MEMORY, PROJECTION, AND IMAGINATION:
ON CHALLENGES FOR OBSERVATION
AND STATISTICS BASED RESEARCH

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Various forms of material, empirical, or observation-based research has grown in importance over the last decade in both architecture and urban design research, in parallel to an increasingly data-driven research utilising an increasing amount and availability of GIS data, tracking technologies, GPS records, and ICT tools. Assemblage theory and Actor-Network Theory have grown strong in several fields, sometimes linked to ‘flat ontology’, as have empirically based fields such as space syntax and geoinformatics. While it is somewhat dubious to bundle these theories together, there are tendencies in contemporary research in which they can be linked, with more or less explicit intents to cut past perceptions and conventions to look at the world ‘as it is’ and generate understanding from observed behaviours, actions, and the myriads of interactions going on. This has produced a rich body of research and significant advances in knowledge. However, there is also need for pause and reflection, to avoid risks of repeating the mistakes aimed to oust. This article offers a set of such reflections that will come about through a set of examples, leading onwards into a discussion of the role of memory, projection and imagination, as well as the need to consider how to integrate norms and structures into research that often intentionally leaves such concepts out.

keywords: architecture, actor-network theory, space syntax, research methodology, spatial configuration

The intent of this article is to address some concerns that arise from recent tendencies in various modes of architectural and urban research. As such, it is not necessarily targeted at any specific method or theory base, as the questions I intend to raise do not by default concern all research within the fields addressed. What is in question, is how we interpret, understand, and make use of what could roughly be called ‘data’ or ‘observations’, how we model our analysis thereof and what conclusions we can draw. The main question concerns the various forms of material, empirical, or observation-based research that has grown in importance over the last decade in both architecture and urban design research, in parallel to an increasingly data-driven research utilising an increasing amount of available GIS data, tracking technologies, GPS records, and ICT tools. It thus concerns research operating through close empirical studies of behaviours, interactions, movements and relations, and more broadly on research that relies heavily on recorded (mappable/observable) data.

If I were to attempt to outline a lineage of the questions I aim to address, the influence of assemblage theory (Deleuze & Guattari, 1980; Farias & Bender, 2010), and Actor-Network Theory (Latour, 2005) is significant, sometimes linked to ‘flat ontology’ (DeLanda, 2002; Harman, 2010). In parallel, correlation studies comparing empirically measurable phenomena to mathematical measures of architectural space has grown in influence, as it has been an increasing focus in for instance space syntax research (Hillier, Lehman, Stansall, & Bradford, 1976; Hillier & Hanson, 1984).

While it is somewhat dubious to bundle these theories and practices together, the coming discussion is not directly addressing them but, rather, the tendencies in contemporary architecture and planning research. Without claiming direct parallels, these tendencies can be traced further in some practices and theories of relational art (Bourriaud, 2002), which made its way into architecture and planning in the late 1990s and early 2000s. The parallel is made, since what I intend to address is the tendency to study behaviour, social processes, and the emergence of socio-cultural structures and norms in the local, observable, interactions of specific situations. This tends to be influenced by certain views of material and subjects found in some works of relational art, criticised by Claire Bishop (2004) as considering “subjectivity as a whole” and “community as immanent togetherness” (p. 67). That is, community in its observable concurrent enactment in a place, and the subject as pre-constituted and deliberately entering the interplay to participate in and form a commu-

1. This paper is a selective reformulation and refinement of an invited keynote held at the International PhD Colloquium Agency/Agents of Urbanity the 1st and 2nd of June 2015 at EPFL, Lausanne, titled 'Textures, Interfaces and Performative Structures'. In the refinement, the focus has shifted more towards outlining challenges for empirical and observation driven research than presenting earlier work.

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nity, which is then often interpreted as influenced by stances that stress interaction (face-to-face, bodily, in-situ) as the positive, and the intentional ego (pur- poseful subject) as the model to understand human action.\footnote{It is important here to note the difference between relational aesthetics as art and art practice and its concurrent adaption into other disciplines, since the tendencies under scrutiny and critique here rather is concerned with the latter. Arguably, some of the discussion in this paper would be misdirected if it were intended as a critique of relational art either as practice or aesthetic discourse.}

Some of these tendencies come from a highly relevant concern for the risks of getting lost in theoretical constructs or pre-defined categorisations or structures, and parallels can be found in for instance Science and Technology Studies, seeking to return to ‘the material’ or ‘materiality’ (Gillespie, Bozkwoski, & Foot, 2014).\footnote{Many would locate ANT in Science and Technology Studies and various strands of new materialism within it, or the other way around. I chose to separate them here because arguably, Latour’s influence is considerably wider. In Reassembling the Social in particular, he addresses primarily sociology as a whole. Latour’s path into architectural research is also at least partially separate from that of STS in general, and came about a few years earlier.} Arguably, this is at least in part mirrored by—or perhaps following from—the emergence of ‘Post-criticality’ in the architectural context (Osman, Ruedig, Seidel, & Tilney, 2002; Somol & Whiting, 2002; Speaks, 2005; see also Latour, 2004), arguing that critical architectural theory has reached a point where, having produced its own orthodoxy, it paralyses and restrains and that therefore doing needs to put to the forefront.

