

Urban Ecological Planning Principles, value positions and application in practice

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Synopsis

The paper presents the principles of Urban Ecological Planning - an approach of urban practice that challenges and supplements outdated technocratic urban planning methodologies that are still dominant in many developing countries. The value positions of this paradigm are illustrated with examples from an extensive fieldwork in Pune, India.

Introduction

Over the last few decades, the need for a radical shift in planning frameworks has been increasingly addressed by development specialists and researchers, who argue that traditional technocratic urban planning methodologies have proved ineffective in rapidly changing social, economic, cultural, political and environmental contexts. This momentum culminated at the Habitat III conference in Quito in 2016, where the international community agreed on taking a new path, as expressed in the New Urban Agenda and the so-called Quito Papers (UN-Habitat, 2018). Yet, an approach and set of principles of urban practice that addresses this need, challenges business as usual and supplements the outdated planning schemes has already been developed.

This paper aims to unpack Urban Ecological Planning (UEP) as it has been conceptualized and operationalized through practice based research and education activities at the Norwegian University of Science and Technology (NTNU), around an International Master of Science program under the same name.

The term “ecological” refers to both the social and environmental ecologies and their interaction within human habitats. The UEP approach has its roots in the Urban Ecology approach at the Chicago School (Park et al., 1925), which focuses on studies of urban social structures and their evolution based on a solid empirical knowledge. This includes investigating how urban management and politics shape the social and physical urban environments, and vice-versa. It can be said, therefore, that the main components of the UEP paradigm are social ecology, political ecology and urban planning. UEP further builds upon the research and participatory work with underrepresented and marginalized communities by such practitioners as John F. C. Turner (1972, 1976), Nabeel Hamdi (1995, 2010). The UEP study program has also been inspired by the action planning approach as taught and practices by Prof. Hamdi at the School of Architecture at Oxford Brookes University.

Table 1 outlines the main value positions in Urban Ecological Planning in contrast to traditional urban planning discourses. Originally, the UEP approach has been developed primarily as a response to challenges faced in informal settlements in low-income countries, but due to globalization and the rapidly increasing socio-economic inequalities in the capitalist West, examples of its applicability in the so-called “developed” countries are becoming more evident (Healey, 2012; Kaika, 2017; Speer, 2016; Watson, 2009; Watson, 2014a). At the same time, it is important to note that we do not see UEP as a panacea for all urban problems and replacement for traditional planning methods, but rather a supplement and redirection that addresses the shortcomings of “business as usual”.

Table 1

	Position in traditional Urban Planning	Position in Urban Ecological Planning
1	Sectoral planning / Functionalism	Area-based and Territorial planning
2	Top-down vs. Bottom-up	Bottom-Top
3	Problem / Issue based	Value based and Developmental
4	Comprehensive and Rigid	Strategic and Contingent
5	Standardized and Generalized	Contextual
6	Formal vs. Informal	Formal-Informal continuum
7	City as a mechanism	City as an organism
8	Instrumentalism / Structuralism	Social constructivist
9	Planner as an executor / implementer	Planner as a facilitator

Value positions in traditional Urban Planning and Urban Ecological Planning.

Integral to the UEP Master program are extensive student fieldworks (between 6 and 12 weeks), which have been taking place in Nepal (1988 - 2005 and 2009), Uganda (2007 - 2013) and India (from 2015). In each of these fieldworks, students learn about how planning is done by the different levels of government within the jurisdictions of the chosen –most of the time informal and/or marginalized– city neighbourhoods, and then study how, and if not, why does planning fail to contribute to an improvement of the local conditions and quality of life of the communities living there. After involving the residents in participatory planning exercises and conducting intensive situation analysis, students then attempt to come up with alternative, more realistic proposals for physical, environmental and/or policy interventions in these areas. While the tasks undertaken in the earlier fieldwork trips focused on urban upgrading of specific sites and settlements, today students are challenged to consider all the different aspects of urban and community planning at local level, focused on, but not limited to: housing, land, property, water, sanitation, health, education, energy, mobility, infrastructure, environmental sustainability, public space, local economy and livelihoods.

The UEP research and teaching activities at NTNU have been ongoing since 1980s and this paper is not the first attempt to conceptualize this field of knowledge and practice. However, just as other frameworks and approaches, UEP has also been evolving and reshaping to adapt to the economic, technological, demographic and environmental changes and transformations. This evolution can be traced down by looking at previous articles on UEP written by NTNU researchers and teachers who have been connected to the study program.

Basing on their experience in Nepal, China and India, Bjonness and Corneil (1998) emphasized the importance of local cultural, environmental and physical contexts in the urban planning process, and explained how the enablement and empowerment at the community level contributes to a positive change. Work by UEP students in Uganda has also been documented in articles by teachers who led these excursions. Skotte (2014) highlighted the depth of stakeholder engagement of the foreign students and the impact they had on capacity building of the members of local communities, NGOs and academic institutions they interacted with. Archipovaitė (2015) focused on the value of context-based teaching for the development of skills and capacity of the fieldwork participants themselves through an in-depth analysis of their reflection notes, which are integral to all UEP excursions.

This paper draws on examples from the project and research work undertaken by 22 UEP students and three staff members during the fieldwork in Pune, India, which took place between September and December of 2017. The empirical data used in this article consist of fieldwork notes by UEP staff and three project reports elaborated by students (Akavarapu et al., 2017; Awusie et al., 2017a and Baracho Teixeira et al., 2017). Each of these reports corresponds to a different settlement chosen for an in-depth study. Besides that, students visited various other sites and projects around Pune to get a broader perspective of the current issues and challenges in urban development in the city.

