual is fabricated. In Guattari and Rolnik's conception, there is no ultimate and finished individual, but rather material and semiotic processes in which subjectivation takes place. For these authors, collective equipment provides individuals with different "models of perception, motricity, intellection, imagination, memory" (Guattari and Rolnik, 2006: 32). The term "equipment" reveals an interesting process of what occurs here: in their technification of the environment, these urban assemblages equip or articulate subjects.

The attention to the distributions and configurations that these "equipaments" entail has had a profound effect on understanding how the figure of the *flâneur* and contemporary notions of public space emerged in Europe. Moreover, as numerous studies in science and technology studies and the anthropology of walking have shown, this figure can only be understood as an effect of the assemblages and spatial distributions materialized and perfected by the modernist urbanism of Haussmann's Paris (Domínguez Rubio and Fogué, 2013; Meulemans, 2017: 51-53) or Cerdà's Barcelona (Estévez Vilariño, 2019). It involves a material delegation of the city's spatial functions, with a distribution and zoning that creates a distinction between nature (the outside) and culture (the inside), relegating infrastructure, such as sanitation and supply systems, to the underground and sealing them with hard pavements to make them inaccessible to those not versed in urban management, domesticating nature in parks and designated areas for trees.

This infrastructural urbanism led to the unique emergence of, among other things, sidewalks (Blomley, 2011): the first instance of a long tradition of infrastructural forms in public space, now widespread in most European cities. Sidewalks became a place for indifferent encounters with anonymous others (Delgado, 1999), a space conducive to the emergence of unexpected walks by those passersby or *flâneurs* who soon captured the urban socio-anthropological imagination. In recent years, our work has sought to delve into the analysis of the singular transformations of modernist urban assemblages to address bodily diversity. This process of urbanization, beyond equipping the city as we mentioned earlier, has primarily equipped the individuals who walk through it, turning all of us as pedestrians into beings whose sensory practices are technically assembled, thus becoming "techno-sensory" beings.

In our work with our blind companions, we have encountered a dense network of mediators (Latour, 2001) and material delegations (Akrich, 1992) that transform and modulate human agency. These mediators take the form of imperceptible yet "activatable" infrastructures or objects that intervene, facilitate, and impact blind navigation, producing various "enabling" effects that challenge the disabling aspects of the built environment.[9] The white cane, the guide dog, the remote control, the smartphone, the volunteer companion, different types of cards (for ordering a taxi, using public transportation, or interacting with ATMs) marked with signals or braille writing, urban interventions such as the Gual 120 in Barcelona, tactile pathways, sound-enabled traffic lights with the "Ciberpas" system, bus announcements, and accessibility features like elevators and ramps in the underground are all examples of collective equipment enabling blind individuals to walk safely.

These various forms of equipment play a crucial role in facilitating mobility and ensuring the safety of blind individuals in urban environments. They enhance their sensorial capabilities, provide navigational aids, and enable communication and interaction with the surrounding environment. By considering these equipment as essential components, we recognize the importance of inclusive design and accessibility in creating a supportive and inclusive urban space for blind and partially sighted people.

However, not all mediations are equal or have the same impact. As evidenced by the critiques reviewed in this study of the *flâneur* figure due to its limited attention to the embodied reality of pedestrians, the relentless production of safe ways of walking and crossing streets for blind individuals has required an expansion of the body types considered in urban design, and in some cases, a democratization of urban planning processes. Only through like this it has been possible to ensure a certain material "translation" (Callon, 1995) of the senses and the mobilization of the experiences of blind individuals into different documentary interfaces for the production of new urban standards and designs (Sánchez Criado and Cereceda, 2016). Thus, through the mobilization of blind people, the designed qualities of sound and touch have become part of this intricate

9. These effects have implications for how we understand "disability" and explain the processes of "disablement." We recommend a careful reading of Schillmeier (2010) for an analysis of how this attention to non-human equipment entails an analytical reconfiguration of dis/ability as a "socio-technical" effect. This perspective goes beyond both the "medical-rehabilitative" model, which focuses on the body as the site of disability, and the "social" model, which emphasizes socio-symbolic or environmental considerations in explaining disablement processes. Such reconfigurations challenge the predominant approaches in disability studies.

urban assemblage that transforms the practices of walking into "tecno-sensorial" experiences, thereby equipping the possibility of safe walking for blind individuals.

Conclusion: Reassembling the Pedestrian Experience?