While the research in question has produced a rich body of research and significant advances in knowledge, as well as research methodology, I believe there is a need for a pause and reflection on where the insistence on observable, recordable, material and interaction might lead, and what it risks leaving out.\footnote{See Jonathan Sterne’s (2014) argument that there is a need to remind ourselves why theories and notions of relativity emerged and what knowledge context they are related to, rather than to prematurely dismiss them in favour of ‘materiality’ and studies of ‘the real world’. While Sterne shares the reservations to structuralism and following relativist theories, he reminds us of how they emerged largely as a response to pitfalls and problems with taking the ostensibly, materially true as a given. His argument is directed towards similar tendencies as the ones I address in this paper.} I will here offer a set of reflections which will come about through a set of examples which will be woven together towards the end of the article. The reflections will concern the risks of confusing the observed for the real, the acted for the intended, and the results for the desired. How do we know, whether someone walking on a street does it because they wish to be there, or because they wish to (not) be elsewhere? And how do we incorporate this simple query into empirical research? These questions can be seen as in dialogue with Latour’s (2005) statements that “there is no relevant group that can be said to make up social aggregates, no established component that can be used as an incontrovertible starting point” (p. 29) and perhaps more precisely, the embedded limitations generated by a notion that “[i]f a dancer stops dancing, the dance is finished” (p. 37).

As reflections, they will take the form of both critique and an outline of concerns that both complement and challenge the tendencies. They also aim to show the critical potential of a critical morphological approach, where research and methods often used in an explanatory, predictive, or prescriptive manner are instead turned to questions of ideologies, norms, perceptions, and processes. This approach is by no means new (see Peponis, 1989; Markus, 1993; Hanson, 1998), and I hope to do at least some justice to the work on which this builds. The outset here, is that materiality does matter. In discussing architecture, this means an approach where what and how we build affects society and culture more broadly, but also individual and collective action and perception. This is not to be equated with a claim that findings are by necessity universally true. Instead, my position here will be that, as Juval Portugali (2004) points out, artefacts are created by someone, and as such exist only as the result of intents and actions of people, and that this character is central to if and how they affect subsequent inhabitance, use, interpretation and behaviour.\footnote{Portugali here, arguably, builds on the notions of Herbert Simon in The Sciences of the Artificial (1970), although Port- gulai’s argument is rather concerned with the ‘nature’ of artefacts in the wider set of cognitive studies than with creating a separate field of studies as Simon does.} In this sense, artefacts are always already entangled with social and cultural norms and meanings, whether the interpreted meaning is aligned with the original intents or not. Considering architecture as a material form of communication makes for a position where findings on relations between the built material ‘real’ and social, cultural and economical processes, structures and
norms must always be considered as at least partially dependent on this very artificiality.⁴

**Material Matters: On spatial distributions**

To begin addressing some of the above I will first outline a discussion on architecture via a set of concrete examples. The purpose is to provide concrete background in which to anchor the coming discussion. This line of reasoning will be presented sorted into three forms of spatial distributions: distributions of space, distributions in space, and distributions through space. These are concepts I have used earlier (Koch, 2004), but have not quite returned to until now. I would like to stress that they are concepts through which to view the objects under study, and not specific methods or tools. Neither are they mutually exclusive categories; even if they roughly stand for how space is arranged, how objects, functions and programmes are placed in space, and how things are negotiated and emerge through space, many phenomena can be understood in several ways. A building distributes space through how it arranges material boundaries, but it is also distributed in space in that it is placed somewhere, but this can also be seen as the result of emergent spatial processes and therefore distributed through space. This is not to say that they are interchangeable; the knowledge gained by studying each aspect will be quite different. It is further not aimed to be a complete model, but specifically an architectural-spatial analytical framework.  

*Distribution of space: Differentiation and Hierarchies*

If we regard architecture as a practice aiming, at least in part, to “create relatively complex and permanent arrangements of space which function as stable allocentric frameworks for locating ourselves, other people, and things as we go about our daily lives” (Peponis, 2012, p. 12), then it is in part a practice of generating differentiation and hierarchy. Arguably, manipulation of material boundaries for the purpose of differentiation and arrangement of space as one of the main purposes of architecture is both an enabling practice and an exercise of power. In a sense, it allows to fold space and generate distance where there is little—such as in a labyrinth (Figure 1)—and differences to co-exist in close Euclidian proximity—such as a bedroom next to a busy street. Privacy enabled just next to publicness. A much recognisable example of the former is the way IKEA has a visitor meander long distances created inside a box before reaching the goods for sale (e.g., Penn, 2005), and the latter is perhaps as most clearly demonstrated in a movie, such as Lars von Trier’s *Dogville* (2003), where the boundaries are simply drawn on the floor while enacted as if real—clearly showing the juxtaposition of at times radically different events taking place just next to one another yet as-if in different ‘worlds’. As Marcus (2010) argues under the term *spatial capacity*, the on-the-surface simple decisions of the number and size of units a building or a city is subdivided into has far-reaching implications. While enabling, it is restricting and communicating: Is a particular building constructed as shallow or deep within the confines of its geometric possibilities, and why? It also signals principles of such separation; i.e. is it separated into small or large compartments? Are they different in size? Are they in a row, along a corridor, arranged like a tree or like a network?

