Article

The Trash Bin on Stage: On the Sociomaterial Roles of Street Furniture

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Abstract
They are easily overlooked, but benches, trash bins, drinking fountains, bike stands, ashtray bins, and bollards do influence our ways of living. Street furniture can encourage or hold back behaviours, support different codes of conduct, or express the values of a society. This study is developed from the observation that the number of different roles taken on by street furniture seem to quickly increase in ways not attended to. We see new arrivals such as recycled, anti-homeless, skateboard-friendly, solar-powered, storytelling, phone-charging and event-making furniture entering public places. What are typical sociomaterial roles that these things play in urban culture of today? How do these roles matter? This article suggests a conceptualisation of three furniture roles: Carnivalesque street furniture takes part in events and temporary places. Behaviourist street furniture engages in how humans act in public. Cabinet-like street furniture makes itself heard through relocating shapes of other objects. These categories lead to two directions for further research; one concerning the institutions behind street furniture, and one concerning how street furniture shapes cities through influencing different kinds of 'scapes.' The aim of this article is to advance theory on an urban material culture that is evolving faster and faster. By conceptualising this deceptively innocent group of things and articulating its relations to the everyday structures of the city, I hope to provide a framework for further studies.

1. Introduction

At the ruins of Pompeii, there is a table-like piece of furniture with inscriptions and bowl-shaped holes in different sizes in its surface. The *mensa ponderaria* was used as a public measuring table, and the holes worked as standardised units for trading goods. It can be imagined how this object played a particular role in structuring the daily life of the ancient market place: It probably changed how people negotiated prices and maybe helped avoid conflicts and made trading more efficient. The combination of a technical dimension and a social dimension here makes the *mensa ponderaria* a striking case of when a thing takes on a role best described as 'sociomaterial.' Today, other kinds of furniture have entered squares and streets. What sociomaterial roles do they play? How do they take part in structuring everyday urban life? They are easily overlooked, but benches, trash bins, drinking fountains, bike stands, ashtray bins, and bollards do influence our ways of living. They can encourage or hold back behaviours, support different codes of conduct, or express the values of a society. The trash bin keeps you from throwing things on the ground; the traffic sign tells you how to behave; the length of the bench seat forces you to decide on how close to sit to an unknown person. In short, street furniture allows and disallows. The subtle but many ways in which these objects perform makes them powerful actors in the social game of city life, and without them the masks of civility we wear in public (Sennett, 1977) would probably look a bit different.

This study is developed from the observation that the number of different roles taken on by street furni-

ture seems to quickly increase in ways not attended to. Furniture is simply doing more and more in public places. While the milestone, the whipping post, the horse water trough, and the scrapers for cleaning one's shoes from dirty streets have retired (cf. Warren, 1978), we now see a range of new and evolving kinds. There is furniture that is produced from recycled materials, that is deliberately uncomfortable and targets the homeless, that is 3D printed, that charges your phone, that is friendly to skateboarders, that is heated by solar panels, and that sends a signal when maintenance is needed. There is street furniture partaking in explorative artistic and collaborative interventions (cf. the Berlin-based, interdisciplinary project "Hacking Urban Furniture"). There are anti-terror installations camouflaged as artwork, bike stands, or even in the shape of decoratively cute animals (Coaffee, 2018). There are retired phone booths turned into Wi-Fi hotspots and mini libraries. Street furniture appears to become increasingly intricate; it mutates, hybridises, and acts in multiple ways. It seems to densify and diversify at the same time. How can this changing landscape of things be made sense of?

