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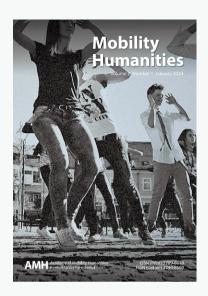
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SPECIAL ISSUE

Material Pragmatism and Dark Design: Critical Readings of "Atmospheres of Rejection" and "Material Interpellation"

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Abstract

This paper presents the outline of a modest assembling of diverse ideas within mobilities research we might term "material pragmatism." It does so with reference to empirical cases of "dark design" (i.e., social exclusion of homeless people by means of leaning benches, spikes, sprinklers, barbed wire, etc.). Such interventions create zones of "go and no-go areas" in the city, and thereby facilitate complex mobility patterns for socially vulnerable groups. From the perspective of material pragmatism, it can be shown that dark design contributes to an "atmosphere of rejection," as well as having a physical impact on vulnerable human bodies. The installations of material artefacts work by a mechanism of "material interpellation" in which subjects are "addressed" by the leaning benches, spikes etc. Material pragmatism is sensitive to such material assemblages of human and non-human entities, and a pragmatic exploration of the movements and actions afforded (or prevented) by such interventions. The paper presents material pragmatism as a way of connecting different thinkers and scholars engaging actual practice and its material components.

Keywords

Dark Design, Material Interpellation, Material Pragmatism, Mobilities

Introduction

This paper presents the outline of a modest assembling of diverse ideas that will be termed "material pragmatism." This is signalled by a row of pragmatically-oriented research perspectives that all have a potential for dealing with the materialities of mobilities in various forms. The aim is to introduce mobilities researchers to these different perspectives that we might try to bring together by seeing them under the "umbrella" term of material pragmatism. It does so with reference to empirical cases of "dark design" (i.e., social exclusion of homeless people by means of leaning benches, spikes, sprinklers, barbed wire, etc.). Such interventions create zones of "go and no-go areas" in the city, and thereby facilitate complex mobility patterns of socially vulnerable groups. Dark design is contributing to an "atmosphere of rejection" (Jensen, Atmospheres of Rejection), as well as having a physical impact on vulnerable human bodies. To understand this, the paper proposes a position sensitive to the material assemblages of human and non-human entities and a pragmatic interest in the movements and actions afforded (or prevented) by such interventions. The label proposed is "material pragmatism" which combines mobilities theory with insights from classic pragmatism, new materialism, and post-phenomenology, establishing a position for thinking through how dark design contributes to creating specific atmospheres, affordances, and distributed agencies within the urban fabric. Exploring the relationship between urban design and mobilities, Jensen and Lanng argue in favour of a useful notion such as material pragmatism:

To move towards a concept of material pragmatism means to connect the pragmatic and situational question *How are design decisions and interventions staging mobilities*? with another type of inquiry asking *What's the name of my mobility experience, what does it mean and how does it materialize*? To explore the meaning of everyday-life mobilities and the importance of design decisions and interventions, across a wide set of professions that shape the situational conditions of billions of people in mundane settings, means to add a new sensitivity to situational, affective embodiments and the inhabited, perceived environment. It means to heighten one's awareness and sensitivity to the material surfaces, the tactile engagements with technologies, the spatial volumes shaped by architectural intervention, the sociotechnical geographies of complex networks, and so on. (40)

In this research on design and mobilities, the notion of material pragmatism showed how seemingly disparate research perspectives could be thought of as all playing a part in increasing our sensitivity to the relationship between materials, materiality, and mobility.

The structure of the paper is the following: After a short introduction we present the different scholars that one may bring together under the notion of "material pragmatism". We show how it draws upon an amalgam of classic pragmatism, actor-network theory

(ANT), post-phenomenology, and critical design thinking. In section three we present two operational concepts based on material pragmatist thinking. These offer a more granular understanding of social exclusion of homeless people by means of design in public spaces. The notions of "atmospheres of rejection" and "material interpellation" are illustrative of how material pragmatist research manifest itself. The paper ends with some concluding reflections and pointers for future research.

Material Pragmatism: Mobilities, Materials, and Practices

Whenever faced with a mobile situation, asking "what enables this situation?" can be seen as a fruitful opening of a pragmatic enquiry. As we are looking at empirical investigations of mobile situations, we have relied on the "Staging Mobilities" framework (Jensen, Staging Mobilities) and its focus on materiality, sociality, and embodiment. In the context of specific mobile situations, the notion of "material pragmatism" explores how design thinking, pragmatism, new materialism, ANT/STS, and Post-phenomenology might connect.