Principles of distributions of space vary over time and space; the amount of subdivision, sizes, arrangements, configurations, clusterings, and so on. The extent to which social differentiation is invested in materially built space, as well as the reasons for spatial distributions, varies. To a large extent, however, such principles tend to be formulations of cultural ideals as much as, or more than, of practical problem solutions even for such ostensibly pragmatic things as homes (Hanson, 1998, p. 109). This is not to suggest pragmatic issues are not involved, but rather that the nature, number and means by which such issues are given form or solved varies noticeably.⁵

As an illustration of this, we can turn to a particularly explicit example of such a discussion in the work of Alexander Klein. Klein, working for the German government to develop ‘scientific’ norms

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⁴ ‘Artificial’ here not as opposed to ‘natural’ or ‘authentic’, but to make explicit the state of having been intentionally produced and thereby an extension of human agency. This is not a claim that such intention is directly mediated, rather it is to say that the state of having been produced engenders the artificial with the consecutive attempts of interpreting such intention, which is further reproduced over time, so as that the ‘meaning’ of particular forms or structures can shift through ongoing societal negotiations, and can take on different meanings for different people. See further e.g., Ricoeur (1981).

⁵ Detailed and thorough studies of configurations of architectural space and their relation to social, cultural and economical processes through time can be found in Markus (1993), Hanson (1998), Puarra (2009) and Steadman (2014), each covering somewhat different but complementary types of buildings and historical periods.
and principles for architecture and housing (Bevilacqua, 2011), developed three principles for good architectural solutions (Klein, 1927, p. 296):

1. The arrangement of movement routes and course of the walk lines (arguing that a simpler walking line is preferable to a more complex one, measured in number of turns, to minimize physical effort).

2. The concentration of movement areas (arguing that a more concentrated movement area is preferable over more fragmented solutions, in regards to comfort, well-being and spaciousness).

3. The geometric correspondence and relations of the plan elements (arguing that elements forming a graspable whole are better than a more complex and/or subdivided plan, in ensuring a coherent overall impression or perception of parts of the building).

These principles were illustrated by examples comparing, primarily, Klein’s own schematics to existing cases, such as in Figure 2, where it more clearly becomes a question of (reducing) route complexity, (increasing) concentration of spaces, and (reducing and normalising) number of spatial elements. One can trace a kind of investigation or comment on this line of reasoning further in the work of Mies van der Rohe, in the Brick Country House (1924), the Berlin Exhibition house (1929), and the Farnsworth House (1951). These projects can be viewed as works manipulating these principles, from the extreme ‘opposite’ in the Brick Country House maximising number of turns, via the Berlin Exhibition house (and Villa Tugendhat and the Barcelona Pavilion) that seems to take intermediate forms, towards the extreme simplicity of the Farnsworth House. I do not mean to claim that Mies is deliberately and explicitly commenting Klein’s writings—the point is rather the deliberate engagement with specific questions of spatial differentiation, subdivision and arrangement that takes centre stage in the architectural proposals in written and built forms.7

![Figure 1: A labyrinth can be considered as a folding or even extension of space. Geometrically, the principle of the labyrinth is, within the confines of its overall shape, to fold the pathway to the centre so as to make the walking length as long as possible. Arguably, this extension is the purpose of the labyrinth for whatever reason it is made, but it stresses the procession to the centre, and transforms the centre-exterior relation by this extension of procession them in-between. The labyrinth here performs an extreme of how architecture transforms spatial proximities by the arrangement of boundaries and connections. Here represented on a silver Drachma from Knossos, 300-270BC, (19mm, 5.41 g). Head of Hera left, wearing ornamented stephanos, triple-ependant earring, and necklace / Labyrinth: A-P flanking, ΚΝΩΣΙ(ΩΝ) “of Knossians” below. Photo: Classical Numismatic Group (CNG), Public Domain.](image)
and it would seem evident that the lives lived in the examples would also be quite different. They also signal different ideals of life, of family, household, and a range of other things through their configurational aesthetics. Robin Evans (1978) discusses such plan-ideal relations through materialised family relations and notions of privacy in the Italian Renaissance villa—in particular Andrea Palladio’s Palazzo Antonini in Udine—and the 19th century English house—in particular Philip Webb’s the Red House in Bexleyheath, London. He demonstrates how they express distinctly different positions regarding individual privacy, household composition, and the spatial frameworks for enactment of social relations that constitute the households. For instance, Evan’s notes, the Italian Villa has no rooms with only one entrance, whereas most rooms in the Red House have only one entry—necessitating the use of corridors and passages.