While street furniture is acknowledged as an important place-making tool in urban design (cf. Gehl, 2011), this rich group of objects has mostly escaped questions about its societal and cultural impact. Against the background of urban areas becoming more complex, we need to understand cities also from the deceptively innocent viewpoint of street furniture. A hypothesis here is that street furniture can be understood as actors in processes of sociomaterial densification (Østerberg, 2000). The term densification is in this case broadened to describe more than planning strategies; cities can be thought of as more or less dense with regards to strangers, lifestyles, narratives, everyday practices, and so on (see also Harvey, 1989, on time-space compression). From this perspective, the hyper-diverse 'land of strangers' (Amin, 2013) that now characterises many public places is a form of densification. One way to put it is that this land of strangers is paralleled by a densifying 'land of strange things'—including street furniture.

As frameworks of how furniture can support desirable place-making are provided elsewhere (cf. Main & Hannah, 2010), this study shifts focus toward street furniture as a cultural artefact. What are typical sociomaterial roles that these things play in urban culture of today? And how do these roles matter? In the following, I will suggest three sociomaterial roles named carnivalesque, behaviourist and cabinet-like street furniture, and I will demonstrate how shifts between furniture roles occur. I end by pointing out two directions for further research; one concerning the institutions behind street furniture, and the other concerning how street furniture shapes cities through influencing different kinds of 'scapes.' This mapping is speculative and should be understood as a preliminary, rather than absolute, model. The aim is to advance theory that is up to date with an urban material culture that is evolving faster and faster. By conceptual-

ising this overlooked group of things and testing how its relations to urban culture can be articulated, I hope to provide a rough blueprint for continued studies.

1.1. Approaching Street Furniture

The word 'furniture' stems from the French word *fournir*, meaning to supply or provide, while in many European languages the word for furniture is related to moving or being mobile, from the Latin *mobilia* (German: *möbel*; French: *meubles*). The term is sometimes unclear: Do technical objects such as power boxes belong? Bus shelters, public urinals, and kiosks can border between 'building' and 'furniture'—where to draw the line? Categories such as artworks and monuments further add to the fuzzy borders. To convey the richness of this subject, I have kept to a loose and inclusive view on what street furniture can be.

As noted in Song's (2011, p. 16) review of definitions, history, and design principles of street furniture, research on the subject is fragmented. When approaching this field, I have used systematic and intuitive methods in combination to gather empirical material. In October 2019, I searched in Scopus and Web of Science Core Collection for works containing the phrase 'street furniture' (or alternative phrases such as 'urban' or 'public furniture') in title or abstract. Duplicates removed, the results amounted to about 500 (of which some 25% were conference proceedings). Some of the most apparent areas associated with street furniture span from urban planning, urban design, and architecture to transportation, ergonomics, engineering, product design, and art.

I limited the results to works including the search phrases in its title and screened the one hundred abstracts left in order to better approximate themes characteristic of current research into street furniture. Some often overlapping themes found in this variegated body of works include street furniture related to ecological sustainability (cf. Jaramillo, Gallardo, & Martinez, 2018; Siu & Wan, 2011), digitalisation and smartness (cf. Ciaramella et al., 2018; Lamsfus, Cazorla, & Sanjuan, 2014), place identity (cf. Bayraktar, Tekel, & Ercoşkun, 2008; Bolkaner, Inancoglu, & Asilsoy, 2019), design method (Prazeres et al., 2019; Şahin & Curaoğlu, 2019; Schindler & Mbiti, 2011) and to questions of human behaviour and perception (cf. de Paiva, 2017; Pizzato & Guimarães, 2019).

The mapping of these themes outlined an area of things that is undergoing a rapid development—technically, ecologically, and in terms of design—but that also lacks conceptualisations from more societal perspectives. This outcome further motivated the study, while the literature also led to early ideas of possible furniture roles to elaborate on. These ideas were developed through a more intuitive orientation, as I then turned towards a wider range of sources: social media, magazines, Google street view, manufacturer's websites, and books in the fields of design and urbanism. Van Uffelens's

Street Furniture (2010) and online magazine *Dezeen* provided an introductory overview of what is celebrated in the design discourse. Further sources include colleagues and people approaching me after conference presentations to offer views and experiences of street furniture, as well as personal observations during travels and in my hometown of Malmö, Sweden. In the process of selecting and discarding among the great number of examples encountered, I have been guided by an overarching aim to identify on-going tendencies and to label these in fair and telling ways that also convincingly allows for a socio-material perspective.

