

The city as a board game: Towards an assemblage representation of the urban

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The city as a board game: Towards an assemblage representation of the urban

In a philosophy of science perspective architectural ideals are typically characterized by concepts that include the individual idea and subjectivity (Kurath 2015). As a result, the traditional design studio tends to simulate the design competition, with students working individually on competing future visions for a selected site. This approach is challenged in this paper, presenting early findings from an STS-inspired research study of architectural design teaching at The Royal Danish Academy of Fine Arts, School of Architecture (KADK). Investigating research potentials in design practices at the school, the aim of the research study is to describe these practices and investigate their research potentials.

Presenting an example from the on-going fieldwork, it is argued that urban design teaching could benefit from the imagery of a board game, substituting the concept of the 'master mind' with a number of heterogeneous players, competing about and negotiating urban form¹. As a design instrument, the board game anticipates actor-network theoretical perspectives, and presents early steps toward an urban design method, with potentials for further investigation and development.

Belonging to what Michael Batty and Steven Marshall names the 'evolutionary paradigm' (Batty & Marshall 2009) in urban planning and design, the paper broaches the idea that cities evolve into an unknowable future, meaning that any objectives or visions that the urban designer might have for the future 'are contingent on the present, hence continually subject to revision and compromise (Batty 2008)'. Building on this argument, the paper questions the finite quality of the traditional master plan, and argues for a more performative approach.

Two paradigms in modern urban planning

"In contrast to the developmental paradigm, which treats the city as a whole entity that develops over time, and whose optimal form is knowable in advance, the evolutionary paradigm allows us to appreciate the organic qualities of cities, without implying there is a fixed relationship between the parts and the wholes, or an optimal mature form (Batty and Marshall 2009)".

In an insightful paper, Batty and Marshall differ between a developmental paradigm and an evolutionary paradigm in urban design. While the ideological basis for the developmental paradigm can be traced back to the renaissance, the evolutionary paradigm can be traced back to Charles Darwin via complexity theory (Batty and Marshall 2009).

The principles of the master plan

'Ever since urbanists began to map and describe the city, the language of the human body has been used to describe urban form and to suggest ways in which cities might be planned (Batty and Marshall 2009)'.

The historical development of modern urban planning is closely linked to a concept of functionalism. In the Italian renaissance the city was understood and depicted as a human body – a complex system, held together by an equally systematic order. As a result of this interpretation, it became the task for the planning architect to understand and reveal that underlying order, holding together the parts of the city-body, potentially optimizing its functionality (Sennett 1994). With the introduction of the perspective drawing, it had become possible to draw the world in Man's image, who (created in God's own image) was believed to have privileged access to knowledge (Hill 2013) (Sennett 1994) (Gifford 2003). In this way, a renaissance concept of planning was built on two assumptions: "First the existence of an underlying, externally defined order, (...) waiting to be revealed, and second, that it's the planners responsibility to discover and reveal that order" (Gifford 2003).

Further, in his most insightful study, *Design research: the first 500 years*, Jonathan Hill argues that it

¹ The study is based on participant observation at crits over the course of the studio in the fall 2017 as well as interviews with leading design teaching Ida Flarup and students

was ‘the command of drawing – not building – [which] unlocked the status of the architect, establishing the principle that architecture results not from the accumulated knowledge of a team of anonymous craftsmen working together on a construction site but the artistic creation of an individual architect in command of drawing who designs a building in a studio (Hill 2013:15).’ This discourse established a relation where architects asserted their intellectual status by making ‘drawings with just a few delicate lines [...]. Whether in the studio or on site, they tended to see not matter and mass but proportion and line (ibid)’. It was the idea, not the craftsmanship, which gave the architect his privileged position and in this way, a third principle for a renaissance concept of planning can be added. It was because of the urban planner’s access to the ‘world of ideas’, established through his drawing expertise that he was considered able to reveal the underlying order of the city. Building on this body-mind dualism, concepts including the individual idea and subjectivity developed as ideals for an architectural and urban planning practice.