Distributions of space are here intrinsically related both to ideals in intent, and to social and cultural notions and practices—as mediators between ‘preceding’ intents, practices and norms, and ‘following’ interpretation and appropriation. These dimensions may be difficult to observe and locate as an actor, while socially, culturally and practically active in both formation and effects. Having stated this, it is important to be careful with such notions since there are few direct links between forms and ideals or practices. In addition, configurations need to be understood in relation to that of other buildings or settlements in their context, taking into account whether, for instance, a building is made deeper or shallower than others in its context, as this relative character is as important a carrier of meaning as the specific configuration ‘itself’. Positioning the distribution of space as a mediator is meant to indicate

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Figure 2: The three principles of Alexander Klein’s ‘graphical analysis’ approach illustrated by his own drawings in Wasmuths Monatshfte für Baukunst und Städtebau (Klein, 1927, p. 296-298). Here, arguably, the distribution of space is put centre-stage studied under principles of efficiency and utility. (Illustrations under public domain, made available by Zentral- und Landesbibliothek Berlin).
that, whether pragmatic, functional, ideological, or other principles or ideals are in the forefront, there remains a notion of what it is that space is arranged for that is reflected in how this is arranged and provided for, but also—somewhat analogous to Latour’s reasoning (2005, pp. 37-42)—that the distribution of space is active and must be considered as multiple and specific.

**Distribution in space: Classification and Clustering**

In *Buildings as Classificatory Devices*, Thomas A. Markus (1987) argues that buildings, as primarily social objects, are dedicated amongst other objectives to the explicit or implicit reproduction of classes embedded in society and language. He further notes how “the form and structure of these systems is socially produced by the purposes, power structures, ideas, practices, and beliefs—and hence language—of the societies which create them” (p. 467). Because of this purpose, he further argues, architecture is predicated upon the notion of classifications that it aims to provide space for; as buildings are divided into rooms, these divisions are made with something in mind, as is the arrangements of rooms into series, trees, networks and other types of configurations (Foucault, 1986). However, once built, this division will continue to challenge the consecutive inhabitants of the building to relate to and make sense of this subdivision for themselves. Sometimes, this becomes socially or culturally established (temporary) categories, such as ‘bedroom’ or ‘salon’. Sometimes, it forces social or spatial invention or rearrangement. There is however a point where it becomes unreasonable for the inhabitants to make sense of this subdivision and the building may be rebuilt or abandoned and taken over for other purposes completely, such as the gradual transition of the basilica from marketplace to catholic church (Markus, 1993). Rather than a determinate relation, it is thus important to view this as an ongoing (culturally informed) process of negotiation where the emergent use and original intent is only loosely linked (see e.g., Peponis, 1989).

Remaining in the process of inhabitance, this can for simplicity’s sake stay within the material processes of arranging objects in space as a process of categorisation or classification. In this process, we can speak of the simple generic principle of co-locating things in the same room as such a categorisation process: things are put together or kept apart on several scales, where arguably one scale might contradict another (we may have glasses together in cupboards but in two different rooms—or do cookbooks belong in the kitchen or in the library?).

Perhaps more nuanced, it is possible to discuss this as proximity relations or contextual relations. What I mean here is that instead of insisting on a tree-structure principle, where things belong to one category, and each sub-category is part of only one higher level category, we accept Portugali’s (2004) point that artefacts do not exist in such simple categories but most artefacts can belong to several categories, forming something more akin to a lattice structure of classes. To an extent, this can be and is responded to by material and spatial arrangement. A very concrete example is how, in a study of a department store Åhlén City in Stockholm performed in 2006, a specific model of Filippa K women’s jeans was found in three different places of the women’s fashion floor (labelled ‘Filippa K’, ‘Jeans’, and ‘Streetwear’); a pattern that was repeated by a wide range of, but not all, commodities—and especially common amongst clothing (see Koch, 2007).

More elaborately, we can remain in the same study and more closely analyse the section of the department store officially labelled ‘cosmetics’. Here, there are two explicit classes present: the higher level class of cosmetics, and the lower level class of brands. By spatial arrangement, however, other classes were possible to find, as when studying for every shelf and desk the goods or brands that were visible from each, arguably forming their visual context. This can then be aggregated or clustered into groups based on degrees of mutual co-visibility from one another, such as in Figure 3.

Here, as it turns out, there is a small number of higher-level categories that emerge, some of which are confined to the meta-class of cosmetics, and some of which reach out and form contexts with others in the department store’s explicit classes, such as a group of cosmetics that cluster with jewellery and silk stockings rather than other parts of cosmetics, while being closer to men’s watches, which are grouped with jewellery but not cosmetics. Comparing how these are arranged and aestheticized in other ways, one differentiation seems to be of price range or exclusivity. The group displayed with jewellery tended to have more space, and primarily be bought through over-the-counter interaction with personnel. The group of cosmetics most confined inside cosmetics tended to be sold by self-service and with fair to
large amounts of the various items available, even piled into bins (see also Miller, Jackson, Thrift, Holbrook, & Crewes, 1998). Second, comparing the found groupings to their presence and expression in fashion and lifestyle magazines, this trend was reinforced and nuanced—and later confirmed by personnel. The spatial arrangement seemed to respond to status. But, it also, arguably, responded to intended use. While one interpretation is that it was a division between which customers bought which brands, it may also—perhaps more likely—be that it was also a question of the context and purpose of buying them (Chua, 1992). That is, the same customer may buy from one category to have as ‘everyday’ makeup, and another category for ‘party’ or ‘special event’ makeup, where each individual customer would have her or his own range and definition thereof.