Pragmatism

We shall start with the foundational work of classic, American pragmatism from the minds of Peirce, Dewey, and James as point of the departure (Malachowski; Misak; Richardson; Thayer; Talisse and Aikin). The so-called "pragmatic maxim" of Peirce states that: "Consider what effects, which might conceivably have practical bearings, we conceive the object of our concepts to have. Then, our conception of these effects is the whole of our conception of the object" (Peirce qtd. in Bacon 25). The idea is that we need to explore the practical outcomes and consequences of both our actions, as well as of our conceptualisations. In Dewey's words, we must connect meaning to existence:

To attribute a meaning to concepts, one must be able to apply them to existence. Now it is by means of action that this application is made possible. And the modification of existence which results from this application constitutes the true meaning of concepts . . . It is [therefore] not the origin of a concept, it is its application which becomes the criterion of its value: and here we have the whole of pragmatism in embryo. ("Development of American Pragmatism" 25-37)

Furthermore, pragmatism means exploring the "total situation" by approaching it with a "holistic" view. In Dewey's terms, this meant to move beyond a Cartesian spilt of objects and subjects, and towards an understanding of the "total environment": "In actual experience, there is never any such isolated singular object or event; an object or event is always a special part, phase or aspect of an environing experienced world—a situation" (Logic 72).

A pragmatic exploration of mobile situations is then focused on the actions enabled

(or prevented) by the combination of human and non-human, material, and immaterial elements of the "mobile situation" (Jensen, *Staging Mobilities*). "Putting actions first" means that we pragmatically enquire into what enables such actions. Another way of getting to this question is then to explore the affordances of the situation. James Gibson's term "affordance" is a foundational idea behind our thinking as well as more recent applications and modifications of this notion (J. Davis; Gallagher; Norman). The notion of affordance is essential to a material pragmatist mobilities research:

Examples from the world of mundane mobilities design could be a fine-grained asphalt floor of a road (one of the most ubiquitous types of pavement in spaces of mobilities), which affords frictionless and smooth car rides; or a traffic signal, which affords the ruled organisation of intersecting mobilities and sets the scene for embodied and interactional mobile situations, such as waiting in a crowd with other pedestrians. Affordance is thus a concept that enables us to target the performative effects of mobile situations through the relational mobile subject–body–materiality couplings. (Ole et al. 30)

The pragmatic doings afforded by the configuration of the materials (humane and nonhumane) is the key focus here. However, as "interpreting animals" humans constantly make sense of their environment, and we therefore also have to understand the ways in which the material configurations are contributing to the way we feel and sense the world. This is precisely the role for the concept of "atmosphere." Atmosphere is a multidimensional term whose precise definition defies short explanations. However, in the context of this paper we can recognise that they are vital for understanding how human mobility connects to affectual registers. Or, as David Bissell argues: "affective atmospheres are central to everyday conduct whilst on the move since different atmospheres facilitate and restrict particular practices" (272). This resonates with Ben Anderson, to whom atmospheres emerge in the relational "assembling of the human bodies, discursive bodies, non-human bodies, and all other bodies that make up everyday situations" (Anderson 80). Urry refers to atmosphere as a phenomenon emerging in the sensorial encounter between people and things: "Atmosphere is in the relationship of peoples and objects. It is something sensed often through movement and experienced in a tactile kind of way, what Thrift terms 'nonrepresentational' practices" (73). A material pragmatist reading of a mobile situation is therefore interested in bridging the conditions of possibility (affordance) with the affectual registers (atmosphere). What "gathers" such diverse elements is the "bodily presence" in the mobile situation.