In this text, we have presented the central findings of our ethnographic research conducted between 2013 and 2016 on blind pedestrians in the city of Barcelona. Our work revolved around a seemingly simple question — "how does a blind person walk or cross the streets?" — and has been carried out by considering and learning from the practices of the blind individuals who participated in our ethnographic study. Through this process, they have helped us understand how the city operates for those who navigate it without seeing or being partially sighted.

This has led us to witness situations that have made us reflect on the city and the detrimental effects generated by a historical process of theorizing about the urban realm. This process has not only rendered blindness invisible (as well as the immense bodily diversity of other pedestrians who roll, limp, walk slowly, are D/deaf, or communicate using sign language or pictograms, to name just a few examples), but it has also disregarded how these bodies experience the city. In this work, we have strived to remain faithful to the rich relationships described by our blind companions. These relationships have become palpable in countless scenes whose complexity has suspended not only our preconceptions of urban space, but also our notions of what constitutes a pedestrian, a city, or urban planning, challenging the disembodied and dematerialized perspectives inherited in urban anthropology.

In the practices of these pedestrians, the city emerges as a multisensory amalgamation of unique taskscapes (Ingold, 2001). It is a way of inhabiting, engaging with, and being shaped by the city through activities and practices that have temporal and spatial dimensions. The body's experience, honed through certain techniques and movements, enables modes of navigating the city where, in almost every walk, there may be a vibration, a sound, or a smell that can reshape the relationship with the city. It is difficult, therefore, to conceive of the city for blind pedestrians as a network of stable elements. While blind individuals may rely on clear references or standard environments and often walk in familiar places, these places are never the same or, rather, they rarely present themselves in the same way. They are mobile and mutable, resulting in an urban space constantly composed within a sentient ecology. However, blind pedestrians face challenges. For a long time, their corporeality, along with that of

many other bodies that do not fit the mold of productive and skilled subjects required by capitalism, has been subject to various exclusions or invisibilities. Therefore, following these blind movements requires shifting the focus away from the main figures of urban theory, such as Benjamin's *flâneur* or Michel de Certeau's description of walking, and opening ourselves up to a range of works in the field of sensory anthropology, geography, and feminist urbanism. These approaches emphasize the importance of analyzing diverse bodies and studying the unique ways in which people move and navigate the city (Jirón and Lange, 2017; Middleton, 2010 and 2011; Sheller, 2018).

As a result, rather than seeking a singular alternative counter-figure to the hegemonic image of a modern pedestrian — bipedal, capable, and ocular-centric — it may be necessary to continue proliferating the study of the unique sensory practices of different collectives and individuals. We believe that our modest ethnography on the practices of blind people in navigating the city, despite lacking references in our immediate circles and thus being singular in its genre, contributes to a broader project of making visible the multitude of urban bodies that employ various tricks and tactics to navigate a city that was not designed with them in mind. In fact, as Schillmeier (2010) points out, perhaps we can pay attention to these sensory tricks and tactics as "inclusive practices" that not only enable, for example, living as a blind person in a predominantly visual culture but also destabilize the centrality of visuality in cities, their design, and their valuation.

However, in this text, we have advocated for a second expansion beyond a mere assertion of diverse corporeality and its constitutive sensoriality for walking in the city. Our exploration of blind walking has highlighted the need to pay attention to non-human entities (animals and technologies) that populate and "equip" walking practices. These entities allow for a characterization of blind movements as a polyphonic and complex composition in relation to specific equipments, or lack thereof, while also illuminating the potential for a non-human characterization of pedestrian phenomena. If there's one thing our blind companions have taught us, it is that the modern city as we conceive it, or as criticized by urban anthropology (Delgado, 1999), may not exist for anyone. In a similar vein to how Latour and Hermant (1998) proposed in *Paris, ville invisible*, for blind pedestrians the city as a totality does not exist. Instead, it appears to them as a collection of small inscriptions, traces, and sensory mediators through which the city reveals itself with every step. These inscriptions, traces, and mediators perform crucial and invisible work in equipping movement and displacement, extending beyond the panoramic visions of the city held by urban planners.

Therefore, blind walking reveals the need to understand the urban assemblages (Farías, 2011) that pedestrian practices are part of. These assemblages are extensively shaped by technicians, engineers, administrators, officials, documents, forms, reports, and control and maintenance devices. In our examination of the practices involving small and mundane "collective equipment" such as a guide dog, a remote control, the tip of a cane, a type of pavement or a pedestrian crossing, we have come to realize how these mediate their walking experiences. Furthermore, our blind companions have taught us to pay attention to combinations and interweaving of sounds, vibrations, and smells — an amalgamation of sensations with which the distributed agency of blind walking must engage, generating assemblages that unite the invisible and the visible. These assemblages establish connections between smells and commercial stores, sounds of cars and traffic lights with crossing actions, vibrations and echoes from pavements and facades with the coordination of their movement.