The three selected areas are located in the central part of Pune (a city of around 3.4 million people) and have qualities of ‘formalizing-informal’ and ‘informalizing-formal’, which reflects the different trajectories which built environments can take. Shirole Vasti is a small self-built settlement, which is officially recognized as a slum by the local authorities. It plays an important role by providing different kinds of services to the surrounding middle- and high-income residential neighbourhoods as well the nearby universities and colleges. Kasba Peth is the oldest settlement in Pune and today constitutes a mixture of traditional low- and mid-rise buildings called “Wadas”, modern high-rises and makeshift shacks. The third settlement, Raviwar Peth is located in the busiest part of the old town and its predominant use is specialized retail. There are also clusters of housing and street vendors in the area. The locations of these three settlements is shown on Figure 1.

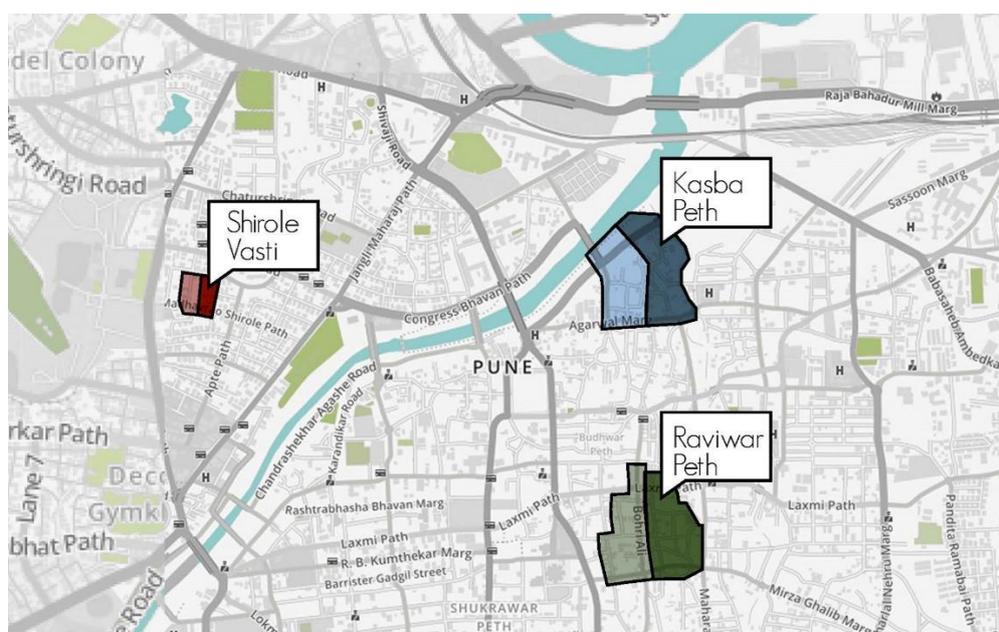


Figure 1. Location of the three selected settlements. Elaborated by Julianti Putri Setiawan.

Value positions in UEP and examples from Pune

In this section, each of the value positions outlined in Table 1 will be elaborated further and illustrated with real-life examples from the 2017 UEP Fieldwork in Pune.

1. Sectoral planning / Functionalism vs. Area based and Territorial planning

Finding the adequate size of planning units remains an open question in planning theory. In principle, we agree with Leung (2003), who claims that planners need to work at different scales from metropolitan to census wards or what he called “zones” as the most local. However, in practice, planning is usually performed at the municipal scale, which is too broad to address real local needs and makes it difficult for planners to comprehend the real urban

complexities. The response to this challenge was ‘breaking down’ of cities into sectors, masterplanning, and the artificial separation of uses for different ‘functional’ areas. Implementing projects and performing interventions within a particular sector (housing, industry, public space, etc.) or infrastructure network (water, electricity, public transportation, etc.), without considering the context of the surrounding areas and its other uses, may solve the initial problem or challenge, but at the same time it may create many other unforeseen issues. For this reason, the UEP approach proposes that planning for urban interventions should be area-based and territorial, as opposed to sectoral. This requires planners to work not only across different scales, but also different specializations and professions. As Blanco et al. (2009, p. 236) argued, “there is a growing realization that the complexities of large and rapidly growing cities (...) require new knowledge generated by the coming together of different disciplines to solve common problems”.

The scale level that is most often omitted or undervalued in urban planning is that of neighbourhood or community. According to Kunstler (1998, p.115), “the basic unit of planning” is a neighbourhood “defined as a five-minute walking distance (or a quarter mile) from the edge to the center”. This allows a truly participatory planning processes and makes it possible for planners and decision makers to develop face-to-face relationships and a sense of trust with the people they are planning for (or, as will be argued later, planning with).

Like in many other cities in India, planning in Pune is performed at the municipal level and, sporadically at the metropolitan level. Some decision making is being made on the Electoral Ward level, yet these are still too large and heterogeneous to address local issues in an efficient and truly participatory manner. Even within the selected areas of study (ranging from approx. 0.5 to 6 hectares), students found different and more appropriate ways to define boundaries: by mandals and/or landlords (Shirole Vasti), by professions, kasts and communities (Kasba Peth – see Figure 2) and by streets or street blocks (Raviwar Peth). This allowed them to get a better understanding of functional ‘clusters’ and find out the interdependencies within and across these areas.