Similar reasoning is conducted by Zamani (2009) Peponis (Peponis & Hedin, 1982; also Zamani & Peponis, 2010), and Tzortzi (2011) to name a few, around the arrangements in museums and how they communicate ideals and understandings of art in general, art classifications in particular, and individual pieces of art within such an understanding. In material practice, it is something that was repeatedly played on by artists such Asher, Haacke and Wilson in their artworks based on rearranging museum collections as a whole or in parts (Buskirk, 2003). Classification thus becomes a dual of suggested belonging, processes of making sense of an arrangement, and of arranging, within a social, cultural, linguistic, and historical context: The works of these artists

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Figure 3: The visibility contexts of cosmetics formed by the arrangements of shelves and walls in Åhléns City, ground floor, in 2006. The contexts are analysed using the software SPOT (Markhede, Miranda & Koch, 2010), and shows two of the clearer context-categories in the overall class of cosmetics. The grey areas are isovists (Tandy, 1967; Benedikt, 1979), which can be likened to visual fields from a point extending horizontally in all directions, and the circles and lines represents their relations. Top (a): A group consisting of jewellery, watches and sunglasses, and high-end cosmetics. Bottom (b): A group consisting of low-end cosmetics.

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9 For instance, in Wilson’s Mining the Museum in the Maryland Historical Society in Baltimore (1992), Haacke’s Viewing Matters in the Museum Boijimans Van Beuningen in Rotterdam (1996) and Asher’s installation in the 73rd American Exhibition at the Art Institute of Chicago (1979). These works all operate by reconfiguring and recontextualising either individual pieces or whole ranges of existing collections.
build on the socio-cultural classificatory processes of co-location or intervisibility.

**Distribution through space: Movement and expanded social relations**

The simplest understanding of distribution through space is a study of flows, such as pedestrian flows. It is here perhaps tempting to discuss flows as a result of the combined conditions of the distributions of and in space, but while this may be true for particular localised instances of space and time, it is worth reminding that flows—and thoughts and intents of flows—also participate in the generation of other distributions. On an urban level, we can understand this as the difference between the study of geographic locations, and the study of access through architectural space. The latter here stands for such questions as ‘how many cafés do I have access to within walking distance’ from a location—that is, how amenities located in space are distributed as accessibilities through space. Another example would be ‘how far is the closest park from my home?’.

This allows for a kind of study of urbanity that, arguably, puts emphasis on an extended situatedness of places, characterising them through their relation to their context rather than by their internal properties, taking into account how the ‘folding’ of space makes close or distant that which in terms of geographic location may seem close by. As an example, we can see the difference between the location of workplaces and the access to workplaces through urban space as investigated by Ann Legeby (2010; 2013a; 2013b; Figure 4).

Remaining in the department stores, however, it is possible to make use of them to highlight another particular notion of distributions through space. This notion concerns the relations of things through space without the relation being concretely and representatively enacted such as through a movement. Here, we will make use of mannequin dolls and their distribution on the floors of men’s and women’s fashion floors of Åhléns City. In all figures 5, a set of rings shows how Mannequins are located on the floor in general. Figure 5a and b show the spatial relations between these mannequin dolls considered as the shortest paths, with the distance parameter of angular deviation of the paths. Finally, Figure 5c shows how the mannequin dolls cluster based on such angular deviation if clustering goes by the average position and is cut-off at about half of the paths considered, and the same clustering is calculated based on metric

![Image](http://contour.epfl.ch/)

**Figure 4:** The locations of workplaces (left) and the access to workplaces (right) in Södertälje in 2009. The analysis is made using the ‘Place Syntax Tool’ developed by KTH and SpaceScape, originally conceived by Alexander Ståhle (Ståhle et al 2005). From: Legeby (2010), Urban Segregation and Urban Form, p. 138 (a) and Legeby (2013a), Patterns of Co-Presence, p. 277 (b).
Figure 5: Clustering of ‘all relations’ in angular distance between mannequins dolls on the men’s fashion floor (top/a) and women’s fashion floor (upper middle/b) of Åhléns City in 2006. Angular clustering at clustering degree 0.5 (50% of clusters) on the women’s fashion floor (lower middle/c) and metric clustering at clustering degree 0.5 on the same floor (bottom/d).

Figures and analysis from SPOT19 (Markhede, Miranda & Koch, 2010), developed by KTH and AEDAS R&D.
distance. First, it can be noted how the two cluster groups respond to two different possible categorisations: fashion or identity branch for the angular clustering, and price or hierarchy position for the metric clustering. Both analyses thus seem to hold socio-cultural relevance. The point here, however, is that these types of relations are relations through space in the sense that, rather than being directly readable relations (as being in the same room or in different rooms), the investigation concerns how extended relations are formed reaching through the arrangement of spatial boundaries and openings, past corners and turns, through in-between rooms and corridors, and so on.

This line of reasoning can then be extended to not only functions and spaces, but dynamic actors such as people. As an example here, I will briefly introduce the Swedish game Burken, which is a variant of hide-and-seek. In this game, both the seeker and the ones hiding are active participants, since the game is not only about hiding but the ones hiding can ‘win’ by reaching a designated point. At the same time, the seeker, upon finding someone, needs to return to the same point before the found person and to proclaim who they found and where. This sets an intricate game of spatial relations in motion, where the social game of spatial relations is decidedly spatial, but takes place without the actors meeting each other. While not a model of society in general, the game has important implications for how we understand action, interaction, and social relations as enacted in and through space (Koch, 2016).