Below, I present a grouping that has been reached by moving between phases of deductively filtering source material through preliminary categories and phases of developing categories through interpretation of source material. Methodological risks include a bias towards well-known Western(ised) cities and a possible over-representation of exceptional and eye-catching cases of street furniture. Nevertheless, I argue that the examples gathered provide a sufficient basis, as long as the three groups are not taken as overly essential or universal. The categories are suggested names of tendencies. They do not dismiss other sociomaterial roles that may be equally arguable. Neither of the groups mutually exclude each other but may overlap in the sense that one piece of furniture can belong to more than one category.

2. Carnivalesque Street Furniture

Urban time patterns can be understood as networks of rhythms (Lefebvre, 2004) of, e.g., transportation, working hours, seasonal sales, daily routines, and so on. Street furniture is part of these rhythms in many ways: through timetables, maintenance, and streetlight schedules. One specific player in the time-city relationship is carnivalesque street furniture, which is employed in events and temporary places. Temporary use of public places such as popup parks and car-free summer streets (see Figure 1) as well as happenings, exhibitions, workshops, interventions, big sales, and city festivals are to some extent dependent on furniture. One case in point is public places formed by activism and grassroots movements. For example, furniture is often used in tactical urbanism (Lydon & Garcia, 2015) to make events such as 'chair bombing' or workshops for building planters, tables, or stages from shipping pallets. The global event "PARK(ing) day," during which parking spaces are dedicated to picnics and other social activities, also engage intimately with furniture. This event assembles a range of furniture-like artefacts such as parklets, home-built miniature golf courses, sunshades and sunbeds, furniture that is inflatable or built by cardboard, colourful installations from leftover materials, and equipment for games and playing. The climate protest movement "Extinction Rebellion" also

Figure 1. Furniture on a temporary traffic-free street in Malmö, Sweden. Source: Photo by author.

makes use of furniture-like objects when appropriating public places. Modular plywood boxes have been used for seating or the forming of a temporary stage. During a protest at Trafalgar Square, this system even enabled building a small tower (that was demolished by heavy machinery).

These tactical (de Certeau, 1984) uses of furniture can be understood as successors of the hundred-year-old practice of soapboxing; to use a wooden (soap) box to form a small podium when holding a public speech. In contrast, there are the more top-down and commercial uses of street furniture in temporal and event-like contexts. To state just a few of the numerous examples, there is the furnished Level Up Street Pavilion designed for Rijeka being the European Capital of Culture 2020, or the organic bench Please Be Seated and the colourful living room-like Walala Lounge for London Design Festival. Large-scale events also employ street furniture, such as when the Royal Mail post boxes were painted gold during the 2012 Olympics in London, or when JCDecaux advertising columns with integrated internet arrived in Baku just in time for the 2012 Eurovision Song Contest (timed with a poster campaign in 26 European capital cities).

Street furniture supports events, but the events can at the same time cause shifts in the furniture hierarchy of a place. Some objects are put on trial, like benches and trash bins becoming overfilled with people and waste. Others might become less important, such as bollards on a temporarily traffic-free street or lampposts made redundant by the lighting from a festival stage. Furniture roles are shifted when people sit on anti-terror barriers, decorate lampposts, and dance on benches. The urinal is exemplary of how events transform furniture hierarchies. Intense crowding in combination with beverage consumption brings this type to the foreground. In fact, the temporary urinal seems to be on the rise; recent innovations include vessel and pipe-concepts that are easily attached to, e.g., trees or fences, as well as aims at gender equalising by providing safe urination-only facilities for women (Block, 2019).

