Reading Conflicts and Congruencies in the Built Environment

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Cities today are full of conflicts and complexities. Globalization and densification trends in particular have led to the tight dwelling of a diversity of people, values, desires and demands upon the built environment. Planning attempts to plan for a level of general good, but this makes the expression of individual identities and ideals of social equity difficult (Fainstein, 2009). People in cities must live together and planners hold a great deal of power over the quality of spaces shared in this coexistence. As Heidegger (1971) has defined it, the act of dwelling defines who and how people are. When places are planned, built or upgraded, the people who experience them are affected. Some residents may win, being happy with outcomes, but others lose, potentially feeling displeased, out of place – or at worst – discriminated against and marginalized.

The physical quality of a city is thus dually affected by the past goals of urban planners, the current planning efforts of spatial management, and the ongoing actions of people's life. This effective link between planning and city fabric and city life can potentially illuminate past gaps and oversights that have occurred between plan and built translation. Through comparing the life in, and use of, places against planning intentions this paper argues that a basis for reflection over decision-making, planning input, execution can be informed.

While this paper does not attempt guidance through the morally loaded prioritizations that urbanism asks of planning, it will describe a tool for tracing the complex relations between built outcomes of planning and human actors. The aim is to illuminate an option for reflection that relates planning and management entities to built outcomes and user behaviors. This paper builds a theoretical argument for, proposes, and then tests a framework to contribute to practice of assessing built results of planning efforts. The proposed framework provides contextual, relational information that can be applied to understand the root of local urban conflicts and which groups or individuals are intentionally or unintentionally being prioritized in local planning.

1 Planning and managing the built environment

The built environment is composed of physical materials that dwellers experience and are informed by each day – most of which have been effected by past planning and current spatial management practices. In the built environment, management and planning authorities (hereafter referred to as Managers) can provide amenities, restrict particular uses, and control the maintenance and upkeep of the environment. These actions are largely exercised through the physical components, or materials, forming the environment.

The overall impression of one’s environment has been strongly related to human wellbeing and identity in the field of Environmental Psychology. Marco Lalli (1992, p. 285) explains that “the environment attains its symbolic significance as a substrate of social, emotional and action related contents.” Understanding the built environment as a foundation for people is a basis from which planning can be judged. How solid of a social, emotional, and behavioral foundation is being provided in cities today? Is this foundation equal for every resident, or are some prioritized? Do management practices reinforce the intended substrates in place after projects are built? These questions of the built environment can be framed through the concept of place, as theory in this realm links people and their actions to their location and its environmental conditions.

To better understand the human implications of planning and management practice, this paper will first provide a survey over academic thought on the notion of place as it may connect people to their environment. Discussion then follows based on the impacts of the materials that compose an environment – how they physically and symbolically link users of place to planning and management authorities (referred to as 'Managers' henceforth). In the final sections, the paper will explain a material and behavior-based framework using a case study about local conflicts and congruencies found after an urban renewal project. The paper is concluded with potential guidelines to assess places. The aspiration of this paper is largely influenced by place-keeping thought which hopes to integrate a long term, holistic sustainability perspective into everyday places.

2 Defining place through its use

Similar to 'environment, the term 'place' is difficult to delimit. 'Place' and its extent have long been contested through many nuanced definitions. This paper will focus on how place describes connections between human activity and qualities of the space in which it occurs. Geographer John Agnew (Agnew, 2011) has synthesized academic discussions on space and place into with three general definitions of place –'Form', 'Meaning', and 'Representation.' Geographical thought on place through history can generally be sorted through these definitions or some combination therefrom, resulting in varying degrees of the human in place discussions. The 'Form' definition of place is the simplest - a measurable location in space usually with recognizable characteristics (Setten, 2006). The next two reinforce human relationships to and within such a location - 'Meaning' follows thoughts on Relph's (1976) 'sense of place' to include feelings, identities and roles of people at a particular location, while 'Representation' regards place as the "setting and scale for people's daily actions and interactions" (Setten, 2006, p. 39).

