Regimes of value and waterscapes of uncertainty

Co-creating values in urban landscapes

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Abstract

Discussions on climate change and adaptation are closely connected to the concepts of value and valuation. Forecasts are based in numerical values, ´hard facts´, seeking assessments of plausible future scenarios by qualifying uncertainties in order to provide knowledge to inform actions and priorities. However, such knowledge does not in and of itself gives direction to action. To address complexity and uncertainty as qualified as possible, different modes of knowledge production, collaboration and aspects of values must be taken into consideration. Questions of value and action in relation to climate change adaptation in the context of handling water could be: HOW do we engage with waterscapes of uncertainty AND potentials of value? This paper suggests seeing water as a mediator and that in order to engage differentiating values, it is necessary to acknowledge underlying justifications. This is explored through cases and forms the point of view of this paper.

Keywords: values, justification, waterscapes, co-creation, urban landscapes, climate change

Acronyms are used in the text: CC = climate change, CCA = climate change adaptation, HOW = handling of water

INTRODUCTION - NOTIONS OF UNCERTAINTY

Climate change, waterscapes & human settlement

Forecasts and risk-mappings highlight what is already known: human settlements cluster close to water. Vast urban settlements are currently situated along riverbanks, bays and in particular low-lying estuaries, providing arid areas for farming, safe harbours, infrastructural convenience, geographic strategic locations of political control, cultural narratives besides of course, the vital force of water for drinking, cleanse and production. Climate change and its changes in the water cycle represent uncertainty at a vast scale and makes human settlement vulnerable (IPCC, 2014). Water thus holds sensitive implications on values and valuation.

In relation to climate change and adaptation, handling of water is a highly important matter: Too much water, too scarce, too fast, too fluctuating, too polluted, too saline, too expensive water and so forth. Water as an actor is multi scalar and holds implications on both individual and collective actor level and all the way up to a geopolitical scale. Though, some consequences are more vital

than others as water covers a span from e.g. flooded basements and isolation caused by flooded infrastructure to crops failure and famine.

Waterscapes of value and human boundaries

Climate change and water are closely connected to the concepts of value and valuation, as climatic conditions and water are vital issues to human kind. Water as actor, fundamentally influences living conditions and is strongly connected to land-use (Tvedt, 2014) in terms of settlement patterns, food production and other divisions of land, e.g. national borders and administrative boundaries. Climate and water is core to human living and practices and thus subject to a variety of differentiating values, engagements and priorities. All of which are likely to involve trade-offs, negotiations or conflicts, e.g. the right to keep private property lines, distribution between up- and downstream areas, liability and damage control in case of flooding, the right to water, price of water, distribution of water, responsibilities of providing clean drinking water or to clean up pollutants of the past. This is strongly connected to manifold levels of interests and practices on a global geographical scale: individual-, house hold-, urban-, municipal- , regional- , state- and transnational levels as well as organizational and commercial levels. As substantial climatic changes seem to be approaching, discussions on water and values might become even more present. This involves adaptation too, as we somehow need to come to some agreement on which actions to take, which not to take (!) and finally how to valuate and prioritize this when climatic uncertainty is at hand.
Different outsets and interests highly influence the calls for action: what measures are necessary or legitimate to initiate and which methods are applied to do this? A further discussion is whether such measures are *good*, desirable or even valuable and for whom or what? Water is an actor making human actors act differently than current practices. This could point towards the importance of engaging with differentiating justifications in order to understand and acknowledge varying forms of knowledge and values.

BACKGROUND - RESEARCH CONTEXT AND APPROACH

Engaging urban landscapes

This research takes departure in landscape architecture and the concept of urban landscapes. In this context, the concept of landscape architecture and urban landscapes is applied with an outset in Sieferle´s concept of ´Total Landscape´ (Sieferle, 2004), further framed by Martin Prominski (Prominski, 2005), quote:" *[...] this new approach towards landscape highlights three previously neglected issues: uncertainty, processes and relationships, As a spatial and temporal terrain, the landscape is continuously changing in an unpredictable way, steered by the relationship of the site with its specific context – an evolving system instead of a static image*." Meaning that landscapes are not defined by formal designs or planning distinctions but rather covers both what is often called urban, rural and everything in between defined by processes, relationships and uncertainty. This approach seems useful related to climatic fluctuations and waterscapes of uncertainty. In relation to processes and spatial implications in urban landscapes, questions of value and action in CCA could be: How do we envision our CCA landscapes on an average day, in a drought, if rainfalls patterns change? Which future values do we aim or make room for – and which time-perspectives do we apply? How do we engage with waterscapes of uncertainty AND potentials of value?