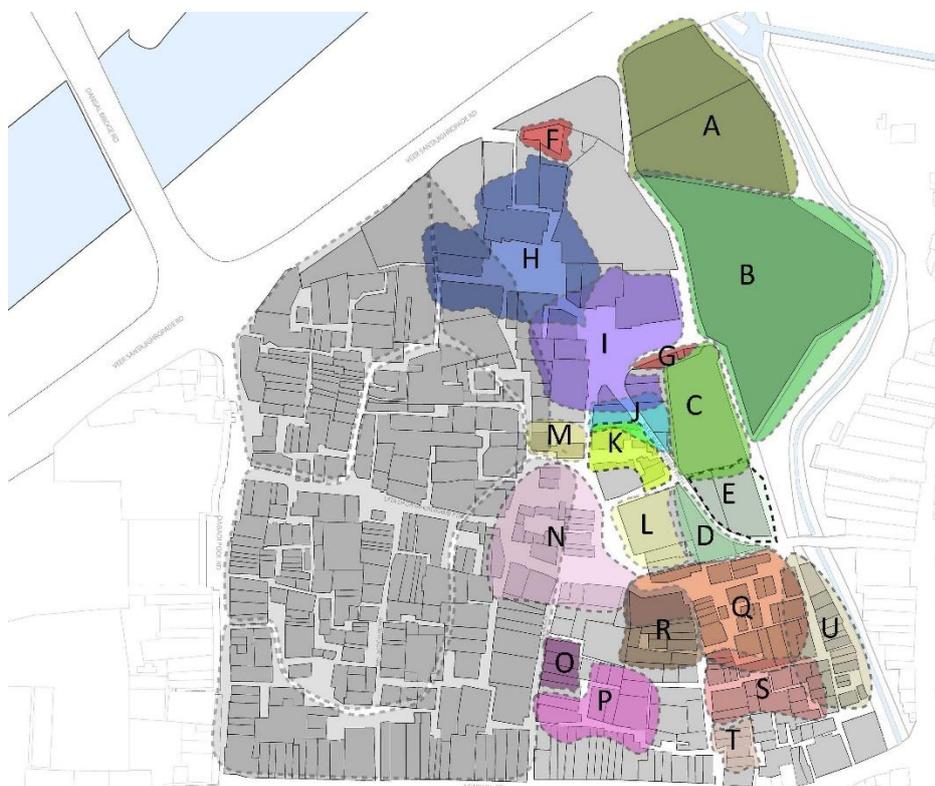


Figure 2. Demarcation of community boundaries in the Eastern part of Kasba Peth, based on participatory mapping performed by the students and local residents. Source: Awusie et al., 2017a.

An example of an issue that requires both multi-sectoral and localized approaches is that of solid waste. In Pune, solid waste and recycling policy and management are centralized at the municipal level and implemented by different levels of garbage collectors - from large automatized trucks to street sweepers. The garbage, however, remains uncollected for longer periods of time in too many areas, and as students discovered - for many different reasons that require inter-sectoral cooperation and localized solutions. Depending on the particular local context, these solutions might range from better solid waste awareness and hygiene education, more attractive incentives for recycling and composting, stricter law enforcement, better placement of garbage and recycling containers on public and private lands to increased involvement of communities in maintenance of shared public spaces (Baracho Teixeira, et al., 2017; Akavarapu et al., 2017; Awusie et al., 2017a).

2. Top-down / Bottom-up vs. Bottom-Top

Mainstream planning theory has recognized a duality of urban processes: top-down (government-driven) and bottom-up (community driven). This oversimplification of development leads to conflicts when plans imposed from the top are perceived as harmful, wasteful or inappropriate by local communities, or, on the other hand, when local demands are rejected by authorities, mainly because the government institutions are either incapable to implement them, or they see these community proposals as incompatible with the overruling existing plans and regulations.

The UEP paradigm rejects this vertical duality in which communities are always disadvantaged, and proposes a more collaborative approach in which a more horizontal partnership between actors in all levels –from the decision makers on top to the most marginalized and underrepresented on the bottom– work together towards the same goals. As Jane Jacobs (1961, p. 238) nicely put it, “[c]ities have the capability of providing something for everybody, only because, and only when, they are created by everybody”.

Urban interventions in such framework can take forms of scaling up and scaling down, which according to Hamdi (2010, p. 224) are “complementary practices”. He argues that

the best way of scaling up the impact of projects is to scale down the size of units or organization, of management and decision making to make sure that accountability is held locally and that success or failure is measured by those who are affected most. Scaling up then is about federating or networking lots of small relatively autonomous units of organizations (network governance) and not about making entities bigger.” (Hamdi, 2010, p. 223-224)

Many scholars have recently emphasized the importance of decentralizing and scaling up urban interventions, instead of enforcing programs and policies from the top. Kaika (2017) explained how local and community-driven initiatives have a greater potential to address global challenges of social inequality, climate change and economic uncertainties than top-down indicators and ‘remedies’, such as SDGs (Sustainable Development Goals), Smart City programs, etc. While examples from crisis-driven Spain and Greece mentioned by Kaika show autonomous initiatives that emerged from strong community mobilization and common dissensus (ibid.), there are also similar scaling up processes facilitated by specially established government institutions and local or international NGOs, whose role is usually to coordinate joint efforts and provide professional advice to local communities, particularly in slum upgrading projects (Archer et al. 2012; Boonyabanha, 2005; Das & Takahashi, 2009). These initiatives are in line with the ideas put forth by Turner (1972, 1976), who argued that households should have control over housing, both as a commodity and a process (of housing), while the role of the government is to provide support for housing construction, provision of services and regulation of the commons.

One of the most known example of a simultaneous scaling up and down is the Orangi Pilot Project (OPP) which provided sanitation infrastructure to around 300 informal settlements in Pakistan since 1980 (Hasan, 2008). Planning, financing and construction of the local sewer connections was done by residents organized in lane committees and supported by professional engineers, while the trunk sewers and other supporting infrastructure beyond the settlements was financed and implemented centrally by the OPP (ibid.).