In modern age, urban planners belonging to the development paradigm famously includes Ebenezer Howard, Le Corbusier and Oscar Niemeyer, who each tried to solve social problems in the modern city by design. While presenting different visions for the future city, these scholars shared a top-down approach to urban planning believing that an optimal city could be fully shaped by Man. Chaotic conditions in cities of the industrial age had created a mistrust in the ‘natural’ forces of urbanity, with people desperately looking for answers to how order could be re-established in the city. Famous master plans such as Howard’s Garden City (1898), Plan Voisin by Le Corbusier (1925) and Brasilia by Niemeyer (1956) can be seen as answers to this problem of urban disorder (Goodall 1987) (Le Corbusier 1985, 2011) (Westin 2014) (Holston 1999).

Critique of the master plan: An evolutionary perspective

‘A city is not so much like a growing organism, where the mature adult form is roughly knowable in advance, and deviations from which are assumed to be harmful. Rather, urban change is more akin to an unpredictable evolution, with the city a system of co-evolving components (Marshall and Batty 2009).’

While inspired by biology, the works of the modernist planners could at best be analogously associated to evolutionary theory, although Charles Darwin was an inspirational source to Le Corbusier². Quite the opposite, they seemed to echo a metaphysical past, dating back to the renaissance and the idea of Man as rational and nature irrational, geometry as a universal order and the planner as the key to the realization of such order (Rasmussen 1957).

As argued by Batty and Marshall, to apply a Darwinian approach to problems of urbanity would be to understand urbanity as ‘a multitude of bottom-up decisions, which while realizing coordinated and ordered patterns, produce shocks and abrupt changes in ways that are intrinsically unpredictable (Steadman 2008:187) (Batty and Marshall 2009)’. Instead of departing from a mistrust in the order of urban, scholars belonging to the evolutionary paradigm takes a supposed intrinsic order of the urban as their point of departure. Believing that social problems indeed *can* be solved by design but that the outcome of a design *can never* be predicted, they believe in vernacular urban transformation forces to be constructive in an intrinsic manor, studying how the parts come together in essentially unpredictable, whilst not arbitrary ways to form resilient social structures.

When Jane Jacobs in her pivotal work *The Death and Life of Great American Cities* (1963) introduced

² Le Corbusier believed in the universal design, and found it in a number of *object-types* representing higher forms of ‘selection’ than other types. Certain objects such as the tobacco pipe were seen as ‘end-products of processes of technological evolution (Steadman 2008:129)’. In explaining the selection of these design-objects, Le Corbusier drew on Darwin’s evolutionary theory, describing how they represented a form of revolutionary end-state – equilibrium. In doing this, however, Le Corbusier found himself in a difficult situation, since a Darwinian formulation of evolution would give account to the factor of random mutation, finding that ‘variations in the form of the artifact were introduced accidentally or at least without any very great measure of forethought (Steadman 2008:131)’. Prescribing these object-types of higher evolutionary status, Le Corbusier thus came to argue from a distinctly qualified position, finding that only ‘objects which conform to certain pre-established formal criteria, of simplicity, geometrical purity and so on [could be named object-types] (Steadman 2008:187)’.

the concept of ‘organized complexity’, she described an urban functionalism, which didn’t lay in the hands of the planner, but immanent in the urban nature. Through street-level studies, she argued from bottom-up how for example simple surveillances in the local, of people sitting in their windows observing street life could emerge into the global phenomena of urban safety. This image of the city as a self-organizing organism via a multitude of heterogeneous, often conflicting but essentially related actions is akin to an evolutionary concept of the urban, resulting in a contrasting view on urban design (Jacobs 1992).

From the perspective of evolutionary theory, the traditional notion of the master plan can be criticized for having misinterpreted the problem at hand, believing in a fixed relationship between the parts and whole of cities, thus creating solutions, which proves unable to withstand evolutionary time (richardsennett.com). As argued by Batty, cities were designed in a timeless future ‘where sets of objectives have been defined to be achievable as if the city was cast in timeless web, and it is of little surprise that few cities have ever achieved the aspirations set out in their plans (Batty 2008)’.

While the finite understanding of cities of the developmental paradigm have been challenged over the last half a century, the logic of the master plan still holds a central place in urban design teaching, with students working individually on contesting urban plans, simulating the traditional design competition. While such plans are often attempting bottom-up designs, including knowledge derived from on-site investigations, they have one issue in common, harshly criticized by actor-network theory: they are static objects, rather than moving projects, presenting a design as an end-solution rather than a movement. The finite quality of the master plan means that it describes only the already actualized, while overlooking the virtual, which according to Gilles Deleuze and Felix Guattari is equally ‘real’. It *is* something, rather than *does* something (Latour & Yaneva 2008) (DeLanda 2015).