Form, meaning and representation are paralleled in humanist Robert Sack's definition of place from generic space. Sack (1992, p. 20) names the following three overlapping "forces" that form a relational framework which reemphasizes the meaning of the environment to human life:

- Nature – including the force of the physical aspects of place on people.
- Meaning – including attributed meaning of a place to its local people.
- Social Relations – aspects of a setting impacting how people interact.

By understanding the three together as "dynamically interdependent forces" (Sack, 1992, p. 20) – place can be interpreted and defined through human use, or activity, in space. Many academic fields build further upon the definition of place to produce theories that link nature/form, meaning, and social relations/representation to use. The chart in Figure 1 provides some examples of relevant theories from interdisciplinary literature.

While many fields focus only on physical or social phenomena, it is useful to see those which begin to near a realm of socio-materiality. Since contemporary planning thought is greatly influenced by sustainability goals and ecological perspectives, a prevalent understanding is that different systems are intertwined and all must be seen in relation to context. Here, socio-material realms become more applicable to a holistic perspective, defining importance of both human and physical characteristics. Socio-material thought departs from the positivist and modernist trends of separating and simplifying phenomena, moving towards the understanding that the social and material effect and produce each other (Law, 2008).

Place Trends in Interdisciplinary Theory and Design Practice

	Material < < << < < < Socio-material > > > > > > > > > Social	Implication of/to Use
Form - Nature	Architectural Design (esp. modernism) Selection of materials and forms by an expert, form follows function Behavior Settings social actions based on type of environment (Barker, 1968) Architectural Determinism social actions based on materiality and physical setting (Hillier, Burdett, Peponis, & Penn, 1987), for example: *programming, place-making*	Physical form and environment guides types of use
Meaning	Material Semiotics material selection and design to convey meaning and intent (Goss, 1988) Natural Place Identity meaning of a place affected by normative value to physical attributes (Scannell & Gifford, 2010) Attachment/Sense of Place importance of a place to local people (Relph, 1976) Urban Semiotics materiality and detail of urban settings hold social meaning (Gottdiener & Lagopoulos, 1986)	Use based on the fit between the material and social expectations; sense of what belongs and is identifiable.
Representation - setting for Social relations	Urban Design (esp morphology) Selection of materials in arrangements, forms, proportions to fit into a setting Aesthetics material quality affects perception and ambience (Kaplan, 1988) Dwelling "to remain at peace within the free sphere that safeguards each thing in its nature." (Heidegger, 1971)	Social uses affected by physical and perceived setting.

Figure 1 Implications for use of place from various theoretical backgrounds.

3 Use controls - and is controlled by - place

Delving into the socio-material, one concept that spans all three dimensions of place definition is that of territoriality. Architect Mathias Kärrholm's (2007) writing describes territoriality as "power exercised over space", or the controls of spatial use and behavior in place. While it is often assumed that formal planning and governing bodies hold control over the built environment, Kärrholm's thought also considers informal controls in place. With this understanding, each person and group holds agency to control their environment, overlapping the responsibility of common residents and governance bodies.

> "Territorial regulations affect our behavior and movements in urban space, both explicitly and in more obscure ways, and these types of regulation are often supported by material forms and designs." (Kärrholm, 2007, p. 438)

Kärrholm's description of controls in space include the implicit and explicit, formal and informal, variable and complex – attributing importance to spatial use. Types of use do not

always align with intentions for place and materials of place. This complexity highlights the need to observe the realities of space rather than assuming adherence to proscribed rules. Territoriality is a truly socio-material phenomenon, encompassing all of Sack's forces and explaining how place, its form, meaning and representation, are affected by the interplay between physical and human entities:

- The physical characteristics of a place ('Form' or 'Nature force') guide and deter different types and amounts of human activity. In example, a locked gate controls access to a park; smooth pavement encourages faster car and bicycle traffic.