Students performing their fieldwork in Pune observed how bottom-up approaches and initiatives in their respective areas, such as providing basic services, extending urban infrastructure, running saving groups, transforming of underutilized common spaces and organizing religious festivals, create additional benefits of community building. They recognized that there is a great potential in exchanging ideas and scaling up such initiatives. Most of the students' proposals for interventions were therefore also based on the ideas of decentralization, community ownership and local initiative. Some examples include a community trust model for land ownership in Shirole Vasti and a community toilet operated by local residents and users themselves under a "Sanitation Company" in Raviwar Peth (Akavarapu et al. 2017). This last proposal will be elaborated later in this article.

3. Problem / Issue based vs. Value based and Developmental

Thinking of urban planning as an unbiased, problem-solving oriented exercise is utopian and wishful thinking. The ambitious goal for urban ecology to seek balance, equity and improvement (Bjønness and Corneil, 1998) requires planners and decision makers to take value stances on behalf of those who are disadvantaged by the dominating economic, political and environmental regimes, such as ethnic minorities, immigrants and refugees, indigenous people, LGBT communities, unemployed, homeless, women, children, etc. Considering that natural and financial resources, land and livelihood opportunities are scarce, these stands may necessarily place limits on property rights and prosperities of the privileged classes. This principle does not only require planners and practitioners to act ethically and compassionately, but as argued by Barry et al. (2018), to change in the way planning knowledge is produced and applied and to reconsider how we define and regulate property.

The UEP framework subscribes to the above statement and the preposition put forth by Blanco et al. (2009, p. 235), who argue that

[b]uilding an alternative planning praxis rooted in the South demands a progressive value base that is both social and ecologically informed. The concept of universal socio-economic and environmental rights offers a profound moral base for planning, but its application in cities of the global South needs interrogation.

Oftentimes planners and decision makers face difficult choices which require making compromises and innovate, always taking into consideration the factual local necessities and aspirations. Ideologically, many urban and environmental planners are divided based on what McGranahan and Satterthwaite (2000) called the "green" and "brown" agendas. The green agenda focuses on ecosystem health, environmental sustainability, nature protection, climate change mitigation, as well as responsible and reduced consumption. Its main target are future generations, therefore emphasis is placed on long-term planning and education. The brown agenda, on the other hand, is centered about human health and well-being, satisfaction of basic needs and equal access to resources. The prioritized groups are low-income communities who urgently require better services and housing (or shelter) options (ibid.). Considering how the contemporary world becomes increasingly globalized, unequal and unpredictable, the mainstream viewpoint that the more prosperous countries can and should focus on the green agenda, while poorer states should first take care of the basic services to ensure a dignified quality of life through prioritizing the brown agenda goals, is oversimplifying the problem. Therefore, we argue that planners and environmentalists need to work together

to go beyond this divide and seek creative solutions that can reconcile both agendas to pursue a world that is not only environmentally sustainable, but also provides good quality of life and opportunities for all.

Middle- and high-income capitalist countries are also facing rapidly growing problems of poverty, homelessness, discrimination, marginalization and oppression, all of which are partly attributed to a planning system and policy making that serve the capital accumulation and private property owners (Harvey, 2013; Mitchell, 2003/2014). Western cities (especially in post-WTC USA) have been characterized by an increasing limitations on freedom of speech, brutal repression of protests and strikes, escalating surveillance measures to control behaviour, privatization of public space, criminalization of homelessness, gentrification and touristification, and other forms of socio-spatial exclusions (Albert & Benach, 2017; Beckett & Herbert, 2010; Blomley, 2004; Harvey, 1989 and 2013; Mitchell, 2009, 2011, 2003/2014, Speer, 2016; Staeheli & Mitchell, 2008).

Scholars and activists who oppose these processes are united under the slogan of the “Right to the City” (Attoh, 2011; Blomley, 2004; Harvey, 2013; Marcuse, 2009; Mitchel, 2003/2014), which originates from the works of French philosopher Henri Lefebvre (1996 [1968]), who called it “a cry and demand” and constant struggle for more democratic and open cities in which all citizens participate. The right to the city is not only about access to public space, but also a universal right to adequate housing, basic services and a generally to inhabit and co-create the city (Attoh, 2011; Mitchel, 2003/2014). Since the early works in 1980s in Nepal, the right to the city principle has also been central to the UEP approach.

UEP takes a stance to first and foremost represent and improve the situation of the marginalized and poor communities, as they are usually the ones that are left out in the mainstream urban planning. Unlike many other universities and colleges performing fieldwork in India, we refused to making proposals in greenfield location or work in more prosperous areas which receive funds from the “Smart City” Program, but instead we chose to work with communities that are below average income and areas that are for different reasons problematic (Figure 3). Students, however, have been taken for short excursions to some of the most prosperous areas and gated communities to see, and compare, the existing inequalities and to learn why and how planning frameworks fail to mitigate them.



Figure 3. Precarious living conditions and overcrowding in Shirole Vasti. Source: Baracho Teixeira, et al., 2017

4. Comprehensive and Rigid vs. Strategic and Contingent

Comprehensive and rigid planning attempts to envision, define and/or regulate a wide range of sectors (housing, transportation, infrastructure, land-use, public space, etc), covering large geographical areas and within a long-term time horizon. Comprehensive plans often take forms of master plans or detailed general plans that are supposed to guide development in a specified area in one and only possible direction. These principles have shaped planning frameworks in many developed and developing countries. However, they rarely achieve the expected results. In times defined by political, social, economic and environmental uncertainties and emergencies, such as natural and man-made hazards, financial crises, armed conflicts, forced displacements, infrastructure breakdowns, epidemics, combined with chronic issues of inequality, poverty and resource scarcity, making rigid plans based on long-term predictions and projections is simply unrealistic.