Arguably, the introduction of an evolutionary perspective in architectural and urban design education is challenged by the quality of traditional forms of architectural representation, which portrays a design as an ‘object’, rather than portraying its performativity. This leads to a question of *how one can incorporate temporality into the representation, bringing the urban design project and its context of human and non-human relations ‘on the move’?*

In an urban design class recently encountered on a fieldwork at KADK, I encountered an urban design studio exploring answers to this question. In an assignment that drew loosely on Deleuze’s concept of ‘assemblage’, the concept of the ‘master plan’ was challenged, with students negotiating the development of urban form, rather than working individually on contesting urban visions.

The city as a board game: Towards an assemblage representation of the urban

As part of an on-going field study of architectural teaching and research, I was recently a participant observer in an urban design studio at KADK. In this studio, the urban was depicted as a heterogeneous landscape, constantly emerging through negotiations between different urban impact factors. Recognizing the agency of such impact factors, the concept of negotiation became an epistemological departure point for the assignment – an entry into the understanding of the urban site as a ‘possibility field’ asking: how can the site be explored as ‘doing’ something? And how can this ‘doing’ be represented in the design studio?

In order to bring temporality into the equation, working with an urban context that acts by negotiating actively with the design project, the site was constructed as a negotiation field, introducing a number of non-human actors influencing the selected site. Challenged by the questions above, the students started investigating this site – a harbour area in the town of Køge, south of Copenhagen, which is currently undergoing a profound evolution. Their investigation focused on four impact factors, which they, divided in four groups, would investigate, map out and afterwards represent in their negotiation of the harbour area as a possibility field, leading into the development of one big model of a potential urban structure. The four different impact factors, selected by the design teachers, each operated in specific ways and it was the first task of students to investigate the behaviour of these impact factors, before trying to operationalize them into operative architectural typologies.

Based on these on-site studies, students built a number of models – instruments – that represented the character of each of the four impact factors, and the ways in which they shape space. The instruments were material translations of the characters of the four impact factors, and resulted in the models

below, representing: 1) wasteland, 2) transformation, 3) the future and 4) heavy industry (Winther, Goldinger, Ougaard & Vaagslid:2018).

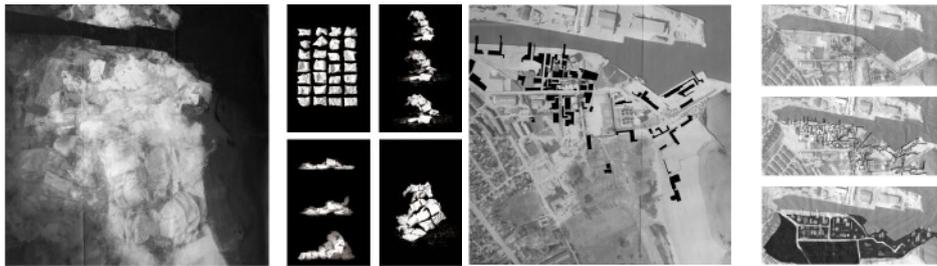
Developing the possibility field as a board game

At this stage, the assignment was taken further, as the students decided to frame the possibility field as a board game, in this way re-writing the assignment in collaboration with the design teachers. Besides structuring the negotiation process, students found that developing the possibility field as a board game could be a productive way of working with another important aspect of the studio – the factor of chance.

In this way, the four different groups would represent each their impact factor in rounds of playing, taking on their individual qualities as they participated in the game with their physical bodies. The rules of the game were decided in rounds of negotiation with both students and teachers included. As a result of these negotiations, the possibility field took form as a classic dice game, bringing the factor of chance into play.

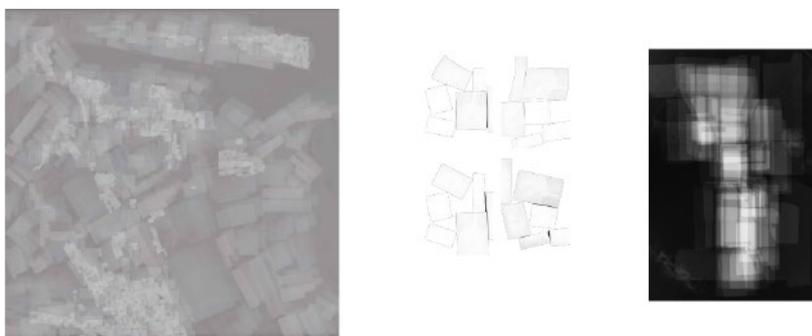
Based on their preliminary studies of the four impact factors, they were further developed into players, which would move in different ways according to the number of eyes shown by the dice, as it was tossed in rounds after turn. To all four players, and for every number of eyes, was defined a number of fields to be moved and the quality or character of the move.