- Use of place is based upon the fit between the material and the expectations of the social. User groups assign 'Meaning' to places based on the activities performed or observed in the space. In example, a cemetery achieves sanctity due to quiet contemplation that happens there; a dark, graffiti covered street invokes apprehension among the vulnerable.

- Social desires and amount of place use is affected by condition and perceptions of place. Social relations can also impact the local feelings of belonging that determine the regular users of a place. In example, broken benches detract staying, lessening spontaneous meetings between neighbors; successful playgrounds gather like-aged children and their parents.

Humans and place are irrevocably intertwined. As different people encounter a place, congruencies and conflicts in and across these realms tell a story of how social and physical phenomena impact each other in a given context. Traces left by use on a place's materials can illuminate such encounters. From the definition of place and territoriality, it is understood that the physical environment impacts our concept of it – that concept in return impacting the perception, hopes and desires of ourselves in a place.

4 Tracing use to planning, management and external forces

Place materials and use are susceptible to change over time. By comparing the conditions of a place at a given time to greater intentions for the place, elements and their responsible actors can be evaluated. Usage types and amounts can be assessed against the positive and negative effects on materials. Material conditions can be rated against intent and functionality over time. Supplementing and layering observation of material and use with place histories from local interviews, material effects can be traced to social actors. This will introduce a framework for this linkage.

Places can be defined but are never closed systems. While many uses in space are cyclical or self-reinforcing, outside forces can also be responsible for putting patterns into motion. Use and effects of use can be understood as products of larger and smaller trends affecting responsible parties – budget fluxes following governmental prioritizations in planning for example. The question then turns to what informs decisions and actions that impact a local built environment, and how suited are the physical outcomes of planning to those who inhabit it? This paper proposes that the observable quality of the materials of place and their conditions lend them to traceability back to greater social and administrative dynamics.

Despite an amount of controversy over the past decade, Actor Network Theory (ANT) has been deemed useful in mapping socio-material relationships in architecture and urban design (Fallan, 2008; Kärrholm, 2007). While ANT is not actually a theory (Latour, 2005), its use as an approach or meta-method may be fruitful in illuminating human-object relationships within and across physical borders. Understanding social and material components thus as interrelated parts of a network can move contemporary place ideology away from both social-

neglecting architectural determinism and material-neglecting social constructivism ideologies (Fallan, 2008; Latour, 2005).

An ANT approach encourages description through the mapping and tracing of actions between people and materials. Latour (2005) explains that ANT's aim is to "render social connections traceable by following the work done," explaining that entities within an Actor Network become important through the way they 'work' upon or affect adjacent ones. In the realm of planning and management, it seems prudent to expand this concept with that agency - understanding also the type of 'work' that different entities could potentially act upon others. The immediate environment can thus be understood as assemblages of materials linking to and from human actors. Through description of place elements as parts of a relational network, planning and spatial management practices can be translated into effects on life within the built environment. Influences on personal choices in place use and on management priorities can be dynamically balanced. Conflicts and congruencies between intent and actuality then pose a telling story - reflecting over practice.

In its simplest form the base network template appears as such:

User → Material ← Manager

Figure 2 Implications for use of place from various theoretical backgrounds.

The following two sections will describe a case which will be used in a later section to elaborate on this framework, its potentials and implications.

5 Conflicts and congruencies

A case of conflicts and congruencies after planning is described here to illustrate the framework's application in assessing an outcome of a planning initiative. The case information is extracted from two observation studies conducted in an Oslo neighborhood, Nedre Kampen. This area was upgraded under the initiative "Miljøbyen Gamle Oslo" ('Environment city' Old Oslo), which focused on bettering living conditions among the diverse, inner-city population. A series of projects were executed under the initiative, particularly in traffic calming between 1993-2000. Most built implementations have been in place for at least 10 years prior to the referenced studies.