In his study of Berlin around the year 1900, Fritzsche (1996, p. 120) accounts of the popular attraction of watching people moving between homes: On the two yearly moving days in April and October, one could observe "streets filled with wagons and handcarts stacked high with furniture." This recurring event generated newspaper reports, so called *Ziehtagen* stories that preyed on the display of poverty and sights of families in misery. Although concerning private furniture, this eccentric example summarises two important characteristics of the public furniture role outlined above: its carnivalesque potential and its engagement with the urban timescape.

3. Behaviourist Street Furniture

When considering the relation between human behaviour and street furniture, things like sitting positions or efficiency in moving or wayfinding might be the first to come to mind for most people. There is, however, a group of street furniture that is characterised by a more intense relation with behaviour. It can be understood as a particular concern with how people behave. This concern is evidenced not only by a special effort to influence what people do in public and how they do it, but also by surveillance and data gathering. One example of this kind of behaviourism is found in street furniture engaging in nudging, a strategy often used to foster sustainable or healthy behaviours. Waste seems to be of particular focus in this field; there are anti-littering projects with ashtrays highlighted with bright colours and humorous signs (the campaign TÄNK in Gothenburg), trash bins reprogrammed to act as charity collection boxes ("Bin it for Good" in the UK), and app-connected diaper recycling bins that reward deposits with discounts and visualisations of environmental impact (Pampers Recycling, in Amsterdam). Further examples include paving patterned with green footprints (REN kærlighed til KBH, in Copenhagen), mazes, or hopscotch boxes (Lucerne Shines, in Lucerne) leading up to trash bins.

By preventing or making impossible certain behaviours, hostile design makes another example of an active concern with the way people act. Hostile design also includes non-furniture like automatic sprinklers or sound frequencies only perceptible by young people, but street furniture is a main character in this phenomenon. Examples include anti-sleep benches with strategically placed armrests or a tilted seating surface, handrails with anti-skateboard metal applications, and trash bins shaped to obstruct picking up, e.g., discarded food or deposit bottles (cf. Rosenberger, 2020). Also, decorative objects such as big flower pots can be used to occupy places that otherwise would have been used for begging. Most notable is perhaps the Camden Bench, in the UK. This concrete piece not only prevents sleeping, skateboarding, and vehicle terror attacks, but is also void of small cavities for hiding drugs and has a recession where a bag can be placed more safely from being stolen (Edin, 2017, p. 39).

Street furniture can take on the task of supporting surveillance technology. Some lampposts are even designed to uphold CCTV cameras (cf. the Victorian-styled security products by manufacturer English Lamp Posts). According to Piza, Caplan, and Kennedy (2014), public CCTV cameras come in mainly two different designs: overt and semi-covert. The traditional overt camera has a box-like appearance and its field of vision is limited. The newer, semi-covert type is spherical and allows for 360-degree surveillance. The overt camera is sometimes assumed to better prevent crime through mere presence as it is more noticeable than its subtler counterpart. On the other hand, the semi-covert camera is sometimes said to be the better crime preventer as the impression of all-round vision seems more inescapable and cannot be sidestepped. In any case, street furniture is here partaking in panopticon-like situations in which behaviour is

not only observed, but also influenced by the very experience of being watched.

Public surveillance is not a new phenomenon, but the recent development of smart cities has spurred debates on privacy and anonymity. The connected, sensor-equipped, and Wi-Fi-providing smart city gathers data on how much trash we throw out, how we drive, and where we commit crimes, and also in this context, street furniture plays a part. Among the current advancements in smart street furniture we find a number of approaches to human behaviour: The outdoor advertising platform Soofa has sensors that register audience reactions in real time. The Steora CCTV bench is equipped with four cameras, one on each side, and includes a night recording function. When used, the interactive EvoBin responds with informative and motivational messages on how to sort waste. The camera in the kiosk totem of the STiNO platform can sense if a child is near, and thus adapt the commercial content. The Airbitat Oasis Smart Bus Stop, tested in Singapore in 2018, not only measures average waiting times and the amount of users, but also includes a "smart alert" for detecting "unusual activities" (ST Engineering, 2018). In sum, with the rise in behaviourist street furniture we see new types of relations develop between humans and non-humans in public space. And, as shown by the case of anti-surveillance protesters tearing down smart lampposts in Hong Kong (Fussel, 2019), just as with human-to-human relations, these encounters are not without conflicts.