Engaging values

Values and thus ´valuation´ is fundamental in many aspects of human lives, in research, society, in daily life and practices. It is a highly disputable concept which is often sought to be measured by fixed scales, methods or devices and history proves re-occurring searches for universal laws on values both in science, religion, law, aesthetics, democracy and so forth. This research, acknowledge values as being plural and relationally dependent. Different actors see them differently from their varying fields of interests, professions and time perspectives. Values thus also contain potentials of conflict. How can we, despite this, discuss, define, negotiate and come to some agreement about values in a practice-oriented context? How can we bridge fields of value across disciplines, engagements and traditional boundaries in order to engage with concepts of value as a way to inform and qualify actions?

This paper takes a practice-oriented stance on values and valuation with an outset provided by the philosopher Hans Fink (Fink, 1991), quote:" *hardly, no other adjective than ´good´ (and its closest equivalents and counterparts) can be used covering such a broad, ontological ´bank´. […] apparently, quality can exist in something very different in different relations, though without ´quality´ or ´good´ being experienced as particularly ambiguous words.*" concluding quote:"*Perception of value is the recognition of something as complex as objects properties in dynamic interpretations of relations.*" Finks claim could be seen as opposed to e.g. projectvism and relativism, as he suggests that we can actually engage with the concept of values and valuation in a relatively pragmatic manner, if we consider and discuss value as in specific contextual relation to some things, situations and its processes.
This paper will explore how to engage value and valuation in a practice-oriented way by considering values and valuation as rooted in relational processes and justifications. The aim is not to find the universal or ultimate ´best´, but rather to ´engage the relational, contextual based ´good, better or best´ in relation to specific situations, locations, actors and time-perspectives - a situated *best*.

Real-time cases – adaptation and values

To engage with the concept of values, I follow three real-time cases on CCA|HOW projects. Cases are followed in the very early phases of the adaptation projects. They are all situated in a Danish municipality and hold key actors from the municipality, the water utility company and external consultants. These cases serve as a way to achieve current knowledge on the early decision making and its underlying processes. The main purpose is to explore *how* to achieve multiple benefits, meaning values beyond the mere capacity and flow of water in CCA|HOW projects. Cases are followed with a certain attention to actor behaviour parallel to the formal agenda of meetings, as informal conversations before, in between and after the formal agenda often serve as a context where values are informally ´negotiated´ and ´affirmed´.

KNOWLEDGE PRODUCTION AND UNCERTAINTY

Science as knowledge production on climate change and adaptation

To react responsible and meaningful in relation to climate change, scientific and quantified knowledge is indeed important as it provides an overall informed platform on climatic uncertainties and impacts. Successful adaptation is not likely to be achieved solely through

hunches, beliefs, contemporary trends or catchy headliners in the media. Nevertheless, unilateral knowledge might not be sufficient to encounter climate change and uncertainty.
Climate change prognosis is usually rooted within scientifically based knowledge production rooted in calculations, modelling and empirical datasets.This in order to provide assessments of plausible future climatic scenarios by qualifying risks and degrees of uncertainties. e.g. sea level rise and melting icecaps, cost-benefit analysis of retrofitting infrastructure, costs of redirecting rivers to supply drinking water to ´dry cities´, urban heat islands and irrigation for agricultural fields without natural water supply. The main purpose is to provide knowledge and thus legitimacy to policymakers in order to inform valuations of *where* and *how much* to adapt. In example, one of the leading bodies on informing the UNFCCC[1] with climate change projections is the IPCC[2] which collect, assess and evaluate data on climate change, all of which is based on scientific, technological and socio-economic information (IPCC, 2014).
However, such numeric based knowledge does not in and of itself give *direction* to *action.* Rather, climate change forecasts have the status of carefully informed uncertainty about very complex issues.