Cities, similarly to other kinds of ecosystems, function like organisms, which react to shocks and emergencies by attempting to combat their effects within themselves. Bjønness and Corneil (1998, p. 63) wrote about the “carrying capacity” and “the ability of a city as a social system to accommodate social demand and stresses”. However, the role of planners should not only be limited to support and maintain the institutional, social, environmental and economic structures which facilitate the recovery and rebuilding processes, but also to seek solutions to resist and prepare for the different kinds of uncertain scenarios in the future.

The alternative we propose is strategic and contingent planning. Nabeel Hamdi (2010, p. 65), who has written about Strategic Action Planning (SAP) defines the principle of strategic planning as “to meet the needs of now, while working toward the aspirations of soon and later”. Similarly, contingent planning recognizes that urban development requires incremental and flexible approach, which can respond efficiently to the rapidly changing situations (Rondinelli et al. 1989). In contrast to static policies, contingency planning facilitates adaptive policymaking, interventions and management (Bloemen et al. 2017). It does not follow a predefined, rigid framework and is context-dependent.

The main difference between these value positions is that a comprehensive and rigid plan often starts with defining how space should function and look like at the end of the process, and then seeks ways to achieve it. Strategic and contingent planning, on the other hand, starts with the situation analysis and the definition of main issues to address, and then seeks which interventions, step-by-step can contribute to gradual recovery and/or improvement. It is usually a circular process in which intermediate interventions are followed by monitoring, learning, reflection and evaluation, before deciding for another round of interventions.

Two proposals from student groups working in Raviwar Peth reflect strategic thinking in planning, as opposed to a typical, top-down comprehensive planning. One group identified sanitation as the main and most urgent issue to be addressed in their corresponding area. As a starting point for their proposals, they acknowledged that the city-wide sanitation plan from 2011 lacked sufficient resources to ensure proper provision and maintenance of the toilets it provided, and that toilets are generally maintained better when there is a feeling of ownership of these facilities among communities that use them (Akavarapu et al. 2017). From that, they developed a proposal for a sanitation block not just as a piece of infrastructure, but as a financial model (called a “Sanitation Company”), which would ensure generation of funding for maintenance and further improvement of the toilet block (ibid.). This is not a completely new proposal, as the NGO called Shelter Associated has been doing similar projects in Pune before.

The second group in Raviwar Peth focused on solving traffic issues in their area (Figure 4) and proposed making the streets more pedestrian friendly. They realized, however, that streets cannot be simply closed for cars overnight, because that would seriously interrupt the

circulation in the area and in particular, the delivery of goods to the local retailers (ibid.). Therefore, the students suggested a gradual, step-by-step interventions, starting with temporary and partial traffic restrictions for specific festivals and days in a monthly or weekly basis. Only if these pilot-projects prove successful and gain support of the local residents and shop-owners, more traffic restrictions can be tested later (ibid.).



Figure 4. Busy street in Raviwar Peth. Source: Akavarapu et al. 2017.

An example of a contingent behaviour are community saving groups, which help residents mobilize funds for strategic investments and to respond to crisis situations. Existence of these was observed in different forms in all the three studied areas. In Shirole Vasti, where the majority of the working-age population is involved in precarious informal work, women saving groups are supported by the Pune Municipal Corporation (PMC) through the Nagarvasti Vikas Yojana and the City Slum Redevelopment Scheme. Among the incentives are free bicycles for children, financing for entrepreneurial activities for the residents and revolving funding schemes offered to women's self-help groups (Baracho Teixeira et al., 2017). Saving groups in Kasba Peth provide 'crisis' credits and loans for income-generating activities for women. They also help fund housing improvements or construction of new housing for member households. Money is collected on weekly basis and deposited to a bank account (Awusie et al., 2017b). In the Durjan Singh Paga settlement in Raviwar Peth, saving schemes are also managed by women, which operate them at three different levels: personal, small group and community. Money collected by the small saving groups are given monthly to the woman with most needs and when there are no particular needs, the choice of the recipient is made through lottery. Community savings operate in the Janlaxmi scheme. The money is stored in a bank account and is used to fund initiatives and respond to problems at the settlement level (Akavarapu et al., 2017). All these are bottom-up initiatives that are occasionally supported by the local governments and financial institutions. Through savings, the communities invest in assets and increase their resilience and preparedness for different kinds of uncertainties.

5. Standardized and Generalized vs. Contextual

The UEP approach rejects the application of standardized and generalized solutions to urban problems and emphasizes the importance of local contexts. Various authors argued how replication of the same ideas in places defined by different demographic, climatic, economic, environmental, political and/or social urban conditions leads to disasters and wastefulness of resources (Hall, 1982; Healey, 2012; Lieto, 2015; Watson, 2014b). A classic example of this are the disastrous impacts of the Athen's Charter's ideology on cities around the globe, which is among the main themes of the Quito Papers (UN-Habitat, 2018). Planners should be very careful when applying 'good practices' in much different contexts from the ones in which they have been initially tested.

One example of illustrating what we mean by this contradiction is explaining two different approaches to slum redevelopment in Pune - one being more institutionalized and mainstream and the other more experimental and context-based.

Housing conditions and the quality of built structures vary drastically not only between different slums in Pune, but also within the same informal settlements. It is very common to find solid structures made of concrete or bricks with all the modern amenities next to precarious, makeshift shacks built of wood, metal sheets or plastic.