Both studies providing the source material for the following case narrative were conducted with a phenomenological approach, attempting to understand the neighborhood as it is through the experience of a pedestrian resident. One study was fieldwork conducted for Master's thesis in 2010-2011 to describe tensions in the neighborhood's communal space (Murphy, 2010). Both photos and interviews from this study are drawn upon for reference. A 2013 (ongoing) pilot study for a doctoral research (Murphy, expected delivery in 2016) provides further observation data and photographs. The doctoral project's aim is to trace use and perception of place and understand motivation conflicts in spatial management.

Episodes from these two studies have been extracted here regarding one of the pedestrian plazas built under Miljøbyen Gamle Oslo. The episodes demonstrate conflicts and congruencies between the place's original intent and its actual life.

6 Case: Oslo's largest speed bump

> "A good ANT account is a narrative or a description or a proposition where all the actors do something and don't just sit there. Instead of simply transporting effects

> without transforming them, each of the points in the text may become a bifurcation, an event, or the origin of a new translation." (Latour, 2005, p. 128)

This section will describe a case through various episodes of observation. Each episode is broken into actors (human and material entities) connected by actions (use and transformations). A diagram follows each narrative, denoting materials in CAPS, actions as vectors with explanations in parentheses, and human actors in lower cased text. The plaza was built as part of Miljøbyen Gamle Oslo's traffic calming plan, described under a heading "From driving and parking to play and entertainment" (MiljøbyenReport, 2000, p. 192). The plan intended to reduce traffic and increase area safety and sociality for residents. This case project aimed to block what used to be a throughway with the addition of a pedestrian plaza.

Determination of 'conflict' or 'congruency' is associated with the plan intentions of Miljøbyen Gamle Oslo (Miljøbyen Report, 2000), practical place-making theory from Jan Gehl (2011), and place-keeping theory by Nicola Dempsey (2011). The term 'conflict' here implies that the result does not match the intention. For simplification purposes, entities are often collected into groups, limiting the network – which could be extended through detailed follow-up along each branch.

Figure 3 The pedestrian plaza residents refer to as Oslo's largest speedbump seen from the north – Image from Google Maps Street View, image date June 2009, available at http://goo.gl/maps/JGFW4.

Episode 1 - In the snow, this pedestrian plaza is covered in tire tracks. Cars drive across it. The curb is high and continuous across the plaza's edges – higher than most curbs at around 20 centimeters - but this is apparently not substantial enough to stop larger vehicles looking for a shortcut between Kolstadgata and Sigurds Gate. In the winter, snow drifts nearly eliminate the curb, providing an icy car ramp from street to plaza.

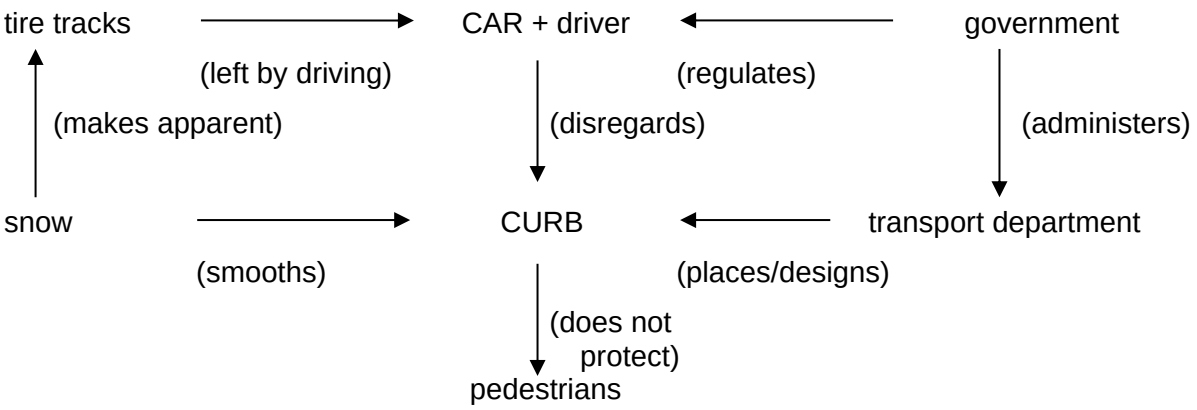

Figure 4 Conflict 1: Cars misuse materials.