Distribution through space thereby is a study of processes, flows and extended relations, and must not be misunderstood as simply a study of flows. This is partially the point of the concept—that it includes, but is not limited to flows, addressing flows as a particular type of enactment of relations, which also take other forms as in the hide-and-seek variant, or in spatial processes of segregation (see e.g., Schelling, 1969; Legeby, 2013), or in studies of certain types of accessibilities (e.g., Ståhle et al., 2005; Marcus & Colding, 2014).

Memory, Projection, Imagination

In the examples above, one can note the attention to detail and relations employed by many of the initially mentioned theories and fields, which offer both theoretical and methodological tools and concepts to enrich and develop further. In some cases, the discussion comes close to assemblage theory or ANT, although coming from another angle. In others, it has closer affinities to GIS studies. However, the point here is the need for additional layers of knowledge to make sense of the results, and for an approach that allows ambiguity in analysis of intent and actions. We can talk about it as reference frames and models of human action. The former concerns how we understand and interpret material arrangements, and the extent to which we accept cultural and social norms and knowledge into the analysis. The second concerns whether we assume people are enclosed vessels that will act out their desires or we assume people to be contextually responsive and flexible beings. Or: How much of what happens in a situation, can we actually read from the situation itself, and how much of its reasons and results can remain interior to such an analysis?

Let us begin with the department store, and the practice of ‘shopping’. If, instead of looking at it strictly as an act of finding what one is looking for, we look at it as a process of seeking what one could desire, and negotiating who one might be or want to become, the range of interpretations shift radically. There is definite support for such a position (Chua, 1992; Iarocci, 2009; Osborne, 2009; Koch, 2012). The question here, however, is how many of the spatial-material categories, studied as arrangements of intervisibilities and separations, make as most sense when studied as identity positions in relation to gender, status in the fashion hierarchy and publicness and privacy (Koch, 2012). These are, of course, interrelated with one another. To put it simply, the commodities were clearly placed in a context of other commodities and in an arrangement that signalled an identity of the shopper who would be browsing them, and clearly separated from other potential identity positions: street fashion separate from tailored fashion—and, in both branches, high-end separated from low-end—et cetera. As in the examples of cosmetics and individual jeans models, depending on how one looks at it, different categories emerge and there was a repeated pattern of objects ostensibly belonging to the same category appearing in different categories, where the categories at

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10 This can be related to Hillier and Hanson’s (1984) note that space “provides the material preconditions for the patterns of movement, encounter and avoidance” (p. ix), it can be noted how the goal of the seeker is encounter, and the goal for the ones hiding is of avoidance, making the game intrinsically based on the entangled relation between these two social actions.

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times repeated themselves but at different levels. Accepting Portugali’s point on the nature of artificial objects, however, this makes sense as it allows particular commodities to take on several different identities by being co-arranged with other commodities. Furthermore, the richness of possible categorisations allows different perceptions of the arrangement to emerge depending on knowledge, investment, and purpose of the visit (see Dougherty, 1978; Portugali, 2014). In addition, the number of mannequin dolls and fitting booths (table 1) suggest the dependency on one’s body for the fit of the clothing, the space given to and number of individual pieces of each commodity, et cetera. The referents that makes this arrangement meaningful are the fashion and lifestyle magazines, as representations of the systems of identities, classes, and positions of subjectivities negotiated through fashion and consumption.

However, fashion, as a combination of the embodied practice of wearing and a semiotic construct in the fashion system (Entwistle, 2000; Kawamura, 2005), cannot act locally without being related to combined cultural notions of how clothing is related to identity formation and communication. These notions include clothing as identity communication, identity as malleable and changeable, and fashion as a changing, constantly negotiated sign system, through which such communication and subjectification takes place. This situates the question in a social and cultural context, where all participating ‘actors’ are flexible and negotiable, even though inertia and power levels are different. Individual choices and acts of fashion expression affect the semiotic system of fashion identities, but, as these systems are collective processes, the power of individuals to affect the meanings or the system as a whole vary greatly, and may often be quite small. That is, if the practices of shopping negotiate the identities of the shoppers, the objects for sale, the stores in which they are for sale, and the whole fashion system, the entire negotiation should not be misunderstood as legible only within the limits of the local situation. Such an understanding creates cutout issues that not only fail to incorporate the wider historical, social, cultural and spatial process, but transform both the context and the specific situation into something else (Châtelet, 2000). A too locally confined reading thereby in effect becomes a study of something else than the situation intended to be studied due to this transformative effect of the cutout. Concretely, this can be illustrated in how the above-mentioned cross-reading of material arrangements and fashion magazines provides a different understanding of the arrangement of goods than a more common cross-reading of arrangements of goods and individual preferences, local sales tactics and attractor goods and impulse buys.