Other modes of knowledge production

Climate change is highly complex and embedded with uncertainty, thus the massive production of scientific knowledge. For the very same reasons, climate change is now even framed as a ´super wicked´ problem (Levin, 2012) referring back to the concept of Rittel and Webber (Rittel, 1973) as problems which are ill defined or tricky to the extent where they are hard to resolve by traditional processes. From this departure, it seems reasonable that in order to address the complexity and uncertainty of CC as qualified as possible, different aspects of values, valuation and knowledge production must be taken into consideration, e.g. interdisciplinary co-creation between the sciences, arts and design.
Design thinking (Schön, 1987) could provide the scientific, quantified knowledge with action-oriented, speculative, ambiguous and purposive knowledge production. In relation to the above mentioned landscape approach (Prominski, 2005) one aim could be *to qualify and envision future values* of urban landscapes and waterscapes of uncertainty. Together, exchange between different engagements and different modes of knowledge production could be seen as crucial mediators, with transformative power (Latour, 2005), between quantified knowledge and directions for action.

WATER AS MEDIATOR AND PLURAL JUSTIFICATIONS

A two-fold view

In the following I will discuss how CCA, waterscapes and values in urban landscapes could be engaged in a two-fold view:
- Water as mediator
- Actors and plural justifications of value

As argued above, water can be seen as a mediator, as uncertainty on waterscapes forces human

[1] United Nations Framework Convention on Climate Change

[2] Intergovernmental Panel on Climate Change

actors to act *differently* and in *diverse* constellations. Differently as current water practices have already proved inefficient in relation to climatic fluctuations, e.g. flooding and crops failure. In diverse constellations since water does not acknowledge administrative boundaries or individual interests. Water is thus forcing diverse actors to act together on mutual impacts. Nevertheless, diverse actors are likely to hold differentiating values and justifications which are not necessarily compatible as such. As described in the introduction, even up- and downstream neighbours, might hold very different interests. Downstream might be interested in measures taken upstream and upstream might experience less risk of economic damage caused by flooding, thus holding priorities on low-cost, downstream solutions. This implies that even if water is a mediator, this does not ease disputes on values and priorities as justifications are likely to differ. This is further discussed through two real-time CCA|HOW cases:

Case1. The climate change adaptation plan - water as mediator

Before the end of 2014, all Danish municipalities were obliged by the state to make CCA plans as an appendix to their municipality plan. Basically all municipalities had to establish those simultaneously and there were no prior experiences to draw upon. As Denmark is expected to experience an increase in cloud bursts, the making of the CCA plan had in its very nature an overall focus on water. For this reason, large-scale calculations and mappings of potential flooding and values at stake were produced. Risk was defined as probability in relation to consequences, and value maps should designate and illustrate ´hot spot´ locations where flooding damages would be most critical. Here, values included considerations and prioritization of important infrastructures (e.g. the ambulance road to hospitals), important functions (e.g. nursing homes which would demand a vast amount of ´responders´ for evacuation thus leaving other areas without help), risk based land-use (e.g. polluted areas or toxic storage of materials which could be washed out in the surroundings or pollute drinking water), cultural heritage (e.g. historical buildings, archeologic sites), density (how many is effected), other infrastructures (e.g. sub power-stations providing electricity to crucial functions as hospitals) and so forth. Obviously values at many levels. In order to do so, the actors working with the CCA plan necessarily had to discuss not only values and their legitimacy but also how to put them into numbers, prioritize and visualize this information in a feasible way. These maps were a highly political and sensitive field to enter, since they held information with the potential of manifold implications, e.g. influencing real-estate markets, insurance prices and so forth. Not to mention citizen reactions when some would realize that their low-lying residential area was at risk of flooding and furthermore discover that this was not necessarily assigned top priority on the value maps.

In Case 1, I followed the Department of Water-environment and Agriculture (DWA) in making of the municipal CCA plan in the final phases, before political and public hearing processes. I consider the CCA plan as a rather large scale/multiscalar case as it hold implications at a large geographical area and involves politics and governance at a larger scale. The impact though, could be considered very ´local´ as it affects individuals, specific buildings and neighbourhoods. What seems noticeable about the CCA plan were, that even though the term ´appendix´ indicates a subordinate document, it holds implications which can seriously influence other appendixes including the main body of the Municipality Plan. The content and implications of the CCA plan holds the capacity to inform, influence or put pressure on manifold departments, sectors, businesses and citizens as well as influence planning regulations like land-use and

zoning, subdivisions of land, building details, infrastructure, contingency plans, liability and responsibilities, involvement processes, priorities of investments and so forth. In example, the provided flood risk- and value maps of the CCA plan holds information which are likely to influence planning and zoning issues, which are usually assigned to the Department of Planning & Building, it influences land use and recreational issues assigned to the Department of Park & Nature as well as issues on infrastructural capacity, boundaries and design usually assigned to the Department of Road & Traffic. This means that the CCA plan potentially strikes back on other appendixes creating new modes of interdependency between a variety of sectors, departments, disciplines and practices.