However, these particularities of Pune's slums have not been taken into account by the local and regional authorities under the Slum Rehabilitation Authority (SRA) scheme established in 2005. This scheme is based on assumption that all slum dwellers deserve "better" (or rather "different") housing conditions and the way to do it is through redeveloping the entire plot on which the slum is located and re-house the residents into new high-rise blocks. This is done in cooperation with private developers who get increased development rights that allow them to construct additional residential units that are then sold on market. The same standardized scheme is being applied across the city and similar schemes are functioning throughout the state of Maharashtra. Such redevelopment projects have been implemented in Kasba Peth and have been proposed in Shirole Vasti.

As the students have found out, the actual condition of the housing stock is rarely taken into consideration in the SRA scheme and the slum dwellers are not involved in the planning process, beyond merely giving the majority consent for the developer to proceed with the rehabilitation project (Baracho Teixeira, et al., 2017; Awusie et al., 2017a).

In Shirole Vasti, the SRA development takes long time to materialize, because of a mismatch of the SRA regulations and the local realities, especially in terms of the complex and unclear land ownership and tenure situation. Another unresolved question is that of eligibility for new apartment units for households of different sizes and those who rent in the settlement (Baracho Teixeira, et al., 2017). In Kasba Peth, one slum pocket surrounded by already completed SRA buildings is ineligible for SRA scheme because of the small plot size that does not meet the minimum land coverage requirements (Awusie et al., 2017a).

A radically different scheme to the SRA has been tried in the Yerwada settlement, where the local population rejected the proposal for total redevelopment. Architect Prasanna Desai and his team were invited to come up with an alternative solution. They initiated a participatory process in which residents as well as local and international NGOs developed an in-situ housing improvement project (Desai, 2010), which they later called "Tailor made Slum Transformation" (Figure 5).

In the first step, the team performed extensive surveying of the slum and established links with the community. The structures were then classified into permanent/solid (pucca) and temporary/precarious (kutchha) according to their physical condition. In the next phase,

architects in consultation with the residents developed design proposals to replace the kutcha structures with solid housing. Due to the irregularity of the plot sizes and shapes, as well as different preferences of the residents, each site was proposed a customized design. The alternatives varied from cluster developments with apartment units in a larger structures built on up to 3-4 joint plots to individual row-houses on separate plots. Funding for the project was provided in the now discontinued JNNURM program and the beneficiary households had to contribute 10% of the costs (ibid.).



Figure 5. Example of a redeveloped house in Yerwada, Pune. Source: Desai (2011).

Contextual solutions did not only provide a better response to the real needs and necessities of the slum dwellers, but they proved more, or equally as efficient as the standardized solutions, such as the SRA. The apparent advantages of the SRA scheme, which are to cut costs and reduce time in the implementation of the projects have not materialized in Pune. The participatory in-situ slum upgrading initiative in Yerwada was a lengthy and complicated process, but the bureaucracy around the SRA scheme and the challenges in applying the rigid and vague standards and regulations to particular context in our study areas made this scheme more difficult, and in some cases impossible to implement. Therefore, it was not surprising that various student groups referred to Desai's scheme in their proposals for upgrading of the studied settlements.

6. Formal / Informal vs. Formal - Informal continuum

The framework for understanding the relationships between formality and informality in UEP was provided by Uwe Altrock (2012, p. 186), who argued that the “close links between more formal and more informal modes in everyday life have shown that one should speak of an informality-formality continuum, hybrid arrangements and co-production by formal and informal actors rather than a dichotomy”.

Altrock explained how the degree of informality can be measured in two dimensions: the strength of imposed regulations and the rigidness of negotiated agreements. Due to the complexity of cities as social ecosystems regulated by a set of laws and policies, most urban activities lay somewhere in the scale between formal and informal. Informality supplements processes in which formality does not work and complements those where it does not reach (ibid.). Informality, therefore, is not an obstacle in development, but an integral part of it. “Hybrid formal-informal arrangements” –he argues– “are closely related to the regulative self-conception states” (ibid, p. 171). When discussing urban development and architecture, Marshall Berman (1982), argued that modernization attempts to impose a utopia of a total control over the built and social environment, which is impossible to achieve due to the

prevailing spontaneity and informality of everyday life. Yet, despite the growing body of literature highlighting the formal-informal dichotomy (for examples, see Hansen & Vaa, 2004; Jenkins, 2004; Koster & Nuijten, 2016 and McFarlane, 2012), the traditional viewpoint that planning should eliminate the informal sphere and/or work only within the formal, is still prevailing in many countries.

While many scholars writing on urban planning in the Global South highlight the process of formalization of formerly self-help and makeshift settlements (De Soto, 2000; Fernandes, 2011; Guevara, 2014; Lall et al., 2009; Nakamura, 2014; Oldfield, 2002), this process also works in reverse. In our previous research, we have demonstrated how land-use in formally planned subsidized housing projects in Delhi, India (Aranya and Ulset, 2016) and Barranquilla, Colombia (Sliwa, 2017) has been gradually informalized and altered by the residents who were seeking better livelihood opportunities and attempted to fill the gaps in service provision.

The Shirole Vasti slum, for example, provides housing for families who could possibly never be able to afford shelter in the formal sector in such a good location, close to their jobs (Baracho Teixeira, et al., 2017). At the same time, its informal economy provides more affordable services to many of the students who attend the numerous local universities and other academic institutions, as well as labour to the residents in this predominantly middle- and high-income area.