The implications of bringing in fashion magazines are thus more than simply a question of frames of reference. Rather, the implication is that there are cultural norms which are active in the shopping situation, for individuals as well as the collective process. Both the department stores and the magazines become forms of mediation and sites of negotiation of fashion ideals and societal structures existing in their enactment (Butler, 1999; Rose, 2002)—an enactment that includes appropriation and distinction, the choice to do and the choice not to do. The process depends on norms being embedded in the sense-making of clothes retail, which is further dependent on individual and collective memory—a faculty that is both active and selective (Ferguson, 2009; Kaye, 2010).11 It furthermore requires such memory—or

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Table 1: Number of Mannequin dolls in two department stores studied in Stockholm in 2006, Åhléns City and Debenhams, total and per gendered fashion floor, followed by specifically underwear. Followed by changing booths. In simple sheer numbers the notion of ‘having to try on’ is repeated through more than double the amount of non-human actors (up to more than 20 times in one section) in the women’s fashion sections, stressing the need for persons belonging to one gender to identify as bodily form much stronger than persons belonging to the other (in a heteronormative base division into two gendered floors).

<table>
<thead>
<tr>
<th></th>
<th>ÅHLÉNS Men’s fashion</th>
<th>ÅHLÉNS Women’s fashion</th>
<th>DEBENHAMS Men’s fashion</th>
<th>DEBENHAMS Women’s fashion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing</td>
<td>33</td>
<td>61</td>
<td>22</td>
<td>74</td>
</tr>
<tr>
<td>Underwear</td>
<td>4</td>
<td>28</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>89</td>
<td>24</td>
<td>119</td>
</tr>
<tr>
<td>Booths</td>
<td>25</td>
<td>49</td>
<td>9</td>
<td>29</td>
</tr>
</tbody>
</table>

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11 Nick Kaye (2000) here provides an illustrative example of Michelangelo Pistoletto’s work Le Stanze (the rooms)—a series of exhibitions “[c]xposing the conditions in and under which a work is always in the process of being anticipated, produced and rembered, where ‘real space’ is written over by anticipation and imagination.” (p. 31). This series shows how the reception and interpretation of any of the artworks depends on both memory and projection. At the same time, each successive installation rewrites the meaning of the
knowledge—to be projected upon both the clothes for sale, and on the self as a shopper. Thirdly, it is dependent on imagining oneself wearing the clothing in a different situation than the local situatedness of the shopping. That is, to understand the concurrent choice of buying, both memory and projection of the individual, set in the wider social and cultural context, must be included in order for the artefacts to become active participants in the negotiation. Why is the person shopping, for what future use with whom and in what context, and how is this future context understood through past and imagined situations? That is, it is enacted based on knowledge, interpretations and assumptions (e.g. Koch, 2016).

If we return to the main argument intended in this article more clearly, it should by now be clear that it is based on the need for a rich understanding of actions and social structures that extends beyond any particular situation. Understanding department stores as sites of social and cultural negotiation of both identities and fashion systems requires an acceptance and inclusion of different orders of concepts, and arguably, the notion of salience of categories (Dougherty 1978). That is, that interpretation—perhaps even perception—of the material world is partially based on cultural norms in mix with situated, individual and collective action; the mannequins and the clothing become ‘actants’ at the point where both individual identity and clothing take on certain cultural characters. Interpretation and perception is furthermore coloured by pasts (true and false), projections (in time and space, and onto places and people), and imagination (of what might or will be, might have been, or could instead have been). A fair deal of this is further based not on knowledge of material arrangements, but mediated knowledges that are only to a varying extent ‘true’ in relation to the material world (e.g. Barthes, 2009; Augoyard, 2007).

On avoidance, social structures, and playing hide-and-seek

Some of these questions are brought to the fore when studying the extended game of hide-and-seek mentioned above closer, with the social act of avoidance (Koch, 2016). The particularly interesting case here is not the avoidance tactics discussed by De Certeau (1984) or Goffman (1963), equitable to changing sides of the street to avoid an encounter, or to turn to another street at the sight of something, but the choice to take a different route or go elsewhere in order to pre-emptively avoid an encounter: for instance, the choice, for a first date, to go to a restaurant where my friends are unlikely to be, such as the protagonist and Nadja does in Breton’s novel of the same name (2000). In order to perform such avoidance, an assumption needs to be made about other people’s choices and behaviours, without knowing where they are, or where they are headed. It is by default a projection, which furthermore highlights the projective in most behaviour in how actions are conditioned by projections of what is—I may go to the central square because it is probably lively, as would be Vinicius Netto’s argument (2008). This projection will then continue to colour expectations, and thereby interpretation—onwards to how events are perceived, integrated into memory, and retrieved in later circumstances and events. Such actions are still clearly material, and relating to material conditions. It is easier to play burken in an Italian renaissance villa, lain out like a network with at least two passages into each room, than in an 19th century English house, lain out like a tree structure with main corridors and single-entry rooms, to use Evan’s (1978) examples from above.12 Architecture as a mediator here in the latter operates to make the possibility of such a game not happen—a difficult act to observe in resulting practices since the act to prevent precedes any attempt of enaction.