Introducing the players



The wasteland (see images to the left)³ is a regenerative and heterogeneous organism, autonomously growing without direction or intention. Depending on the number of eyes shown on the dice, the wasteland unfolds, sneaks around or squeezes through.

Transformation (see images to the right)⁴ balances the existing and the idea. It departs from an existing field, and mediates change processes, bringing the existing into the future. Depending on the number of eyes shown on the dice, transformation either doubles, rotates, reduces, shifts, dissects or mirrors.

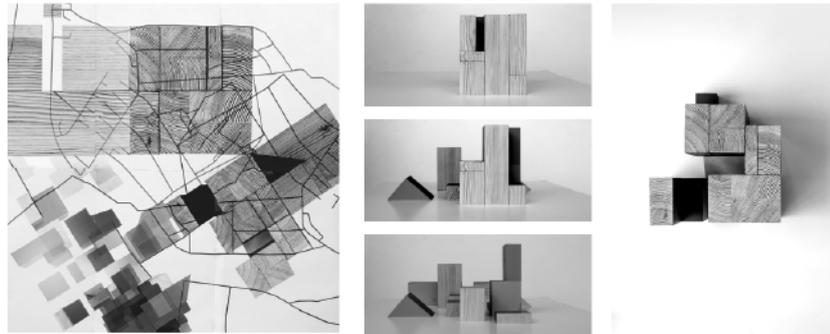


³ Source: (Winther, Goldinger, Ougaard & Vaagslid:2018)

⁴ Source: (Winther, Goldinger, Ougaard & Vaagslid:2018)

The Future (see images above)⁵ deals with the changing nature, and for every 5th move of the future, there is *the flood* – a context-specific effect of climate change, more frequent and less predictable than ever before. Depending on the number of eyes shown on the dice, the future either shifts or lifts.

Heavy industry (see images below)⁶ works top-down with great impact, characterized in shape and size by its logic and function. It places itself in the field as a monolithic giant and is only dissolved in one of two strategies when clashed with a neighbouring actor. Depending on the number of eyes shown on the dice, in relation to neighbouring actors, heavy industry collapses as either fabric (a structure within) or grid (a structure around), referring to different levels of rigidity that the industry imposes on the field.



The probability attached to each of the players was defined by the preliminary studies of the impact factors. For example *the future* was believed to lift 50 percent of the time, and shift 50 percent of the time, thus arriving at a 1:2 probability with 1-3 eyes = shift and 4-6 eyes = lift (Winther, Goldinger, Ougaard & Vaagslid:2018).

The course of the game

Over the course of the game, as interactions become increasingly complex, the overall complexity of the space increased showing how the urban is formed in processes of negotiation and chance. When the game starts, possibilities are high and complexity low, but as the game is played, by each strike, complexity is rising as players come together to produce form, filling up the possibility field.

However, to decrease this complexity, and gain some control over the growth processes, by the end of each round of playing, students would gather to negotiate the overall spatial outcome of the round. Still staying in their characters, thinking and negotiating with the ‘mind-set’ of their players, the overall structure was negotiated creating a form of hermeneutical process between playing, and zooming out to consider the outcome of playing.

Thus, the game unfolded in the field between negotiation, strategy and chance, constantly releasing and restraining growth processes as the game went along. After a number of rounds, which had not been specified prior to starting the game, the students collectively decided to stop the game. This decision was based on a collective evaluation of the last rounds of playing, where changes to the built structure became less and less dramatic, with only transformations of the existing structure taking place. The movement of the building mass had reached a less dynamic, more stable stage, and it simply made sense to stop the game, all the while acknowledging that the game obviously wasn’t finished, since architectural growth and transformations processes can never really be finished.