An interesting example of formal-informal arrangements can be observed in Kasba Peth, where the Maharashtra Rent Control Act has kept their rent at artificially low levels for many years. The downside to this policy is that property owners have no incentives to maintain their buildings and invest in upgrading (Figure 6). As a response to this problem, one household negotiated with the landlord and agreed to pay more rent than it is stipulated according to the Act. That way, both sides are satisfied - the owner has reasonable payment for maintaining the property and the tenant has increased security of tenure and higher living standards (Awusie et al., 2017).



Figure 6. Informality and the unsafe living conditions in Kasba Peth. Source: Awusie et al., 2017a.

In another case, the legal status of the Durhan Singh Paga settlement in Raviwar Peth has been unclear for many years, which resulted in a growing informalization of activities happening there. The site is formally owned by the PMC and has connection to the grid of all the basic infrastructure. However, the rent has stopped being collected from the households and the structures have not been updated in official maps for many years, mainly because the municipality gave up their claims to the land when it lost a legal battle with the residents to evict them to redevelop the plots for public facilities in 1960s (Akavarapu et al., 2017).

By including these and other informal structures and aspects in their research projects, students proposed much different solutions to everyday problems of the communities they worked with than the planners and other policy-makers in Pune. Everyday life in India (and beyond) provides many examples where the informal “penetrates” the formal and where formal and semi-formal emerge from informal arrangements. This coexistence of formal and informal is magnified by the fact that the chronic weakness of formal institutions in India spoils their capacities to implement the ambitious, long-term plans which they are required to pursue.

7. City as mechanism vs. City as an organism

As we indicated before, within the UEP framework, a city is not perceived as a functional and static mechanism, but as an organism in constant and complex social, political and environmental interaction. Those who practice comprehensive planning and modernist architecture often like to see their proposals as final products that by no means should be altered or changed by its users. Cities, however, benefit from their abilities to adapt to the changing circumstances and have capacities to react to unforeseen circumstances just like living organisms, which mature, gain strength and develop response systems to ‘illnesses’ and shocks.

Jane Jacobs called the city an “organized complexity”, which simultaneously deals “with a sizeable number of factors which are interrelated into an organic whole” (Jacobs, 1961, p. 432). Planning, therefore should respect the organic nature of the city and support development that maintains human scale, enhances communities and make places safe. This includes, for example, recognizing the ‘natural’ emergence of a mix in land-uses and the coexistence of old and new (ibid.). Like in an ecosystem, the natural tendency in cities is to grow more complex, as opposed to separating into clearly defined functions.

The aspect of change over time is key to understanding this principle in practice. Mehrotra et al. (2017) challenge the notion of permanence of the built environment and point out the benefits of integrating more temporary, elastic, incremental and reversible (or as he calls them “ephemeral”) spaces and uses in contemporary cities to better accommodate different social, cultural, economic and environmental functions, and to increase their preparedness for the uncertain futures.

While these principles gained widespread accepted among scholars and practitioners in recent years, the extent of impact and intervention of planners and architects in the built environment remains a point of debate. As Nabeel Hamdi (2004) frames it: “How much structure do we design before the structure itself interrupts the natural process of emergence?” (p. 73). Performing a proper diagnosis of a particular area and understanding its local context are key to answering this question.

The informal housing development in Shirole Vasti and the establishment of commercial uses in strategic locations in the settlement (Figure 7) show how a multi-functional urban area can emerge organically without any top-down masterplanning. In contrast, the SRA scheme pays little or no attention to the human and social aspects of living environments, but instead it only focuses on the durability of the structure and efficiency in space distribution (Baracho Teixeira et al., 2017). The gradual replacement of the traditional Wada-style buildings in Kasba Peth

with their public, semi-private and private spheres by concrete high-rises is also divorcing the human scale from the built environment (Awusie et al., 2017).



Figure 7. Land use map of Shirole Vasti. Source: Baracho Teixeira et al., 2017.

Interesting patterns that resemble organic evolution of spaces and its uses, where interruption by formal planning was limited, has also been observed in the marketplace in Raviwar Peth, where retailers selling similar products cluster along the same streets and street blocks, while many smaller shops and street vendors are selling different products depending on the upcoming festivals, seasons and crops (Akavarapu et al., 2017). Many street vendors also chose locations to compliment the offer of the established retailers in the buildings behind, for example vendors who sell spices and vegetables often set up their carts in front of shops selling kitchen utensils (ibid.) Like in Mehrotra's Ephemeral City (Mehrotra et al, 2017), common spaces in all three settlements served multiple functions, accommodating social and religious events, playing children, community meetings, parking etc.

8. Instrumentalism / Structuralism vs. Social constructivist

The epistemological underpinnings of UEP are social constructivist as opposed to instrumental or structuralist basis of mainstream planning. Social constructivism is a sociological theory of knowledge according to which human development is socially situated and knowledge is constructed through interaction with others. The phrase was coined by Peter L. Berger and Thomas Luckmann in *The Social Construction of Reality* (1966). Instrumentalism on the other hand suggests that theories are tools or instruments able to identify reliable means-end relations found in experience, but not to identify realities beyond

experience (first attributed to Dewey, 1925 and Popper, 1956). Structuralism suggests that elements of human culture must be understood by way of their relationship to a larger, overarching system or structure. It works to uncover the structures that underlie all the things that humans do, think, perceive, and feel (first suggested by de Saussure et al., 1916). The last two positions are more characteristic of mainstream physical planning where the emphasis is on finding solutions to measurable problems within the framework of city wide systems – such as traffic networks, water supply and land-use planning.