Episode 2 - Benches and trees along the plaza are arranged neatly to one side, clearing a wide cobblestone plaza. The two adjacent streets are planned to direct cars around wide turns, away from the plaza. The materials of the plaza are nice, bright, and typically clean - a welcome, albeit more labor intensive change from the asphalt streets and asphalt sidewalks typical to Oslo. A bronze bust of a well-liked former mayor stands in the plaza, holding the potential to introduce a bit of civic pride and dignity to this otherwise marginalized neighborhood. The space is open enough to get full sunlight for large parts of the day. The design itself has many of the same elements that were successful just a few blocks away, deeper into the residential blocks - elements which the residents helped the planners choose under Miljøbyen Gamle Oslo's participation processes.

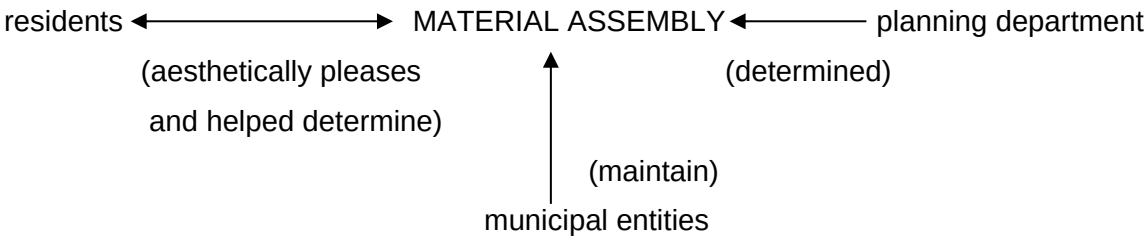

Figure 5 Congruency 1: The materials should be conducive to a safe, social place.

Episode 3 - There are few windows or doors facing the plaza and little reason to use the space. One adjacent building is a private residential cooperative, while two others hold centralized public housing leftover from the 1970s. The two benches of the plaza are often occupied in nice weather by local alcoholics who hide the beers in plastic bags from the nearby grocery store. On those days, their fellowship dominates the space, lessening the comfort of other potential 'stayers' in the space. A small bike rack is there, covered in graffiti and seldom used. This plaza is not a particular destination and the adjacent buildings all have their own bike parking close to entrances. The plaza has been the sight of at least one shooting and one stabbing in 2012.