From this perspective, water act as a mediator, forcing actors to act differently and even push forward collaboration of diverse actors with differentiating interests and values. In example, the Department of Planning & Building had a prior designation of a building expansion of a specific area. This land-use is now questioned as the area hold potentials as a catchment area for the surrounding built up areas. In this case, the value of accommodating economic growth by building is questioned by the value of not flooding existing buildings. In this case, the risk of flooding changes current practices and mediates action, forcing diverse actors to act differently. Furthermore, this questions how actors discuss, negotiate, valuate and produce knowledge – and in particular how this is put forward and understood. In the following, I use another real-time case to look further into different values and justifications of different actors.

Case2. Suburban adaptation and plural values

Case 2 is an on-going CCA|HOW adaptation project. The purpose of the project is to adapt a whole suburban town in order to manage cloudbursts. This is done by an interconnected system of retention basins. This case was followed with the research objective of how to create multiple values through transdisciplinary co-creation.

It soon appeared, that each actor involved, not only represented a certain department or and sector. Each actor also held specific values which seemed to derive from underlying justifications related to their specific profession or department. In the following example, one actor made argumentations in order to facilitate interests of his department (accommodate existing workflows and practices, save time and money), provided through modes of argumentations seemingly rooted within his discipline as engineer (measurability, calculations). Nevertheless, all values at stake appeared meaningful in their specific actor-project context, thus making underlying valuations and prioritizations opaque. At one meeting there was a discussion about the specific location of a retention basin. This basin was to be located on a site which in summertime also functioned as a circus field. This was not just a circus field, each summer the circus let their elephants run free in the neighbouring town forest, a big event in a small town. One actor found these coinciding functions at the location critical and brought up for discussion that the retention basin should be re-located. The engineer[3] in charge from the Department of Road & Traffic claimed (quote): “This is the *best* location. Water has its flow – the circus wagon has to go”, whereas the project manager from the water utility company claimed:” this is not *good*, this is an important and sensitive area to the citizens”. This led to a discussion where ´ *best-location´*, were argued by hydrological calculations, administrative boundaries, property lines and cost efficiency and ´*important-location´* were argued through citizen interests, involvement- and implementation

[3] Actor names are known to the author.

processes. Both of the terms, *best* and *important*, indicate top priority and represent an embedded valuation of something being more valuable than something else. In itself, this embedded valuation seemed to contain core values used to argue for and legitimize a certain priority. The arguments of ´*best*´ location were all rooted in numeric, measurable values such as costs and ownership together with hydrological calculations stated as a measureable ´end-result´ of waters flow. The arguments of ´*important*´ location were rooted in local knowledge on the location and citizen behaviour, priorities and engagements. In the context of the project meeting, both claims of ´*best*´ and ´*important*´ seemed meaningful and justifiable. Nevertheless, the degree of legitimacy was neither obvious nor self-explanatory as the valuation criteria were not compatible, as hydrology and elephants do not produce consistent comparable valuation criteria.

What was actually the most important or best? Did any of the arguments held more legitimacy than others? Though hydrological calculations are based on careful measures, projections are still based on modelling tools, chosen inputs and upstream spatial decisions. As the circus is a free enterprise it could be questioned whether it will continue to come to this exact suburb letting their elephants run free in the years to come – or if elephants as such are even allowed in circus in years to come.
As my own entry as researcher is landscape architecture, I went to experience, and thus valuate, the site myself through 1:1 registration. At first, I even passed by the site before realizing that this were the *best/important* place. The site was a bulky lot with varying grass cover, gravel and tire trades. The site was mostly characterized by its emptiness and the adjacent infrastructural junction, giving a sense of a vast and leftover place. The site itself did not reveal the importance of place as discussed. Though, the collective, visual memory of Google Maps aerial photo did reveal remains of circles in the grass, likely due to the circumference of a circus tent.
Nevertheless, on-site registration did not feed landscape architectural valuation in terms of the discussed legitimacy of use. Information levels as maps and photos did not reveal the importance of place and neither water-flow nor elephants.