Therefore, what these particular forms of equipping bring into focus are unique "pedestrian assemblages." With this concept, we aim to broaden the notion of "urban assemblage" itself, becoming sensitive to the implications that different technologies and animals can have in generating specifically multisensory configurations of body-city relationships, enabling and equipping bodies that are commonly overlooked to articulate new techno-sensorial practices. It serves as a conceptual tool that can help draw attention to and describe the effects that different urban configurations have on a wide diversity of urban experiences and bodies. Through this descriptive tool, the city emerges as a set of relations that go beyond the human: a city made up of techno-sensorial practices that assemble the sensory and equip pedestrian movements, enabling particular displacements. Or rather, a collection of pedestrian assemblages that, instead of an infrastructure designed for indifferent encounters among pedestrians, reveal a complex ecology of supports and accompaniments that facilitate and embrace bodily diversity.

References

Akrich, M. (1992). The de-scription of technical objects. In *Shaping Technology/Building Society. Studies in Sociotechnical Change*. W. Bijker and J. Law, Eds. Cambridge, MA: MIT Press.

Benjamin, W. (2005). *Libro de los pasajes*. Madrid: Akal.

Blomley, N. (2011). *Rights of Passage: Sidewalks and the Regulation of Public Flow*. London: Routledge.

Brenner, N.; Madden, D.J. and Wachsmuth, D. (2011). Assemblage urbanism and the challenges of critical urban theory. *City*, *15*(2): 225-240.

Buscher, M.; Urry, J. and Witchger, K. (Eds.). (2011). *Mobile Methods*. London: Routledge.

Callon, M. (1995) Algunos elementos para una sociología de la traducción: la domesticación de las vieiras y los pescadores de la bahía de St. Brieuc. En *Sociología de la ciencia y la tecnología*. J.M. Iranzo, J.R. Blanco, T. González de la Fe, C. Torres and A. Cotillo, Comps. Madrid: CSIC.

Carmona, R. y Ortega, C. (2009). Estudio del protocolo reproductivo en la «Fundación ONCE del perro guía (FOPG)». *Revista Complutense de Ciencias Veterinarias*, *3*(2): 167-175.

Cereceda Otárola, M. (2018). Desplazamientos a ciegas: Un estudio etnográfico sobre los movimientos y movilizaciones urbanas de las personas con diversidad visual en Barcelona. Doctoral Thesis. Doctorat en Persona i Societat en el Món Contemporani, Universitat Autònoma de Barcelona.

Classen C. (2005). Touch and technology. In *The Book of Touch*. C. Classen, Ed. Oxford: Berg.

Classen, C. and Howes, D. (2013). *Ways of sensing: understanding the senses in society.* London: Routledge.

Classen, C.; Howes, D. and Synnott, A. (1994). *Aroma: The cultural history of smell*. London: Routledge.

Col·lectiu Punt 6 (2019). *Urbanismo Feminista: Por una transformación radical de los espacios de vida.* Barcelona: Virus.

de Certeau, M. (2000). *La invención de lo cotidiano* (Vol. 1). México: Universidad Iberoamericana.

Delgado, M. (1999). *El animal público.* Barcelona: Anagrama.

Despret, V. (2008). El cuerpo de nuestros desvelos: Figuras de la antropo-zoogénesis. In *Tecnogénesis: la construcción técnica de las ecologías humanas*. T. Sánchez Criado, Ed. Madrid: Asociación de Antropólogos Iberoamericanos en Red.

Domínguez Rubio, F. and Fogué, U. (2013). Technifying Public Space and Publicizing Infrastructures: Exploring New Urban Political Ecologies through the Square of General Vara del Rey. *International Journal of Urban and Regional Research*, *37*(3): 1035-1052.

Estévez Vilariño, B. (2019). Reassembling Lesseps Square, Rethinking Barcelona: A More-than-Human Approach. *International Journal of Urban and Regional Research, 43*(6): 1123-1147. Farías, I. (2011). Ensamblajes urbanos: La TAR y el examen de la ciudad. *Athenea Digital, 11*(1): 15-40.