Rather than an asocial behaviour or a social problem—even though there are avoidance behaviours that cause or are caused by problems—such behaviour needs to be included in an understanding of social action seen as how individual actions pertain to how people relate to one another. Arguably, such actions are also as much or more generative of social structures than encounters and interactions are. Who avoids whom, on what grounds, and for which reasons? However, avoidance is also an important process in the emergence of subcultures (Williams, 2011) and resistance movements (Rose, 2002; Bonnevier, 2007), and thereby, arguably, in the

12 Hanson (1998) elaborates on similar principles of freedom and control in homes as both overall and localised in different homes, for instance in discussing Hardwick Hall (p. 193) and how within a ‘global’ hierarchical structure particular parts form a “separate and protected sub-complex […] well nigh impossible to police”.

former. Harvie Ferguson (2009) notes, how while ostensibly about the past, memory is always in the present, with an ambiguous relation to empirical fact, changes over time, and affects future memory making. Memory is an active faculty operating both for the purposes of future projection and for interpretation.
ongoing processes signifying democratic societal negotiations and practices of freedom.

Concluding remarks

So, what is the line of argument here and where does it lead? It is not my intention to get stuck in a critique where the message is that everything always has to be taken into consideration. Knowledge processes largely build on the ways we make selective readings, conceptualise, and abstract the world around us. The intention is rather to point to some necessary reflections that seem to have gotten somewhat lost, with fundamental implications for our understanding of society and social structures as well as architecture and urbanities. But it is also to point to how we can understand social structures in a richer way, where the perpetuation and enactment of avoidance and apparent non-interaction fills a pivotal role. I am not arguing for avoidance as much as for the acceptance of its taking place, and as a part of socio-spatial structuring. Architecture here plays an active, non-deterministic role both material-ly and culturally, to the extent these aspects can be distinguished as separate.

It is primarily an argument for understanding action and situation as socially and culturally embedded—but in their embeddedness not necessarily determined—and as extended in both time and space. This embeddedness and extension, considered as both the implications, reasons, and effects on the activity and interaction, and the effects of the situation down the line. That is to say that, to study social interaction and behaviour as if it was not related to history, and not related to the range of societal and cultural concepts into which they are embedded, is highly problematic, and assigning causes, effects and interpretations as limited to what is observable within a situation is likely to lead to faulty conclusions. It furthermore risks neglecting the myriad of small influences in relation to the more notable high-impact interactions that are more easily observed. The material world—including, but not limited to, architecture—participates in this embedding. In this sense, societies can be said to generate different spatial cultures in response to different social processes and values and how they are invested in material space (see Griffiths & von Lünen, 2016). This embeddedness makes the question of who and what is active in a situation richer but more difficult to answer. Similarly, ‘data’ needs to be handled carefully, including individual data. Again, do we know why a person is somewhere? Is the assumption that they specifically want to be there not an act of theoretical violence? This becomes even more important when navigating between ‘big data’ and individual preferences, actions, or behaviours.

If we put it more pointedly, it is a challenge to certain interpretations of Latour’s (2005) claims that we should dispose of any categorisations external to a situation and to build our understanding of any event ground-up (p. 27-42), not because there are sets of categories ready to use, but because the event is always already embedded in social and cultural norms and notions perpetuated in and through the society in which any event takes place. Of course, this is a particular reading of Latour that many will disagree with, and my challenge is rather directed towards a set of analytical practices including some but not all of a wide range of empirical or data-driven research practices including the field of ‘space syntax’ in which a lot of my own work has taken place—again with the caveat that it would be unfair to say that it concerns every researcher in the field. It is a challenge voiced from within, firmly emplaced in a conviction that close, meticulous study of the particulars is important, and that just as giving space for the intangible, there is a need to keep reminding ourselves to do the dirty work of close scrutiny and data collection, and the power of ‘small data’ where these questions can be brought to the fore. Rather than a challenge in a black-and-white manner, furthermore, it is a challenge to tendencies, which broadly speaking can be found in many kinds of research, stressing the individual, localised, personal, embodied here-and-now at the expense of memory, projection and imagination, or notions that emergence and performativity processes would mean that structures and classes (in a wide sense) are not existent as historically conditioning processes affecting the here-and-now. It argues against that claim that the cultural and social knowledges and tastes engrained in people would be fully identifiable through local observations of actions—or that the situation is best understood through the lens of the modern, intentional subject (see Butler, 1999; Ferguson, 2009). It is an argument that when the dancer stops, the dance is not over—just like it did not begin with the first observable dance step.

Acknowledgements

This article was written with the support of the FOrmas-funded project SRE Architecture in the Making.
It is further written drawing from the work of the research group SAD at KTH, in relation to its wider context at the School of architecture, and would not have been possible without the many discussions with colleagues and friends there. Through the years, SAD could be considered as having consisted of Lars Marcus, Jesper Steen, Daniel Koch, Alexander Stähle, Ann Legeby, Pablo Miranda Carranza, Eva Minoura, Eunyoung Choi, Henrik Markhede, Ehsan Abshirini, Sara Sardari Sayyar, Magnus Blombergsson, Johanna Wiklander, Mohammad Sarraf and Meta Berghauser Pont. Finally, a sincere thanks to Karin Reisiger and Bettina Schwalm for aid with translations from German.

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