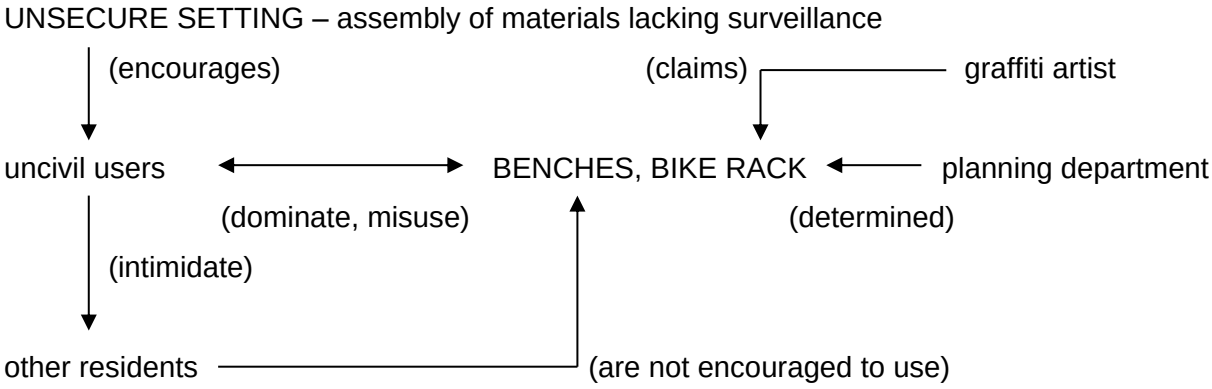

Figure 6 Conflict 2: Domination of the material by uncivil groups

Figure 7 Aerial view of the plaza (left), drawing of traffic intention, traffic and pedestrian conflicts (right – car traffic in orange, pedestrian in yellow-green).

Episode 4 - From the car perspective, the road appears and perhaps should be continuous. Following either of the roads leads cars in a circuitous, non-intuitive route requiring many turns to cross the neighborhood. There are several businesses, particularly grocery stores, in the neighborhood which are stocked daily. Large trucks that carry goods have no problem jumping the curb. Smaller cars and trucks make use of a curb cut slightly south of the plaza – it becoming an awkward, lopsided ramp.

The plaza connects a dense residential district with bus stops, grocery stores, and subway plaza to the north. If pedestrians follow traffic rules and marked crossings, what appears as a straight sight line becomes a convoluted path. The tight line of trees and benches to the east provides obstacles for diagonal pedestrian crossing. The often occurring but unexpected presence of cars and trucks on the plaza further complicates being on the plaza.

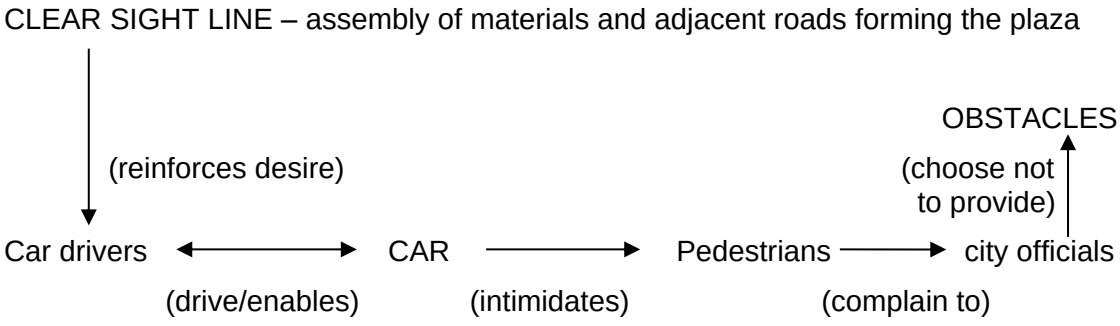

Figure 8 Conflict 3: Sight lines are direct but the paths are not.

Episode 5 - Children do play and parents do socialize in this neighborhood, but not in the plaza as intended. Just around the corner to Kolstadgata, a first floor apartment often has a window open to a kitchen. Children play on the small sidewalk outside, checking in with the mother through the window. Sometimes neighbors also stop to chat there despite the narrowness of the sidewalk. This place is more trafficked by pedestrians, cars heed the curb, and drive slowly as they approach the bend in the road. The street is quieter, calmer, and safer overall since the nearby traffic calming implementations.

CALM STREET – assembled ambience from reduced, slow moving traffic

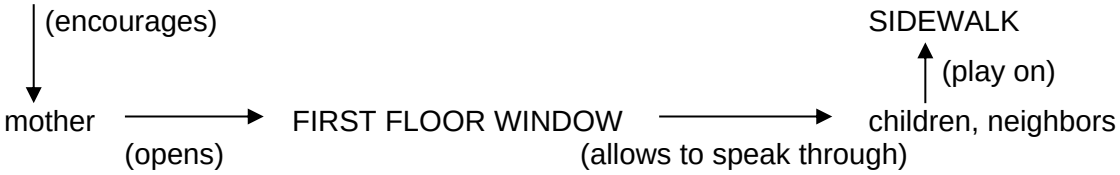

Figure 9 Congruency 2: Nearby areas function as safe social arenas

7 Lessons of the framework

This summary will relate these episodes to the base framework illustrated earlier (Figure 2). The following 7 points are keyed with numbers into an elaborated framework in Figure 9.