Applying a deleuzian ontology

‘Assemblages are not governed by any central head: no one materiality or type of material has sufficient competence to determine consistently the trajectory or impact of the group. The effects generated by an assemblage are, rather, emergent properties, emergent in that their ability to make something happen is distinct from the sum of vital force of each materiality considered alone

⁵ Source: (Winther, Goldinger, Ougaard & Vaagslid:2018)

⁶ Source: (Winther, Goldinger, Ougaard & Vaagslid:2018)

(Bennett 2009:24)'.

The image of Køge as a 'possibility field', which was later transformed into the board game, could easily have been mistaken for a 'possibility space' – a notion derived from Manuel DeLanda, who famously interprets the works of Gilles Deleuze and Felix Guattari. While only loosely inspired by Deleuze's theory, there are invisible links to complexity theory in the way the urban design studio was established and developed in a negotiation between teachers and students. Of this reason, and to draw a possible direction for a future conceptual development of the board game approach to urban design, a few concepts from DeLanda's complexity theory shall now be introduced, and put in relation to the board game study.

When you choose to structure a study of urban growth processes as a board game, it is perhaps because you realize that the material world consist not only of what already *is*, but also what *might become*, not only of the *actual* but also of the *virtual* (DeLanda 2015) (Abrahams 2016).

Following DeLanda, a deleuzian ontology allows you to consider the material world in exactly this way, describing not only the 'beings' of things, but also their 'becomings'. For Deleuze reality is much more than the actual world, we see around us. Also the so-called becomings are pre-actual parts of reality – a form of virtual reality. Or as DeLanda puts it, 'there is no such thing as "reality as it really is" because reality changes, there are innovations, multiple levels of emergence, and unpredictable capacities to affect and be affected (DeLanda 2015)'.

In this connection, Deleuze speaks of an actual realm and a virtual realm, as two extremes with a line in between (figure 1). In its extreme form the actual realm is problematic because it suggests that the objects we see around us can be studied as fixed beings with clear traits. 'But also the extreme virtual realm - a collection of 'pure potentials' – would be no less abstract and reductionist (Abrahams 2016)'.

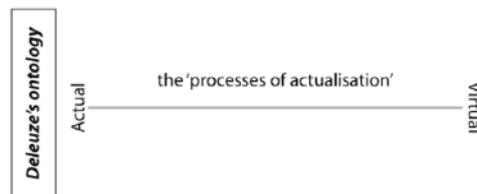


Figure 1: Deleuze's ontological structure (Abrahams 2016)

Instead of giving these extremes an ontological status 'Deleuze sees the two realms as functional devices, helping to imagine a theoretical line connecting these two points describing the 'processes of actualization'' (ibid). Such 'processes of actualization' pose the ontological structure of an assemblage theory, and the possibility space refers to an exploration of these processes. In my view, the board game creates such possibility space – an arena for the study of 'processes of actualization'. And the reason we need such possibility space, not least in urban design, is precisely because of the difference between what DeLanda refers to as properties and capacities of material objects.

While 'a knife may be sharp (a property), it also has the capacity *to cut*' (DeLanda 2015). This means that besides their properties, material objects are characterized by their capacities to affect and be affected. Capacities, though, are relational, so the knife's capacity to cut, 'must be exercised with something that has the capacity *to be cut* (cheese or bread, but not a solid block of titanium) (DeLanda 2015)'. In this way, DeLanda explains that while both properties and capacities are real, 'properties are always *actual* (the knife is either sharp or dull), [but] capacities are only actual when they are being exercised. Most of the time they are only potential (or *virtual*). (DeLanda 2015)'.