The focus on embodiment and sensation that material pragmatism has as its foundation resonate with similar insights from the field of "enactivism." This is a position within cognitive science, arguing that "cognitive processes are not just in the head, but involve bodily and environmental factors" (Gallagher 1). Enactivism, that bridges pragmatism and phenomenology with cognitive science and neuroscience, suggests a profound interdisciplinary relationship that fits material pragmatist thinking. The emphasis on the moving body and its environmental embeddedness into the material settings (from

architecture to technology) furthermore is a fertile overlap. The enactivist position draws upon classic pragmatism as well as on embodied phenomenology and has as such clear affiliation to the position of the neo-pragmatic philosopher of the body, Richard Schusterman and his notion of "somaesthetics." According to his work, the sensations and perceptions of the body are crucial to an attuned phenomenology. Accordingly, we never simply "feel our body" (Schusterman 8). What we feel is our body in relation to something, and that "something" may be clothes, pavements, chairs, air, heat, etc. In other words, a relational coupling between body and environment capturing the "total situation" as Dewey did. In an analysis of how bodies are being repositioned and regulated in light of Covid-19, Jensen argues that we should think of "extended bodies" and "elastic situations" ("Pandemic Disruption"). By this, he is referring to regulatory frameworks. For instance, "distance taping" is bringing forward (as well as rearticulating) the culturally embedded norms of "proper distance" in public between strangers. However, it also articulates the fact that there is something "between us." In this instance, we are thinking of aerosols and the Covid-19 virus. The Covid-19 case of social distance and all the controversies this has brought with it illustrates the relationality of materiality, embodiment, and sociality. Understanding the mobile situation from the point of view of material pragmatism means giving accounts for the ways in which mobile bodies relate to hard material structures, other co-present bodies, as well as the ephemeral atmospheric qualities of the air and micro-climatic constituents of the situation. Here, material pragmatism breaches out towards new ways of understanding the "materiality" of the mobile situation.

New Materialism

Jane Bennett is one of the key thinkers within "new materialism." She speaks of matter as "vibrant" and not inert and static (*Vibrant Matter* vii). Bennett wants "to think slowly an idea that runs fast through modern heads: the idea of matter as passive stuff, as raw, brute, or inert" (vii). This leads Bennett to speak of matter as "vibrant" and not inert and static. She draws on both Dewey and Darwin in her argumentation and draws a line from pragmatism as an underlying ontology. She sees human and non-human entities as "vital" and material, acting together and in concert rather as subjects and objects. Accordingly, she sees "materiality" as something that tends to "horizontalise" the relations between humans and non-humans (112). Elsewhere, Bennett argues that:

I find myself living in a world populated by materially diverse lively bodies. In this materialism, things—what is special about them given their sensuous specificity, their particular material configuration, and their distinctive, idiosyncratic history—matter a lot. But so do the eccentric assemblages that they form. ("Systems and Things" 233)

Bennett speaks of "thing-power" as another way of stating the relational interdependency

of artefacts and things (somewhat similar to Latour). In her latest book, inspired by Walt Whitman, she continues the investigation of "what kind of I is alive in a world of vibrant matter?" (Influx and Efflux 118). The focus is to give an account of the relationship between the human and non-human, albeit in a highly poetic grammar. Also, Karen Barad and Donna Haraway are relevant representatives for the new materialist turn (Barad; Haraway). Space prevents us from going into more detail, but the new material perspective is part of a larger "nonhuman turn" that also draws on pragmatism in an interdisciplinary approach to think across human non-human categories (Grusin). The agenda of new materialist thinking has influenced mobilities research in general, as here in the words of Adey and colleagues:

Mobilities research is at the forefront of developing new ways of thinking about the politics of matter. Whilst people are mobile, the equally differentiated mobilities of information, capital, goods, and services that are essential for contemporary life are a sustained feature of mobilities research. Indeed one of the defining characteristics of mobilities research is its attention to the mobilities of multiple materialities, both human and non-human . . . materialities that have different qualities, different properties, different capacities, and are formed of different relations . . . A focus on mobile materialities problematizes simplistic distinctions between humans and non-humans and instead retunes attention towards the assemblages of matter that move. (Adey et al. 265-67)

This resonates with Jensen, who argues, "the linkage between materialities and pragmatism lies in the concrete affordances created by design and intervention as well as within the understanding that artefacts, materials, and things are not passives" ("Of 'Other' Materialities" 592).

The focus on materialities, things, and artefacts should not, however, lead us away from the important dimension of people-centredness. We are exploring mobilities design to understand human-made infrastructural landscapes and urban metropolises. We should correct the omnipotence of humans and identify a more modest place for "homo movens" (Vannini 118), but we must still explore how moving in these systems creates social lives and cultures. One way into such an exploration is to insist on the multi-sensorial and embodied understanding of mobile situations but with a much more detail-sensitive emphasis on the mediation of things. This is the key scope of "post-phenomenology" to which we now turn.