1. Managers are those responsible for materials, their existence, and the upkeep of their condition. (Episodes 1-4)
2. Users can also be responsible for materials and changing the material conditions. (Episodes 1, 3, 5)
3. Use of place can guide the perceptions of and inform use by other people. (Episodes 4, 5)
4. The physical presence of material (singular or as an assembly) can guide, allow, and discourage uses. (Episodes 1-3)
5. Material conditions determine planning and management needs and workloads. (Episodes 2-4)
6. Individual motivations can make later use and misuse difficult to predict. (Episodes 1, 3, 5)
7. Circumstances external to a project may limit the resources for management.

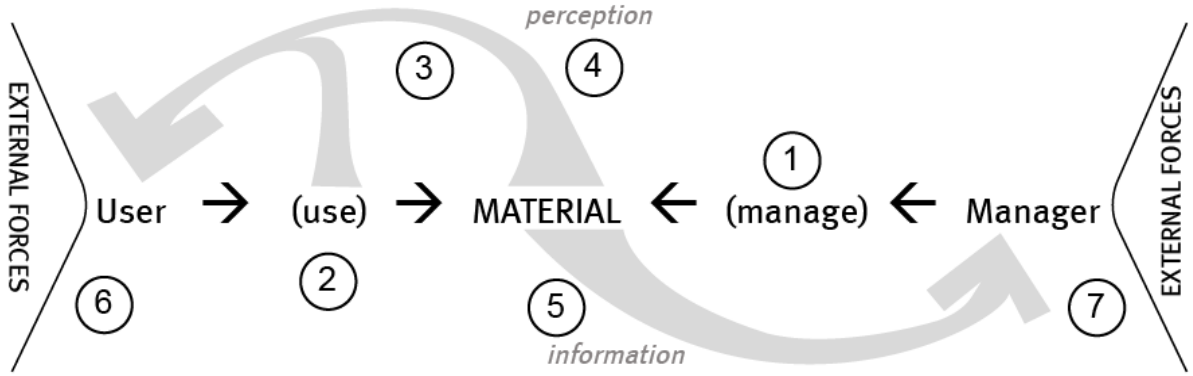

Figure 10 An elaborated framework of the material in the built environment

Indirectly, following these steps through the framework, further points can be concluded. Inconsistencies in both manager and user realms often appear in the built environment. The

suitability of planning and management decisions impact perceptions and inform use (Episodes 1-5). Managers often have the agency to counteract detrimental use and negative perceptions (Episodes 1, 3, 4).

8 Lessons from the material

Materials and their condition can be dually understood as products of use and as products of governance; the two actions counteract each other in space. Signs of material misuse often relates to local social dynamics, while the toleration of misuse and unchecked use of place may comment upon ignorance, disengagement, or inability of a place's managers. The following general lessons are gleaned from this study which can become important reminders for planning and management practitioners in assessing their own place work.

- The lack of use in place can be as significant as the presence of use.
- Use does not always follow intention.
- Seasonal and temporal conditions change material and use.
- Agency of different actors can inform projections and remediation measures
- Materials can enable civil or uncivil user groups
- Management resources and mechanisms may be limited after construction
- Inflexible existing conditions may impact use more than new implementations
- Perceptions of use are as important as physical condition in determining use, but:
    - Pleasant conditions do not always lead to desired behaviors
    - Desired behaviors can occur as secondary effects of planning projects

Many of these lessons are context dependent, but can be considered in new place planning projects.