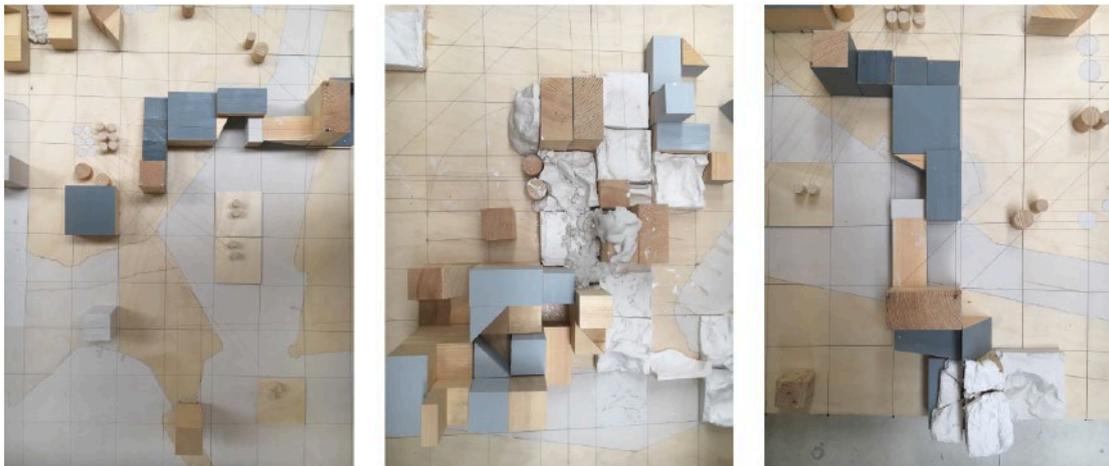
Thus, to understand and explain material objects in terms of both their properties and capacities, an architect or urban designer needs to study their performance in action, in relation to other objects. Hypothetically, this could be in 1:1 scale or in practice of a test laboratory, simulating potential processes of actualization.

Bringing an example of a 1:1 study of capacities of materials from building architecture, Peter Zumthor

in his famous book on *Atmospheres* (2006) describes how he was surprised by the material compatibility of a soft cedar material, he used for surfaces in an exposed concrete building. In spite of his undoubtedly firm knowledge and experience of material compatibility, he didn't expect a matching effect of the two materials. He thought the soft cedar tree would be too soft. But when he put the materials in relation to each other, in the actual context, it turned out the cedar tree had no trouble fitting in. As a result, Zumthor removed the rosewood, which he had first expected would fit in, and installed the soft cedar tree instead (Zumthor 2006:24ff).

As an example of the latter, the board game presents an ideal type test laboratory simulating an urban complexity in action, studying its properties and capacities as they actualizes through (unpredictable) interrelations. The four urban conditions, which turned into players in the board game, were each characterized by a number of properties, which had been determined based on previous studies in Køge. But in addition to these properties, predictions were also given as to how the players would potentially interrelate with other players, through a description of their capacities. Each of the players held a number of capacities, which could only be studied *in action*, in interaction with other players with matching capacities. The wasteland, for example, is described as regenerative and heterogeneous in its properties, and it has the capacity to unfold, sneak around or squeeze through, when interrelating with other players. The images below illustrate processes of actualization, with the four urban conditions interacting in various ways, catalysing emerging capacities of these, creating urban form⁷.

Further, by turning the city into a board game, adding the factor of chance to the production of events in the possibility space, an account is given to 'evolutionary time'. While the capacities of players are pre-established in the concept of the game, their actualization through interactions with other players are subject to chance and thus essentially unpredictable, preventing a pre-determination of form.



The image of the city as a board game

When you decide to image the city as a board game, obviously the first question you'll ask yourself is which game do I want to play? And why?

In the present example, the board game was developed as a classic dice game, partly because it was simply the most well-known and simple game design, and partly because the students wanted to play with a high factor of chance. Besides the essentially unpredictable outcome of any game, which rises from the lack of ability to fully predict the strategy of competing players, dice games holds the random element, which further increases complexity. In the dice game, chance takes part of the game as an external 'player', or an externality, as described in microeconomics. It is that non-strategic action, or breaking of the rules, which is not included in classic strategy games.

Working with randomness in relation to design is interesting as it breaks with the idea that the appearance of the material world can be reduced to intentional action caused by 'subjects', such as the architect. On the contrary, design processes are very often influenced by randomness caused by unforeseen, and often overlooked, externalities such as sudden cases of illness, climate change or

⁷ Source: (Winther, Goldinger, Ougaard & Vaagslid:2018)

simple misinterpretations (Yaneva 2009). Introducing the dice could be one way of including such element of randomness. However, this element could also have been included in a card game, where specific cards could disrupt a game otherwise structured by strategic decision. And it is obviously the next step for a development of the board game to bring it in relation to other types of games used in urban development, marking its position in relation to existing literature on game theory.

Laura Varnaez, for example, has combined Space Syntax theory and method and game theory to describe ways through which decision-making processes can be 'spatialised'. Describing how games can be either cooperative or non-cooperative depending on the rules established, she has studied the spatial configuration of Southbank in London as a game of chess. In this game, she studied how people were using different strategies to move forward, shaping and re-shaping paths in the area (Narvaez 2014:6). Unlike the board game, this game does not have pre-defined rules, and it is played by individual actors competing with one another. Re-building the board game as a game of chess and playing it at the same time as the original dice game, observing the development of both could be one way to further investigate the qualities of different games against one another.