Post-phenomenology

To insist on the multi-sensorial and embodied understanding of mobile situations, but with a more granular emphasis on the mediation of things is the agenda of "post-phenomenology," as articulated by techno-philosophers Don Ihde and Peter-Paul Verbeek. Ihde is interested in how we can keep an alertness to the embodied and multi-sensorial engagement in the world at the same time as he insists that our capacities and acting bodies are mediated:

Only by using the technology is my bodily power enhanced and magnified by speed, through distance, or by any of the other ways in which technologies change my capacities. These capacities are always different from my naked capacities. (Technology and the Lifeworld 75)

There is always something "between us" and the notion of a world of isolated bodies is a fallacy that stands to be corrected by material pragmatist readings of the situated relationship between the environment and the body (and other bodies). Ihde explores the many different ways in which human's sensations and experiences are mediated (by clothes, eye glasses, machines, etc.). When, for instance, thinking about a simple act of "looking out the window" Ihde states that: "the I-world relation is changed to the window-I-world. This is more than a formal change; the way the world is experienced is changed *ontologically"* (*Technology and the Lifeworld 47*). Furthermore, to the post-phenomenologists "things and artifacts, too, can become actors and thus deserve to be studied on par with humans" (102). Verbeek sees affinities with Latour's position in his argument for post-phenomenology (112).

Verbeek argues that post-phenomenology might be related to actor-network theory, however what it additionally brings is the "situated perspective, the perspective from inside out" (168). The post-phenomenological sensitivity to human bodies, sensation, affect, and situational experiences are vital pointers for a material pragmatism exploring mobile situations. What postphenomenology might "gain" from being connected with the other ideas within material pragmatist thinking is a higher sensitivity to material design and design thinking. Within the post-phenomenological realm of thinking, operational notions such as "multistability" also connect well to material pragmatism. For a thing, artefact, technology, or space to have "multistability," it must have a certain flexibility, meaning that for various situations it might perform differently (Rosenberger). As we shall see later in this paper, a bench might be considered a multi-stable artefact that both offers rest to tired urban dwellers and potentially rejects street-sleepers from lying down (Jensen, "Material Pragmatist" and "The Bench"). Or, as Verbeek argues:

The designer of an artefact thus works with an inscribed user in mind, to whom he prescribes properties and behaviour. This does not mean that users automatically act exactly in the way the designer intended; they have to subscribe to the inscriptions. They can simply refuse to use an artefact, or use it selectively and even in novel and unexpected ways—a phenomenon that Ihde referred to through his concept of multistability. (161)

Interestingly, this also brings the question and theme of design into the debate. Design is a key theme of material pragmatism and one we shall return to. However, as mentioned by Verbeek, there is an affinity between post-phenomenology and actor-network theory that we now will discuss.

Actor-network Theory

Bruno Latour connects to the classic pragmatists in a positive and accommodating way. His critique of "human exceptionalism" is one thing (a grounding idea that humans should be looked at "on par" with non-human entities). However, ideas about agency and the notion that anything that modifies a state of affair deserves to be named an "agent" (or actant) is also a key pointer to pragmatism (*Reassembling the Social* 71). Furthermore, a notion such as "delegation" speaks very clearly to a material pragmatic understanding. Many technologies and artefacts perform their agency through acts of delegation. This is, for example, the case with Latour's famous example of the "door closer" substituting the door opening and closing of a janitor ("Mixing Humans and Non-Humans"). Accordingly, we are dependent upon technologies and artefacts as much more than simple "things" separated from us as humans and under our command:

Our collective is woven together out of speaking subjects, perhaps, but subjects to which poor objects, our inferior brothers, are attached at all points. By opening up to include objects, the social bond would become less mysterious. (Latour, *Aramis*, or the Love of Technology viii)

This notion of "inferior brothers" and the ways in which we are attached to them in complex assemblages (Farias and Bender) suggests that we are scripted and enrolled into situated relations that need a pragmatic (and material) analytical framing. Or in the word of John Law:

If you took away my computer, my colleagues, my office, my books, my desk, my telephone I wouldn't be a sociologist writing papers, delivering lectures, and producing 'knowledge'. I'd be something quite other—and the same is true for all of us. So the analytical question is this. Is an agent an agent primarily because he or she inhabits a body that carries knowledges, skills, values, and all the rest? Or is an agent an agent because he or she inhabits a set of elements (including, of course, a body) that stretches out into the network of materials, somatic and otherwise, that surrounds each body? (383-84)