9 Implications on place

Summarizing the framework's lessons in terms of place definition and place theory can help to explain the role of materials in the built environment and its life. The life of a place, divided into the entity groups of User, Material, and Manager can be used to describe and analyze the effectiveness of decisions in the built environment over time. A goal for such potential can be found in place-keeping thought, encompassing both planning and maintenance of place with the aspiration "to create a high quality, sustainable space which is valued by users who want to visit it again and again" (Dempsey & Burton, 2011).

Reflection over this study and framework concludes with a suggestion for further empirical work to test its extents and limitations. It could also be analyzed against different user-manager relationships to understand how action, information and perceptions change.

The framework together with the place definition implicates a base for judging place-keeping effectiveness. This study proposes the following indicators as a starting point for such:

- Form- If materials and their arrangement in place are sustained in a non-detrimental manner despite continued use, then place-keeping is effective.
- Meaning- If the actual and intended uses of space are congruent, then the meaning is sustained over time. Place-keeping then can be effective as long as the actual management of place follows the anticipated management needs of place.
- Representation- If materials and their arrangement are congruent with the actual use of the place and management can sustain the balance of wear for continued use, place-keeping is effective.

Further study is needed to test and potentially elaborate upon these points, but conceptually holes and dissonances found in place could significantly inform practice. Possible patches to the physical and managerial aspects of place can be illuminated alongside cost analyses to determine the overall benefits of better suiting the built environment to the life that inhabits it. While social trends, personal expectations and desires may not be controllable by a place

project, accounting for effects of the place use will strengthen the future place plans and sustainability.

10 Conclusions

Planners cannot control the life that their plans inspire, but they can learn from it. The uncontrollable aspects of human populations and behavior will always impact place. This quality of the urban demonstrates the usefulness of planners and spatial managers to reflect over the outputs of their practice. The type of reflection framed in this paper is one seldom found after projects are built. Reports after plan implementations such as Miljøbyen Gamle Oslo often show before and after-construction pictures, but spaces are not typically studied over a long term or critically documented as everyday life and time has makes its marks.

The Miljøbyen Gamle Oslo plan initiative has been critically evaluated using demographics data from the census. The city now has published and realizes that most living condition increases since plan implementation are actually attributable to new populations moving in (Miljøbyen Report, 2000). Such results are important and valuable information to the municipality and planning professionals, but they offer little insight over how to make meaningful improvements in the daily lives of the residents who are already there, in place. This urban renewal effort turned into a classic case of gentrification, which may have been expected given the aesthetic focus of many of its projects. Observing materials and life in the spaces now could inform simple solutions to better local places – some central benches to block traffic in the described case for instance - but funding for the project and its spaces ended over a decade ago.

Too often, budget and resources for planning and local implementations often stop short after a project's end. This tradition in practice does little to support planners' ability for reflection, evaluation, and learning after project completion. Reflection over the products of practice could contribute to holistic assessments of works past to inform current planning and management needs. This framework demonstrates the capacity to be far more detailed and suited to the context of place than a before and after surveys. Observation studies are demanding in time and human resources, but offer great potential for guiding place betterment and increasing maintenance efficiency. Collaborative, cost-sharing efforts could be encouraged across different public and private sectors to share burdens and strengthen the sharing of local information.

One of the key learning points in this type of reflection is the difference between how a planned space or project may seem on a drawing and how it may be perceived and used in everyday life. Planners and spatial managers today must realize that their jobs cannot be accomplished sitting behind a desk – they need the invaluable local knowledge only acquirable in the field. Professionals without the resources to open intense evaluations over planning projects past, could work such strategy into the early documentation phases of planning projects. Implementing material observation and learning early could provide plans a basis relevant to a locale's existing life. Such a strategy could effectively pinpoint and encourage positive local behaviors, while learning the sources of detrimental ones – grounding future interventions in what already exists.

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