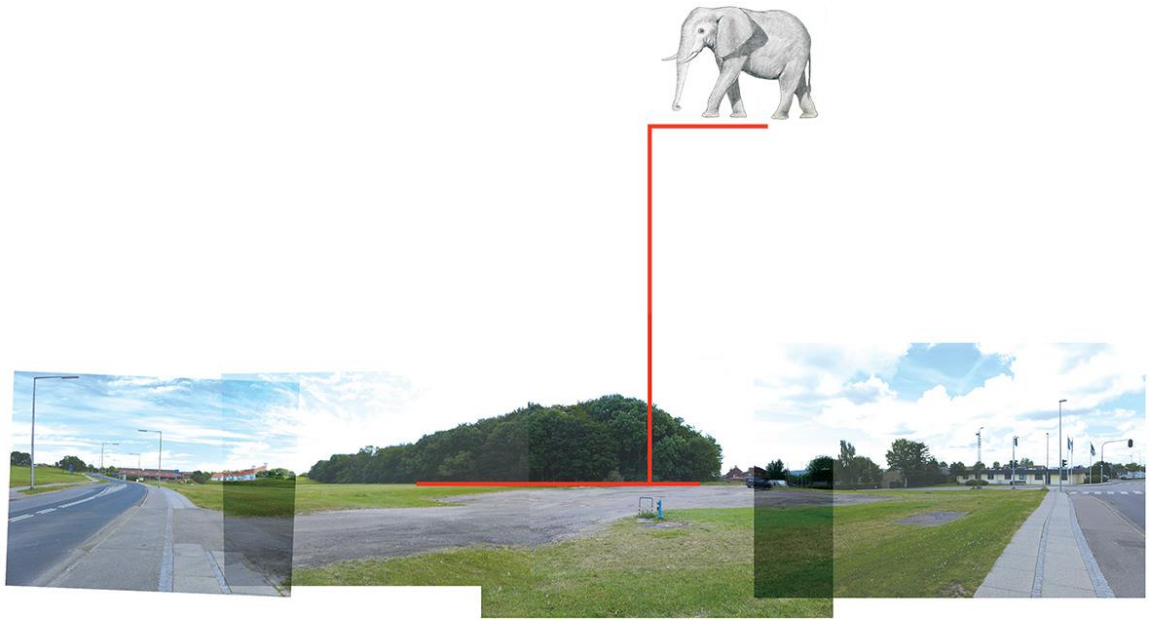


Fig.1.On-site - the best/important location, photo-stitch by author

Values and underlying justifications

This case experience put my attention to, that in order to engage with co-creation of values in this actor-project context, it was inadequate to engage in a landscape architect suggestive way, e.g. proposing a variety of other potential values, as this would only add even more incompatible valuations to the discussion. It seemed necessary to address the underlying justifications of the actors before values and priorities could be discussed or negotiated beyond habit of thought, opaque hierarchies and unspoken practices.

Justification as a method?

The above experience, exemplifies how argumentations and valuations can differ widely within the same situation. Clear argumentations do not necessarily provide obvious comparability or transparency into underlying valuations. This point towards, that in order to address values in a practice-oriented context, it could be useful to look into *underlying* values. This paper proposes the approach of Boltanski & Thévenot to engage with the issue of underlying values. They present a way of identifying and justifying values with their *6 Regimes of Justification (*Boltanski, 2006): *the inspirational, the domestic, the opinion, the civic, the market and the industrial regimes*. These regimes provide a methodological approach with a potential to clarify, decode and encode value. An approach which can ALSO allow for mutual understanding, collaborative creation and help to reach for contextually based values by addressing both justification and context specific (peaceful) conflicts.

What seems particularly useful is that the approach of the 6 regimes, acknowledge justifications by providing contextual and scalar flexibility: actors are likely to represent more than one regime at the time and that actors are likely to shift in their justification (and thus regime) depending on the specific context. This means that it provides an approach which is generic AND specific at the same time, without suggesting universal or fixed modes of actor behaviour. The 6 regimes of justification seem hold the capacity to ´function´ as a scale-less and dynamic approach which seems useful in terms of actor-worlds, actions and the dynamic processes of water in urban landscapes. Furthermore, the approach of the 6 regimes of justification seems useful too in both collective (group) and individual encounters. The 6 regimes of justification could be applied as a structural and interpretational tool of *underlying* values

BRIEF INTRODUCTION TO THE 6 REGIMES OF JUSTIFICATION

The inspirational regime: what is justifiable and thus considered valuable, is creativity, artistic modes, free-spirit thinking, etc. In relation to HOW that could be poetic, explorative, creative HOW projects.