Latour's perspective points towards a pragmatic and materialist understanding of architecture and design as "made". The fact that the world increasingly is "made" suggests that there is no outside to the "artifactual":

To define humans is to define the envelopes, the life support systems, the *Umwelt* that make it possible for them to breathe... we are enveloped, entangled, surrounded; we are never outside without having recreated another more artificial, more fragile, more engineered envelope. We move from envelopes to envelopes, from folds to folds, never from one private sphere to the Great Outside ("A Cautious Prometheus?" 8-9)

The work of Albena Yaneva is illustrative of the importance of connecting the material

with a pragmatic inquiry. She does so in detailed field studies of how architects work with models, how they gesture, and how they get into a "dialogue with the material" ("A Building Is a 'Multiverse"). Yaneva sees architecture as an "ecology of practice" and argues for redefining the relations between its various elements such as "habits, skills, buildings, sites, city regulations, designer's equipment, clients, institutions, models, images, urban visions and landscapes" (Five Ways 33). Seeing these as an ecology or an assemblage dissolves object-boundaries and redistributes agency. Yaneva's reception of Latour's work (but also her own original contribution to architectural research) points us towards the last of the four key themes of material pragmatism: design.

Critical Design Thinking

Dunne and Raby's call for "critical design" is one such position where we see both the critical-creative potential of "designerly ways of thinking," and a strong pragmatic and experimental basis for exploration (43). The design dimension of material pragmatism is therefore both a methodological and procedural dimension, as well as it is an experimental and spatialised approach to mobile situations. By exploring the world through design interventions, mock-ups, and 1:1 scale experiments, we have found that we both gain insight into the materialities of situated practices, but also a window into the potential of citizen involvement and co-creation (Jensen and Lanng).

The detailed and situated analysis that we may apply based on Ihde and Verbeek goes hand-in-hand with Latour's notions of "distributed agency." It also reaches back to the materialities perspective and points forward to the design dimension that is a vital part of mobilities design research. Dunne and Raby's call for "critical design" is one such position where we find both the critical-creative potential of "designerly ways of thinking," and a strong pragmatic and experimental basis for exploration:

Critical design might borrow heavily from art's methods and approaches but that is it. We expect art to be shocking and extreme. Critical design needs to come closer to the everyday; that's where the possibility to disturb lies. A critical design should be demanding, challenging, and if it is going to raise awareness, do so for issues that are not already well known. Safe ideas will not linger in people's minds or challenge prevailing views but if it is too weird, it will be dismissed as art, and if too normal, it will be effortlessly assimilated. If it is labelled as art it is easier to deal with but if it remains design, it is more disturbing; it suggests that the everyday life as we know it could be different, that things could change. (43)

The question is how to bring together an analytical sensitivity to spaces, sites, artefacts, and technologies, at the same time as exploring the embodied and multi-sensorial engagements between human and non-human agencies.

Each of the themes coming together under the material pragmatism label deserves more

space and more detailed exploration to be justified. However, within the confinements of a paper this should suffice. Hence, we shall move to a short summary of the perspective before giving a few examples of its use.

Towards Material Pragmatism

Even though the thinkers presented are diverse and may indeed disagree on some issues, we have tried here to read them from the common point of material pragmatism in order to see how they (despite their differences) can take the mobile situation and the concreteness of human practice within the built environment as outset. This is "where the action is" and hence what should be the focal point of an empirically attuned analytical position. Material pragmatist thinking draws insights from classic pragmatism in relationship to the situated focus on what enables or prevents actions and practices. However, it connects to more contemporary lines of thinking with the focus on embodiment and multi-sensorial interfaces between materiality and human experience of post-phenomenology. But also, the granular awareness of how materialism is "vibrant" and re-connecting human and non-human entities in novel ways, as well as how this is an expression of different kinds of distributed agencies dissolving the human exceptionalism of material practices. Finally, as this work comes out of an interest in the making and designing of mobilities, material pragmatism connects to ideas about design and critical design thinking. The connection to the design dimension is two-fold. On the one hand designerly ways of thinking adds critical creativity. On the other hand, we see in design a rich and granular vocabulary for thinking about materiality (e.g., volumes, materials, spaces, surfaces, hights, sightlines, etc.). In suggesting material pragmatism as an umbrella term for these diverse perspectives, the main motivation might be said to grow from the work in design. As a field, design begs us to think pragmatically and materially concrete (Jensen and Lanng; Jensen et al.).