4. Cabinet-Like Street Furniture

Terms such as urban soundscapes, smellscapes, visual pollution, and the availability of information through personal digital gadgets indicate that public places might be more loaded with flows of stimuli, messages, and narratives than ever before. While signs and billboards as well as figuratively ornamented street furniture can easily be understood as a form of storytelling, there is one more particular way in which street furniture plays a part in the urban infoscape. It is similar to how the cabinet historically has been used to showcase curiosities and artefacts from other places. Street furniture sometimes takes on a cabinet-like role by relocating and incorporating shapes of other everyday objects. By moving a motif between environments, it can deliver a kind of narrative punch line.

There is street furniture that makes a point of relocating shapes between the interior realm and the exterior. This includes furniture shaped like office supplies such as pencils, paperclips, and keyboards (Luntz, 2019) enlarged table top lamps (Piccadilly Place, in Manchester), seating shaped like open books (various locations in Istanbul and London), or piano keyboards (Vörösmarty utca, in Budapest; the Cynthia Woods Mitchell Pavilion, in Texas). The furniture-like installation Tokyo City Bench is a fiberglass piece looking like a slice of a classic living room, including dining table and chairs. The Community

Chalkboard at the City Hall in Charlottesville, US, is, just like its counterpart at Les Berges de Seine, in Paris, a slate chalk wall that in the name of democracy offers itself to the citizens. The Flying Grass Carpet is a decoratively patterned rug of artificial grass up to the size of a public square that to this date has 'travelled' some twenty cities around the world as a temporary place-maker. It is used for open-air festivals and other popup-concepts and can be hired together with additional features such as plants, furniture, and events.

One extraordinary case of interior-exterior relocation is a campaign for a hardware store chain in Thailand. The company typically used sidewalk billboards for advertising, but this campaign also made use of the backsides of the billboards through turning them into interior walls—including shelves, lamps, and wallpaper. Besides being an eye-catching way of displaying the product assortment, this action also referred to the habit of poor people taking billboards and using them to repair the roofs and façades of their homes. In the short campaign movie (Boonyanate, 2013), we see an old lady waving towards the camera before closing the door to her shelter that is now clad with sale offers and the HomePro company logotype and colours. This campaign can be seen as another example of how a narrative punch is gained from a play between the interior realm and the exterior.

In contrast, there is street furniture that relocates everyday objects within a place. A thing that is somehow associated with the place is represented in a piece of furniture. Such is the case with bike stands in the shape of bike locks or keys, cigarette bins looking like a cigarette (cf. the Chiave Cycle Stand or the Fu Cigarette Bin by Artform Urban Furniture), or trash cans shaped like ice cream cones placed outside of ice cream parlours. Similarly, there are the benches and tables in the City of Gold Coast, Australia, that by being shaped like surf boards reference the region's famous surfer culture (van Uffelen, 2010, p. 226), or the alphabet-shaped seating at the Arts and Humanities Faculty of the Aix-Marseille University. Also in the small island municipality of Træna, Norway, we find object-relocating furniture that accounts of local history: fish industry pallets redesigned into public seating. A related example is the bench seats at Roosevelt Island, US, which are shaped like the island contour. One further case of intra-place relocation of objects is The Car Bike Port (see Figure 2), a bike stand that has spread to a number of European cities. It carries the silhouette of a full-size car, thus making a point about the amount of space that a car occupies as compared to ten bicycles.