UEP on the other hand is dependent on the socially situated analysis of local areas, to find both locally relevant and socially contingent solutions for issues which are prioritized by residents in the identified area for engagement. This approach is essential in order to ensure that the needs and priorities of even marginalized groups are represented in the plans, and those that one is planning for actually feel ownership of the plans being made. Consequently, the methods used in UEP are borrowed from disciplines such as sociology and social anthropology, relying heavily on participatory and socially interactive means of evincing knowledge.

These principles in UEP defined fieldwork methods in Pune and previous trips. This has always resulted in a much greater depth of the collected information and greater trust among the participating communities. While traditional planning attempts to ‘operationalize’ data by seeking concrete answers to narrowly-defined questions and assumptions using primarily quantitative methods, surveys and closed-end questions, the UEP approach enables planners to get a holistic overview of the situation with all its complexities and interdependencies. Identification of real needs and necessities and the discovery of alternative paths is possible only when the community is treated as equal partners in the planning process and gets a chance to “unfold” the story through answering open questions and making proposals or suggestions about their own environments. This is not to say that qualitative methods and exploratory research should detach from larger structures and systems, but that the human factor and social processes at local level are at least equally as important in the planning process.

9. Planner as an executor / implementer vs. Planner as facilitator

The final, and perhaps the most important principle that characterizes the UEP approach is the positionality of urban planners in their profession. In too many places, planners assume that people they plan for do not know what they need and what they want, because of their apparent lack of knowledge and understanding of their environments. Such thinking leads planning professionals to a common perception of community participation as unnecessary; which explains why it is so often replaced by manipulation, therapy or in the best cases, ‘consultation’ sessions, which in reality are barely one-way information channels (Arnstein, 1969). These kinds of planners still see their professions as executing and implementing plans.

When tracing the history of the planning profession, Michael Lennon (2017) explained how it evolved from a primarily design-oriented, ‘artistic’ ideology, into a more scientific and technocratic discipline of mapping and predicting urban complexities, to finally reach the current stage where planners advocate “on behalf of those who live, work and use the spaces being planned” (ibid. p. 148). The last stage, however, has not yet become the mainstream, at least not in certain countries, where planners either refuse to give away their status as experts in their professional fields, or follow outdated and obsolete education curricula that still promote the idea of planners being ‘designers’ of spaces, ‘creators’ of plans and ‘implementers’ of their own ideas (Siame & Muvombo, 2016).

The UEP approach is grounded by the principle that planning should be done by the people directly affected by the planning decisions. The planner, therefore, should not plan ‘for’ the

people, but 'with' them, as equal partners. In other words, a professional should not be making decisions for communities, but instead facilitate a process in which they can take the best choices for themselves and access resources to improve their own lives and livelihoods. This is based on the (rather banal) idea that the communities actually know their situations and aspirations better than anyone else. As Hamdi (2010, p. 145) argued, "the expert comes to be seen as a special kind of person, rather than that every person is a special kind of expert". He further claims that planners and policy makers who 'provide' actually do more harm than help, because they increase the dependency of the communities on institutions, while a more 'enabling' approach actually increases the capacities and opportunities for them (ibid.).

The application of a participatory and exploratory approach to planning applied by the UEP students in Pune was perhaps what brought the most lasting positive impacts in their respective areas. The most evident was the change in mindset of households and communities in the studied areas. At first, it was clear that local residents were initially discouraged and disappointed by the failed promises of their representatives at the different levels of government, the ineffectiveness of public institutions, and the time-consuming surveys made by students and interns from local universities and NGOs. However, after spending some time with the UEP students, the residents seemed (at least to certain extent) to have restored their faith in planning, collaboration and collective decision making. This was especially visible in Shirole Vasti, where over 50 local dwellers came to participate in the final community meeting organized by the students (Baracho Teixeira et al., 2017; Figure 8).



Figure 8. Community meeting in Shirole Vasti organized by the students. Source: Baracho Teixeira et al., 2017.

Students also practiced a multi-stakeholder approach, where the information and ideas they gained was shared, reconfirmed and compared with other project partners, such as the local NGO Maharashtra Social Housing Action League (Mashal), the Indian National Trust for Art and Cultural Heritage (INTACH) - Pune Chapter, as well as other local architects, planners, politicians and researchers. The result of this collaborative work was that the proposals of most groups were much more localized and different (or directly opposite) to those proposed by the local authorities.

Conclusion

This paper discussed the role urban planners should play in relation to the nine value positions of the Urban Ecological Planning approach as opposed to traditional urban planning. Through examples from urban governance and development work in Pune, we argue that in complex contexts where social, political and environmental issues play out in the interface between the formal and the informal, planners need to stop thinking of their job as executing and implementing plans. They should rather act as facilitators, coordinators and enablers who connect the different actors and stakeholders together. Particular focus should be on the Right to the City and on addressing the needs and aspirations of marginalized communities who are normally underrepresented and excluded from the formal planning and development processes. This exclusion is to a large extent a result of the 'wishful thinking' of technocratic planners who give too much faith in social engineering, while at the same time underestimate the power of communities in shaping their own living environments.

By teaching the above mentioned values to our students and exposing them to some of the most challenging urban environments, we attempt to supplement and fill the gaps in planning education. While the UEP approach and the study program have been evolving to keep up to date with the contemporary issues in urban development, the idea of shaping the right 'mindset' has remained unchanged. Therefore, we propose to end this paper the same way, which Bjonness and Corneil (1998, p. 66) ended their article on UEP principles twenty years ago:

If we teach students about change and complexity and give them tools and methods to operate effectively in this dynamic context, we can prepare them to have a practical approach to local problem solving, grounded in the deep understanding of urban transformations and the implications of their actions to the direction of future change.

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