García Grados, C. (2017). La percepción participante como una herramienta metodológica feminista: Una aplicación a los estudios de género. *AIBR. Revista de Antropologia Iberoamericana*, *12*(2): 125-146.

Goffman, E. (1963). *Behavior in public places: Notes on the social order of gatherings*. New York: The Free Press.

Guattari, F. and Rolnik, S. (2006). *Micropolítica: Cartografías del deseo*. Madrid: Traficantes de Sueños.

Haraway, D. (2006). Encounters with Companion Species: Entangling Dogs, Baboons, Philosophers, and Biologists. *Configurations, 14*(1): 97-114.

Haraway, D. (2003). *The Companion species manifesto: Dogs, people, and significant otherness*. Chicago: Prickly Paradigm Press.

IMPD (2009). *Barcelona, una ciutat per a tothom: 30 anys treballant amb les persones amb discapacitat*. Barcelona: Ajuntament de Barcelona, Institut Municipal de Persones amb Discapacitat (IMPD).

Ingold, T. (2011). Worlds of sense and sensing the world: a response to Sarah Pink and David Howes. *Social Anthropology*, *19*(3): 313-317.

Ingold, T. (2001). *The perception of the environment: essays on livelihood, dwelling and skill*. London: Routledge.

Ingold, T. and Vergunst, J.L. (Eds.) (2008). *Ways of Walking. Ethnography and Practice on Foot*. Aldershot: Ashgate.

Jirón, P. (2011). On becoming «la sombra/the shadow». In *Mobile Methods*. M. Buscher, J. Urry y K. Witchger, Eds. London: Routledge.

Jirón, P. and Lange, C. (2017). Comprender la ciudad desde sus habitantes. Relevancia de la teoría de prácticas sociales para abordar la movilidad. *Cuestiones de Sociología*, *30*. In https://doi.org/10.24215/23468904e030.

Kusenbach, M. (2003). Street phenomenology. The go-along as ethnographic research tool. *Ethnography*, *4*(3): 455-485.

Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. London: Oxford University Press.

Latour, B. (2001). Un colectivo de humanos y no humanos: Un recorrido por el laberinto de Dédalo. In *La esperanza de Pandora. Ensayos sobre la realidad de los estudios de la ciencia*. Barcelona: Gedisa.

Latour, B. and Hermant, E. (1998). *Paris, Ville Invisible*. Paris: Les Empêcheurs de Penser en Rond/La Découverte.

McCormack, D.P. (2017). The circumstances of post-phenomenological life worlds. *Transactions of the Institute of British Geographers*, *42*(1): 2-13.

McFarlane, C. (2011). Assemblage and critical urbanism. *City*, *15*(2): 204-224.

Merleau-Ponty, M. (1970). *Lo visible y lo invisible. Seguido de notas de trabajo*. Barcelona: Seix Barral.

Meulemans, G. (2017). The Lure of Pedogenesis: An Anthropological Foray into Making Urban Soils in Contemporary France. Doctoral Thesis. Department of Anthropology, University of Aberdeen.

Michalko, R. (1999). *The Two-in-One. Walking with smokie, walking with blindness*. Philadelphia: Temple University Press.

Middleton, J. (2011). Walking in the City: The Geographies of Everyday Pedestrian Practices. *Geography Compass, 5*(2): 90-105.

Middleton, J. (2010). Sense and the city: Exploring the embodied geographies of urban walking. *Social & Cultural Geography*, *11*(6): 576-596.

Pallasmaa, J. (2012). *The Eyes of the Skin: Architecture and the Senses*. London: Wiley.

Pink, S. (2009). *Doing sensory ethnography.* Thousand Oakes: Sage.

Pink, S. (2007). Walking with video. *Visual Studies*, *22*(3): 240-252.

Sánchez Criado, T. and Cereceda, M. (2016). Urban accessibility issues: Techno-scientific democratizations at the documentation interface. *City*, *20*(4): 619-636.

Schillmeier, M. (2010). *Rethinking Disability: Bodies, Senses, and Things*. London: Routledge.

Sheller, M. (2018). *Mobility Justice: The Politics of Movement in an Age of Extremes*. London: Verso.

Serlin, D. (2006). Disabling the flâneur. *Visual Culture*, *5*(2): 193-208.

Valverde, M. (2012). *Everyday Law on the Street: City Governance in an Age of Diversity*. Chicago: University of Chicago Press.

Wilson, E. (1992). The invisible flâneur. *New Left Review*, *191*: 90-110.