The board game as a teaching and design research instrument

While the board game as a design research instrument is obviously in an early phase of development, it presents a challenging way of imaging urban form. Always subject to the inevitable factor of chance, the board game presents urban growth, as it is – complex and essentially unpredictable, while not arbitrary. This approach is in line with an evolutionary reasoning, which describes urban growth as essentially unpredictable and uncontrollable, whilst not arbitrary or destructive. From the standpoint of assemblage theory this means that one needs to work with urban conditions, not only in terms of their existing properties (the actual realm), but also in terms of their pre-existing capacities (the virtual realm), by looking at how these actualize in interaction with other players. Within the framework of the board game, such studies have been made possible.

Besides challenging traditional planning approaches, the study also presents an alternative approach to design teaching and research, which it has been inspiring for a design research scholar to follow. With the introduction of the board game as a design research tool, traditional ideals in architecture – including the individual idea and subjectivity – are substituted by a collective process of conflict and negotiation. The students taking part in this design studio didn't draw a set of individual competing images for how an optimal urban form could be or should be, but instead they designed an instrument in collaboration, which simulates actual processes between presence and future. By doing this, they took studies of the problem at hand – an urban complexity – as departure point for the shaping of a design research instrument. – An instrument, which anticipates actor-network theoretical perspectives on architecture- and design practices, by introducing the design process as a series of events involving a multitude of heterogeneous actors of human and non-human character, negotiating the synthesis of form (Labour & Yaneva 2008). In this way, the board game unfolds as a performativity, existing only *in action* and thus bringing a temporality into the representation of form.

However, at this stage of development, the board game has not reached a status of an actual design instrument. Challenged by demands of individual work and examination, the board game study of Køge was limited to forming a research phase in a larger semester project ending with a number of individual studies. Motivated by positive students evaluations, perhaps the research study could be expanded in the future, and the potentials of the board game as an actual design instrument further explored.

Closing remarks: The board game study as an illustrative case

Albeit loosely inspired by the deleuzian concept of 'assemblages', the urban design studio didn't depart from any specific theoretical or methodological position, instead establishing the studio as a form of experiment (Winther, Goldinger, Ougaard & Vaagslid:2018). When I first visited the design studio the development of the board game study could not be related to any existing research agenda at the school, nor was it anyone's ambition to form it into a research method.

To my knowledge, the study had developed solely on the basis of practice-based decisions taken in relation to the problem at hand, with a form of case-specific technique or method developed in a

continuous negotiation between students and teachers. In this sense, even the learning objectives of the studio could to some extent be transformed over the course of the studio, in negotiation, not only with the teachers, but also with the study 'object' – an urban complexity calling for less essentialist and deterministic approaches.

While such case-sensitive approach is in no way unique for an art academy, such as KADK, where singularity in both method and design is a pursued objective, the board game study presents an innovative approach in that it challenges traditional architectural ideals by suggesting multiple authors as well as questioning the representation of the urban.

In this way, the study has served as an illustrative case example for my research study in design teaching and research of how the practice-based approach pursued at KADK can carry research potentials, and push existing theories and methods. But also how these research potentials are often falling under the radar, as practice-based studies are rarely being put in relation to theory.

Arriving to the design studio as a design research scholar, I plead guilty in having brought the practice-based research in relation to theory, pushing towards a research production. My sole presence during critique situations has most likely influenced the path discussions took, perhaps towards a debate of the research potentials of the design studio. By drawing attention to the research potentials of the study, the ambitions for the board game might have changed, and theoretical reflections on its present state and future potentials set in motion. Whether this influence has been productive or perhaps destructive is not my question to answer, but my participant observation in the studio gave me an insight into architectural practice and theoretical reasoning as different work-modes, their individual qualities and how these modes might (not) be combined.

Whether to combine these work-modes, as in the form of a merging, or a constant dialectics, or to keep them separate and instead establishing platforms for dialogue, I cannot say at this point. But I believe in the potentials for developing some of the basic components of the board game approach to a more general method for teaching and research in urban design. Besides breaking with the traditional image of the 'master mind' in urban planning, it presents an alternative format for the urban design studio, questioning traditional notions of design and representation.



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