The cases perhaps most similar to the traditional cabinet displaying exotic artefacts are the ones working on a transnational level. This goes for the red, white, and green painted fire hydrants and bollards in New York's Little Italy, as well as the phone booths with pagoda roofs in Chinatown and the one in 'Little Sweden' Lindsborg, Kansas, in the colours of a Swedish flag. Similarly, there are cases of iconic red British phone booths left in former colonies (and some painted green in Kinsale,

Figure 2. Bike stands displaying the silhouette of a car, Malmö, Sweden. Source: Photo by author.

Ireland). A striking case of transnational relocation is Superkilen, Copenhagen. This square exhibits objects associated with over 60 different ethnicities, for example, an elephant-playground slide from Chernobyl, a Moroccan fountain, and swings from Iraq. The way in which cabinet-like street furniture engages in a play of references might at first come off as something from a theme park, or as a postmodern game of cheap tricks. But these cases illustrate how the relocation of shapes and materials can enable street furniture to take on very clear-cut and direct storytelling roles. As shown, it taps into discourses on sustainable mobility, democracy, marketing ethics, and local and national heritage.

5. Commanded Street Furniture Roles

While this article so far has described roles, the following part focuses on shifts between roles. I will here suggest a few type-situations by focusing on a particular relationship often overlooked in studies of public life: that with smaller objects that people carry. Not only do these small things provide a useful limitation here, they can have a significant influence on how we interact with places and other people, and they seem to imprint themselves on a considerable part of urban culture (cf. Cochoy, Hagberg, & Canu, 2015; Kärrholm, 2017; Magnusson, 2016, pp. 263–268).

In short, some furniture roles are commanded through the force of external objects. First, furniture roles can be dependent on another object that is manda-

tory, a kind of deal-breaker, for activating a role. On a general level, bike stands are dependent on bicycles, trash bins on empty packages and waste, turnstiles on tickets, and telephone booths are dependent on coins, phone cards, and telephone books. Semi-public situations where you need to buy something (ice cream or coffee) to be allowed to sit at a table are also a case in point. One more unexpected type of transaction here is an anti-littering campaign in Mexico (van der Kroon, 2012) in which bins provide Wi-Fi in return for dog excrements (20 minutes for 70 grams). Dependency on external objects is perhaps best illustrated by newspaper stands. As analogue media loses some of its prevalence, the cancellation of a newspaper can now suddenly retire the newspaper stands of a whole city in an instant and leave public places full of empty boxes. As shown in Figure 3, while waiting to be removed, the stands are sometimes appropriated by another group of objects: trash. This role shift occurs especially during events and city festivals.

Secondly, some furniture roles are extended or reinforced by external objects. Blankets and quilts used at open air cafés at the end of the outdoor season postpone the expiration date of chairs and tables by a month or so. The camera supports the souvenir value of red British phone booths and Guimard's Art Nouveau metro entrances in Paris by mediating them. The refillable water bottle teams up with urban drinking fountains and extends its provision from a momentary resource to something you can save and consume later.

Figure 3. Newspaper box after the newspaper was cancelled, Malmö, Sweden. Source: Photo by author.

A sub-type in the long tradition of drinking fountains (Becker-Ritterspach, 1990) is the one compatible with an additional non-human: the pet-friendly drinking fountain with a dog bowl at its foot. Even gravestones make an example here. Gravestones are perhaps not usually thought of as street furniture, but as cemeteries in densifying cities accommodate more and more everyday activities and user groups (runners, cyclists, dog owners; cf. Grabalov, 2018), they do assume a street furniture-like role. They become one type in an assembly of other pieces popping up in the urban cemetery: dog trash cans, signs with opening hours or codes of conduct, and even battery recycling bins due to the use of electric lanterns. Here, we see the role of the gravestone as a memorial reinforced by small things such as wreaths, candle holders, stuffed animals, and flower bouquets.