The domestic regime: what is justifiable and thus considered valuable, is loyalty, tradition and family. In relation to HOW that could be to prevent a residential house of a flooded basement.

The opinion regime: what is justifiable and thus considered valuable, is whether *others* consider something valuable or not, the more support the better. In relation to HOW that could be media wanting to create headliners to gain readers interests or politicians wanting to accommodate public opinion here and now or prevent major damages by initiating the building of dikes.

The civic regime: what is justifiable and thus considered valuable, is whether there is a greater purpose serving e.g. society, institutions and local communities. In relation to HOW that could be clean drinking water for future generations or local involvement processes.

The market regime: what is justifiable and thus considered valuable, is whether something is tradable or marketable (not to be interpreted with economy itself). In relation to HOW this could be elements or techniques, like filters, materials and technical solutions, which could be exported to or traded with others, thus marketable.

The industrial regime: what is justifiable and thus considered valuable, is measurability, calculability and established methods. In relation to HOW that could be hydrological calculations, capacities and measured soil conditions.



Fig.2.The 6 Regimes of Justification exemplified by water issues.

In the following I will try to apply the 6 regimes of justification on the above mentioned dispute in Case 2. The engineer who claimed that ´water has its flow…´ provided argumentations rooted in justifications of the Industrial regime, as justifications were based on calculations from the hydrological mapping and the measurability of property lines. This was put forward as an argument to justify the ´*best*´ solution. To exemplify the dynamic potentials of the regimes, please note, that the actor who brought forward that the location was important to the citizens, in principle represented a highly industrial regime in combination with the market regime. This was a key actor from the water utility company still bringing justifications forward related to the Civic- and Domestic regimes.

In relation to the dispute on circus field versus retention basin, the 6 regimes of justification could be seen as an explanatory approach on the notions of ´*best*´ vs ´*important*´. The claim of that hydrology and property lines justify ´*best*´ location could then be seen as rooted within the Industrial regime. The claim of ´important´ location could be seen as rooted within an acknowledgement of values in the civic and domestic regime.

A more speculative example on the multi-scalar flexibility of the 6 regimes of justification could be, that when the engineer-actor gets home to his family, his justifications are likely to make a shift towards the domestic regime, though probably still holding contentions related to the

industrial regime. This could e.g. be arguments of why a new power plant should not be placed close to the backyard of his family (domestic regime, protecting family interests) which could be further justified by providing a calculation showing that the location would be much better further down the street (Industrial regime).

Justifications: Analysis – Conflict Scenario - Instigate

The 6 regimes of justification appear to be useful both at a meta-level of understanding as well as a practice-based project level. It is important to pay attention to, that this framework needs specific actors engaged in a specific project. There have to be risks of gain and lose in order to go beyond common notions of "we all agree that this project shall be good". The 6 regimes of justification could hold the potential to serve contextual specific analysis of underlying values AND as an instigative tool: which values are embedded and do they hold potential conflict? Which values could be useful to apply in order to qualify a project further?
In the following I call this:
- *Justification Analysis* (a project-specific check upon embedded values, values and justifications which are embedded or presupposed)
- *Justification Conflict Scenario* (which justifications could hold conflicts on values and justifications, what would other regimes "respond")
-*Justification Instigate* (which justifications and values could be meaningful and/or useful to apply in the specific project-actor context, What more could be addressed and achieved by engaging other values and justifications)