In line with the fundamental focus on actual, empirical practices, we will now turn to how material pragmatism as a "conceptual parable" has led to the coining of operational concepts and theoretical elements useful for actual analysis of mobilities.

Atmospheres of Rejection and Material Interpellation

From the positioning of material pragmatism, we shall explore two central concepts aiming at empirical exploration. These are concepts that have been developed as part of the research into how design interventions such as leaning benches, metal spikes, barbed wire and other designs of the material environment have the effect of excluding street sleepers and homeless people (Jensen, "Dark Design"). They are as such connected to a wider conversation about material interventions and designer intentions. It should be

mentioned that some of this research is parallel to work done on "hostile architecture" (Rosenberger), "defensible spaces" (Newman), and "unpleasant design" (Savic and Savicic). Whilst recognising this work, the notion of "dark design" is different, with its more open scope to any materiality that might exclude (i.e., well beyond "architecture"). In step with material pragmatist thinking, dark design explores anything that de facto works to exclude and hence exercise power through materials and materialities. Moreover, important work has already been done in urban geography on "military urbanism" (Graham) and exclusion by design (M. Davis). This is work focusing more on the general mechanisms of exclusion and global trends in urbanism than what we are about to outline here.

Atmospheres of Rejection

As already indicated, the ways in which we as sensing and moving bodies register and experience the material world is about much more than embodied sensation. This is, of course, fundamental, but so are the ambiences and atmospheres registered, and these are of a much more complex nature than the body sensing experiences. Culture and norms play a certain role, as well as the individual's emotional and affectual state. In relation to material pragmatism, we want to focus on the notion of "atmosphere of rejection" as developed elsewhere by Jensen ("Atmospheres of Rejection"). The atmospheric experience emerges in the mediated meeting between human perception, sensing and registering of body, space, and artefacts (the latter in its widest sense as any artefact that attunes the situation). If one thinks about a homeless person wandering the empty streets of a city at night looking for a space to sleep, then meeting leaning benches, spikes, and barbed wire may indeed be expected to contribute to a very particular atmosphere. This is what we think of as an "atmosphere of rejection" and we may imagine the person looking for shelter feeling the dismissal and rejection as both a very material and physical thing, as well as indeed an atmospheric sensation. Or, in the words of a homeless street-sleeper:

From ubiquitous protrusions on window ledges to bus-shelter seats that pivot forward, from water sprinklers and loud Muzak to hard tubular rests, from metal park benches with solid dividers to forests of pointed cement bollards under bridges, urban spaces are aggressively rejecting soft, human bodies. We see these measures all the time within our urban environments, whether in London or Tokyo, but we fail to process their true intent. I hardly noticed them before I became homeless in 2009. An economic crisis, a death in the family, a sudden breakup and an even more sudden breakdown were all it took to go from a six-figure income to sleeping rough in the space of a year. It was only then that I started scanning my surroundings with the distinct purpose of finding shelter and the city's barbed cruelty became clear. (Andreau)

A city that rejects its citizens in this deep material sense may of course be criticised, however, here we want to keep the focus on the actual "workings" of this. The reason is that such a case lends itself imminently well to illustrate the key points behind material pragmatism. There is a pragmatic and situational focus on what determines the situation,

and this need to be understood as a matter of multiple assemblage materialities:

We are facing material interventions that pushes bodies away in a very tangible manner often afforded by basic conditions such as gravity. However, we are also seeing how the push from the artefacts and materials in their subtle way becomes parables of self-perception of the homeless. The constant rejection 'radiating' from the artefacts and spaces is part of a larger discourse of rejection that ultimately expresses a deep and profound case of identity rejection in a context of demand of ethical recognition. ("Atmospheres of Rejection" 329)

An atmosphere of rejection that "works on" soft human bodies with exclusionary effects is best understood on the backcloth of an analysis sensitive to the situation's delicate composition of different materials (e.g., bodies, benches, pavements, spaces, etc.). It is the network of material assemblages across the city that makes up the real geography of exclusion that homeless people "read" and interpret. That results in an "urban mosaic of 'go/ no-go' areas" (Jensen, "Dark Design" 124). The atmospheres of rejection also connect to the points made within human geography and the attention given to "negative geographies" in sense of non-relations, denials, and refusals (Bissell et al.).