Thirdly, a small object can command one out of several roles from a piece of furniture. This is what the cigarette does when it turns movable furniture into demarcation tools in smokers and non-smokers negotiations over space (Subasinghe, 2019, p. 38). Similarly, the skateboard brings out a role from the railings and bench-like blocks in public places such as Auditoria Park in Barcelona, Phæno Science Center in Wolfsburg, Riverside Museum in Glasgow, and the Oslo Opera House (Borden, 2019, p. 156). Loan books turn the iconic tubular bus stops of Curitiba, Brazil, into small libraries, called *tubotecas*. The most powerful artefact in commanding one out of several roles is perhaps the smartphone. Following the smart city trend, there is a range of furniture from which a smartphone can elicit charging, Wi-Fi, or Bluetooth connection.

A fourth and slower type of influence on furniture roles occurs when a culture of small things develops into sub-types and pieces of furniture co-develop to stay synchronised. This is not a role shift, rather a kind of branching, or role diversification. Bike stands now concern regular bikes, rental bikes, or electric bikes. What was previously one trash bin are now often several smaller bins for glass, paper, combustibles, and so on. One recent innovation here is the type of trash bin that offers a side-vessel for users to place empty deposit bottles. The bottles are made available for people who make a small sum of money when turning them in for recycling. A related

example occurring in Beijing and Rome is ticket machines accepting deposit bottles as payment.

The perspective of small, carried things demonstrates how street furniture roles can be conditioned by other scales of material culture. This allows for a particular sociomaterial aspect, in which public places are characterised by their specific setup of combinations of furniture and carried objects. An analogy can be made to an ecosystem, where organisms of different sizes have various possibilities of forming symbiotic relationships (a sea urchin can attach itself to a crab, but not to a jellyfish). In his discussion on material culture, Miller (2010, pp. 42–54) points at a 'humility of things' that makes the formative powers of ordinary objects escape our attention. Their tendency to be taken for granted makes us overlook how they shape us as social and cultural beings. It is through naturalisation and humility that everyday objects—or, in Miller's words, "stuff"—can so strongly work as settings that frame our ideas of whether behaviour is normal or abnormal in a given situation. Following this line of thinking, constellations of furniture and carried objects are active in the formation of social life. One important point here is that what we carry in public to a large extent is a matter of social demography. Cigarettes and cups of take-away coffee have different associations to identity and lifestyle (see Graham, 2012, on smoking, stigma and social class; see Zukin, 2009, p. 4, on 'domestication by cappuccino'), and are distributed differently over social groups. The group of people that throws bottles in a trash bin is arguably not the same as the group that goes picking them up for deposit. The bike, fast food, or shopping bag—if any—someone carries in a public place is a question of living conditions. Depending on the furnishing, the carrier might, as shown in Doherty's (2018) account of the exclusionary mechanisms of smart trash bins, be subtly welcomed or rejected.

6. Discussion

With regards to research on hostile design, Rosenberger (2020, p. 890) calls for "greater conceptual clarity." Considering the richness of the subject—of which this article has really only scratched the surface—Rosenberger's call seems valid also for street furniture at large. There is an interesting point in Subasinghe's (2019, p. 40) study on public smoking at a college campus, when an ashtray bin takes part in an ethical drama: "Scattered cigarette butts that had fallen out of bins were seen as the direct responsibility of the smokers rather than accidental in nature due to misplaced lids." Just as the *mensa ponderaria* in Pompeii, the ashtray bin here mediates social relations. It is playing innocent and blame is transferred from non-human to human. What do we call these and similar sociomaterial situations involving street furniture? How could we analyse and discuss them if we do not have names for them?

This article provides an example of how a conceptualisation is possible, while it at the same time points at

a need for continued research in a similar vein. I hope that the suggestive character of the roles sketched out can inspire research that supports, questions, or expands on this mapping, and that the sweeping approach to empirical harvesting can prepare for studies that tailor more rigorous methodologies to the subject. Aspects out of scope here serve as openings for further studies: What street furniture roles are specific of different cultures? This study deals with existing and upcoming roles, but what kind of roles are currently retiring from public space? How can roles be understood in the context of specific types of places (the park, the square)? Below, I will conclude by recommending two more specific concerns for continued research.