Justification Analysis could work as an entry to identify embedded values through the understanding of underlying justifications. This could be used as a check-up and indicate potential justification conflicts.
Justification Conflict Scenario could be used as a speculative mode to identify and create scenarios on conflicts. Such contextual specific conflicts could then serve as a way to instigate contextual, situated values within the project.
Justification Instigation could provider an entry to use the knowledge on and acknowledgement of specific [peaceful] conflicts used as a driver to make things *better*.
In the following I will try to engage this on the dispute in Case 2: The overall adaptation strategy of this town, were initiated to accommodate the civic and domestic regime, as the aim was to prevent flooded houses and infrastructure.
Justification Analysis: At this stage of the project, the locations of the retention basins were decided on basis of hydrological calculations, administrative boundaries and property lines. The retention basins were dimensioned to hold the exact capacity and flow of a certain cloudburst. The slopes were shaped as ´technical slopes´ (1:2, 1:4) thus efficient, low cost and within already known approaches and workflows. The cover was mono-sort grass with low maintenance requirements. Functions were strictly based on allowing room and time for water (Shannon, 2013), no other functions and their formal design was the simplest, calculable geometry. Seen from the approach of the 6 regimes, all of this could be interpreted as if the project development itself had solely happened within justifications of the industrial regime.
Considering that the project as a whole was engaging quite some areas of the urban landscape within the town, it appears highly relevant to the domestic and civic regimes at more levels than flooding. These retention basins were calculated to last and hold capacity for the coming 75 years

of which most of the time they would be dry, green/brown deserts holding no other functions, e.g. no obvious potentials of alternative uses or sensory experiences. The only value was the mere capacity of retaining water in case of a cloudburst. At the stage very close to actual implementation, it seemed as if only one mode of justification had been involved in making the project.

Justification Conflict Scenario: It is highly plausible, that citizens hold multiple priorities, like the project manager from the water utility company also drew attention to. Citizens/residents could be seen as representing the civic and domestic regime on this. They probably want to avoid flooded houses and infrastructure, but they also attach value and meaning to circus elephants in the town forest as they actually live their daily lives in the town. As a conflict scenario, the civic and domestic regimes could have responded with counter-action. Citizens could have engaged values and justification from the inspired regime to suggest new, creative alternatives, or they could have engaged justifications of the industrial regime to ´trumpf´ justification and legitimacy by providing different hydrologic calculations, or they could have engaged justifications of the opinion regime, e.g. support from local politicians seeking votes or local media seeking viewers through supporting a-good-feeling-case (the elephants versus the bad retention basin). Such conflict scenarios could be used as a mode to understand or acknowledge potential conflicts through the regimes of justification.
Justification Instigate: Embedded justifications and conflict scenarios could be used to explore potentials of contextual based values and justifications within the project: which new actions could we aim for if e.g. the inspired and the industrial regime met?
I do have to stress that by introducing the 6 regimes of justification, the errand is neither to equalize nor to mainstream, as if all 6 regimes always need to be represented or that justifications and values should be sought to be equally favoured. The errand is rather the opposite. Different contexts might entail different values with different legitimacy, importance or meaning. One could ask though: how solitary may a regime act in urban landscapes? Do alike justifications hold enough diversity and robustness to actually encounter the uncertainty, complexity and vast perspectives of climate change?

The point is, at least if the aim is collaborative creation of values, that in order to do so, we might need to acknowledge different justifications and accept [peaceful] conflicts as part of this. The 6 regimes of justification could be used as a method/framework to reach for contextual based values beyond habit of practices. This said, in order to use the 6 regimes of justification as a preliminary method to engage with the concept of value, it is highly important that the context is situated with specific actors, a specific project in a specific location. Furthermore, this cannot be seen as a toolbox, ´tick-all-regimes-and-all-values-are-favoured-thus-the-project-is-valuable´: in order to engage with contextual based values, it is important to acknowledge variable degrees of legitimacy within any project. If the premise of contextual-based values and co-creation is accepted as a mean to meet climate change and adaptation, justification and acknowledgement of contextual based conflict could seem useful as an approach.

CONCLUSION

Justification and co-creating values

Climate change represents uncertainty and takes adaptation. One of the main issues is handling of water. In order to put direction to action and envision (future) values it takes interdisciplinary engagement. In terms of that, design thinking could hold importance as an approach to envision and suggest speculative scenarios to inform actions within the context of uncertainty and complexity. As described above, water could be seen as a mediator forcing diverse actors to act differently than their current practices. Though, this does not in itself promotes value or well-functioning co-creation. To actually engage diverse actors and different modes of knowledge production, it might be useful to look into underlying justifications and use the acknowledgement of differences and [peaceful] conflicts as a driver. The 6 regimes of justification could be seen as a framework which could address values and disputes in a communicative manner as an approach to reach for co-creation of values in the context of waterscapes of uncertainty.

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