Much more could be said about the ways in which an atmosphere of rejection comes into being and how it works in details. However, here the main point was to illustrate how this could be seen under the light of material pragmatism. Let us therefore in brief move on to another conceptual and theoretical contribution form the dark design research that also may serve to illustrate the potential of material pragmatist thinking.

Material Interpellation

We want to propose the notion of "material interpellation" as another example of a material pragmatist reading of dark design and injustice. Here we should note that we are turning to a different body of theories. In the following, we are engaging with critical media studies and political philosophy to explore an idea about how the excluded "reads" the dark design artefacts in question. One could argue that these ideas should have been derived from the already presented thinkers that we labelled material pragmatism. However, here we are turning to more specific communication and media studies, which is on the edge of the presented thinker's fields. That, however, does not invalidate the argument. It rather illustrates that to expand on a material pragmatist way of thinking, one might turn to yet other areas of concern. However, the reason the following theories and research references are not presented under the material pragmatist label is primarily because they have less focus on the pragmatist outcomes of the materialisations in question. Connecting them to that theme is an act by the author here, and not due to an inherent logic of the positions.

Artefacts and spaces entangle and enrol soft vulnerable bodies in immobile/mobile assemblages via affordances and atmospheres in processes we term "material

interpellation." Here, we are partly inspired by Althusser and his notion of interpellation. In Althusser's understanding, powerful ideologies inscribed and enrolled state subjects into fixed positions via a process of interpellation. It is not quite the same way in which we will speak of interpellations here, but the classic example of the shouting police officer used by Althusser may indeed also be of relevance. Althusser used the police officer shouting "Hey, you there!" on the street as an example of interpellation. Being "positioned" as a subject to the State (embodied by the officer), Althusser argued that the shout would "name" and position the subject with the assumption that he or she would stop, and turn around for further police inspection. In Althusser's words "by this mere one-hundred-and-eightydegree physical conversion, he [sic] becomes a subject" (174). Much in the same way as the shout, "hey, you there!" articulates law-abiding subject, so will a leaning bench or spikes address the human subject looking for rest or shelter. Here, we want to underscore the design dimension of the situation by using the term "material interpellation." This should be understood very literally as the ways in which the material composition and design of the artefact "announces" or articulates its relationship to any passing human bodies. The leaning bench articulates the message "you cannot lie here!," however, with large scope for interpretations. For a person walking home from work that announcement might not even be "heard" whereas a homeless person looking for a place to rest will "read" the material interpellation of the leaning bench in a very different manner. It will be read as part of the before mentioned "atmosphere of rejection" (Jensen, "Atmospheres of Rejection") and may in turn be interpreted as a statement of identity denial. The political philosophy of Althusser is, however, not the only field of relevance to engage with if the interest is the phenomenon of interpellation.

According to Horkheimer and Adorno, the "culture industry" creates passive subjects only interested in media consumption in a process somewhat like Althusser's notion of interpellation (Horkheimer and Adorno). This is on a rather general and societal level of mass consumption. The notion of interpellation has also been applied more directly and on the situational scale of making sense of a media message (or text), as showcased below by film theorist David Gauntlett:

Interpellation occurs when a person connects with a media text: when we enjoy a magazine or TV show, for example, this uncritical consumption means that the text has interpellated us into a certain set of assumptions, and caused us to tacitly accept a particular approach to the world. (31)

Drawing from this we might say that the very act of communicating requires "positions" that hail us as having particular roles or "places." In the words of Lapsley and Westlake: "a film as a pre-existing structure . . . interpellates the spectator, so constituting him/her as a subject" (12).

Within critical media studies on gender and race, a number of scholars are engaging with the notion of interpellation. Marisha Parham argues in *Debates in the Digital Humanities 2019*

that social media interfaces interpellate and cohere what bodies may do, and she speaks of the body as registering and inscribing strobes of light in a manner akin to interpellation, but with a pre-conscious, sensorial, and affect-oriented result instead of a hermeneutic "reading" or interpretation. Interfaces and light are examples of how bodies register, enrol, and ultimately become interpellated as consuming, surveyed, and dominated subjects. Senft and Noble show that when it comes to understanding racism and social media, the notion of interpellation is equally fruitful. They establish a distinction between positive interpellation, negative interpellation, non-interpellation, and mis-interpellation (111) (here is also affinity to "negative geographies" in Bissell et al.). This ranges from being associated with, for example, a positive social context, over the opposite to being ignored, and finally to feel included into a collective context only to realise that one is not. Senft and Noble report a story about the Algerian philosopher and psychiatrist, Frantz Fanon, that captures this perfectly. Fanon describes riding on a train in silence when, out of nowhere, a white child pointed at him stating loudly: "Look. A Negro!" Precisely at that particular moment, Fanon felt he ceased to be part of "everyone" on the train, interpellated as "Negro" by the statement of the child (Senft and Noble 109). Mis-interpellation is a very powerful element of identity denial that also has its parallel amongst the groups targeted by dark design. And here is a strong link to the debate on mobility justice and the vital question of "who counts as a person" (Sheller 39). These arrangements may involve complex and networked relationships that bring together different groups, which may have normative ideas about mobility and justice. As Sheller argues:

Everything from styles of clothing and footwear, use of prosthetics and mobility aids, physical abilities and limitations, all shape differing capabilities for movement. These enablements and impairments are in turn designed into clothing, dwellings, buildings, and cities, as well as inflected by styles of moving or constraining bodily moves. (51)

In this respect, we might think of interpellation as a more or less explicit communicative act that (in collaboration with materials and artefact) modifies the subject's position in one way or another. This is also what happens with Althusser's policeman hailing the subject. The question is: can we in the context of materialities and artefacts establish an operational notion of "material interpellation"? Can materials and designed artefacts "hail," address, and interpellate subjects? Let this be considered a hypothesis for future empirical research.

In this paper, the label of material pragmatism has been illustrated as a way to assemble situational and site-specific experiences that homeless people might have with various forms of design that excludes. Hence, the material interpellation of dark design interventions contributes to an atmosphere of rejection where the mobility justice question "who counts as a person" (Sheller 39) becomes very concrete and real. The material interpellations of dark designed artefacts establish an atmosphere of rejection and hence contribute to a "molecular politics" in the city. Rather than seeing power being exercised by participation of institutional politics with a capital "P" we find new types of "molecular

politics" battling for public attention (Amin and Thrift 158). Here, dark design sits oddly between the conspicuous "big politics" of global agendas like within the United Nation's Sustainability Goals, and then the "minute politics" that unsuspiciously (to the large majority that is) announces itself in material interpellations where things, artefacts, space, and bodies relationally re-configure in urban spaces.

Concluding Reflections

The future will bring more both theoretical and empirical research to explore material pragmatist thinking. In this short conclusion we want to focus on three key issues.

Firstly, bringing together positions such as pragmatism, new materialism, post-phenomenology, actor-network theory, and critical design thinking under one common label of material pragmatism is helpful for giving "dynamic boundaries" to the interdisciplinary explorations of situated mobilities in contemporary cities. Much more detail should be unfolded to illustrate the granular detail of material pragmatism. Moreover, even though this might seem like an attempt to "border and order" the situated mobilities research, this is by no means an attempt to ground this in a fixed framework. One of the greatest achievements and attractions of the "mobilities turn" is precisely its inclusionary openness to multiple theories, research fields, and methods. Articulating material pragmatism as one example of how to frame situated, empirical mobilities is not the same as seeing this as the only approach of relevance or even as a new theory. In accordance with its pragmatic DNA, it is rather illustrative of how a way of thinking might be in a constant process of calibration and seeking of new ideas and perspectives.

Secondly, we might ask how and why this is of relevance to the study of dark design and social exclusion in the city. The point is that many other themes of relevance to situated mobilities (e.g., commuting, tourism, refugee mobilities, etc.) could have been engaged with the notion of material pragmatism. Needless to say, to provide more detailed accounts for the empirical applicability of these to analysis (as well as to put forward their detailed content), more space would be required. Thus, as these words are being written, the research project on dark design is catching momentum and empirical ethnographic field studies are being carried out. This happens in parallel with the detailing of more elaborate and coherent, theoretical writings. In addition, one might want to explore the multisensorial experiences of heat, light, smell, noise etc. in more detail as part of this research.

Thirdly, the research perspectives for future material pragmatist thinking point towards more situated, critical ethnographies. Moreover, material pragmatist mobilities research should turn towards critical design thinking. This is already the case in the sense that this research is carried out within a design research institution. However, in the future, involvement with critical arts practices will be explored as another venue for contributing

even more to a material pragmatic understanding of situated mobilities. This paper hopefully has given some inspiration to a diverse set of thinkers that one might try to engage with by seeing a common denominator in the material pragmatist focus.

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