First, further research into sociomaterial roles of street furniture should address relations to different actors and institutions. Between the lines of this study looms a range of activists, design firms, artists, advertising agencies, charitable organisations, retail companies, and local governments. Who makes use of what furniture roles, and with what intentions? One of few in-depth works portraying a relational development of street furnishing is design historian Herring's (2016) study on street furniture controversies and modernism in post-war Britain (see also Abildgaard, 2019). While public authorities' engagement with street furnishing has weakened during later decades, the private sector has gained influence. Following ideological shifts and an increasingly market-dependent urban landscape where cities compete in branding themselves, street furnishing has become a lucrative business. The influence of the private sector over street furniture is linked to a privatisation of public space itself, according to Herring (2016, pp. 197–201). It can be argued that this development calls for an up to date terminology that can go beyond dualities like classic/modern, mobile/fixed, or mono-/multifunctional, and that is able to address how the intentions of different actors are played out through furniture roles. The categories proposed in this article can be seen as building blocks towards an updated terminology. To recognise carnivalesque, behaviourist, or cabinet-like features of street furniture allows for questions about who exerts what influence over which places. Who benefits from this rhythm, observation, or storytelling being installed at this place? It would furthermore be possible to explore how furniture roles differ in flexibility of employment by many or few actors. For example, carnivalesque furniture is employed by both grassroots movements and formal institutions, whereas the behaviourist category seems more associated to the latter—what other patterns of relations are there?

Secondly, continued research should address questions of what kinds of cities are co-produced by street furniture of today. I suggest that the notion of -scape as a way of seeing (Appadurai, 1990, p. 296; DeLue & Elkins, 2008, pp. 162–164) has potential here. As a tentative demonstration of this idea, the three categories can be understood as corresponding to three different

'scapes.' Carnivalesque street furniture contributes to a timescape. It takes part in public events and temporary spaces, and so adds to a densification of the rhythms that structures urban timescapes. Cabinet-like street furniture contributes to the infoscape of a city. It makes itself heard through the relocation of other things, and so contributes to the flows of information in public. Behaviourist street furniture forms closer, more intimate connections with how humans act and behave. Meetings between strangers in public are often described as everyday encounters (cf. Wilson, 2011), and it is in a behaviouristically furnished landscape of encounters that we see a densification of relations between humans and non-humans.

Founder of ethnomethodology Harold Garfinkel (1964, p. 227) set out to reveal "how the structures of everyday activities are ordinarily and routinely produced and maintained." Timescapes, infoscapes, and landscapes of encounters can be regarded as examples of the structures that Garfinkel (1964) refers to, and in light of the presented cases, street furniture provides one possible answer to the "how" posed in his quote. The notion that street furniture has structuring capacities might at first seem obvious: Traffic flows are ordered by signs and bollards, streetlights are turned on at regular intervals, and the trash bin prevents disorder. But, as I hope to have shown, the ways in which these objects structure daily life work well beyond the obvious. Street furniture plays roles on several scale levels, it changes roles, and it forms alliances with other materialities such as water bottles and mobile phones.

In *Paris: Invisible City*, after listing that Paris has 400 newsstands, 700 billboards, 9,000 parking meters, etc., Latour and Hermant (2006, p. 64) state that:

> Each of these humble objects, from public toilet to rubbish bin, tree protector to street name, phone booth to illuminated signpost, has a certain idea of the Parisians to whom, through colour or form, habit or force, it brings a particular order, a distinct attribution, an authorisation or prohibition, a promise or permission.

By gathering notions on street furniture, sociomateriality, and everyday orders, this is a rare quote. Although one should probably be careful about going too far with ascribing power to objects, it is more likely that we are underestimating the influence of street furniture—and while perhaps not so much today, it might be even more so tomorrow.

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Conflict of Interests

The author declares no conflict of interests.

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