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## **Design for freedom**

A paper examining urban  
design through the lens of  
the capability approach

Amar Sood

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## **Design for freedom**

### A paper examining urban design through the lens of the capability approach

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**Abstract.** Urban design theory has an ambiguous basis within the urban development praxis, and yet is the most flexible and amalgamative practice operating within and in between disciplines of architecture and urban planning, drawing from various other domains. This paper explores a developmental basis of urban design theory through the lens of the capability approach propounded by Amartya Sen (1999). It attempts to draw parallels between the capability approach and urban

design theory, proposing a framework of analysis for social and spatial processes towards expansion of 'freedoms' and 'functionings'. The framework exhibits the dependency and complementarity of 'freedoms' and 'capabilities' on one hand, and 'capabilities' and 'functionings' on the other. It shows that design is liberating when foreseeable 'functionings' are enabled, creating opportunities and aiding expansion of 'freedoms' towards 'real and effective' development.



# Content

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<b>1. Development through the lens of the capability approach</b> .....	5
1.1. Introduction .....	5
1.2. The capability approach, its interpretations and operationalisation.....	6
1.3. Implications of the capability approach on urban development.....	7
1.4. Conclusions.....	8
<b>2. Theory to practice: exploring a new basis</b> .....	9
2.1. Relative positioning of urban development praxis: planning, design & architecture .....	9
2.2. An alternate value to urban design .....	10
2.3. Drawing parallels between the capability approach and urban design theory .....	10
2.4. Participation as a tool within the process .....	12
2.5. Capability-led framework for urban design.....	13
2.6. Conclusions .....	15
<b>3. Dharavi: searching for new ‘capabilities’</b> .....	17
3.1. Introduction .....	17
3.2. Conflicting realities .....	17
3.3. A design-led solution .....	18
3.4. Applying the framework .....	19
3.5. Conclusions.....	20
<b>4. Conclusions</b> .....	22
<b>References</b> .....	23

## List of figures

2.1. Quinta Monroy - before and after	
2.2. Drawing parallels between urban design theory and the capability approach	
2.3. The social process	
2.4. The spatial process	
3.1. Location of Dharavi in Mumbai, India	
3.2. Dharavi	
3.3. Developer's vision of Dharavi	
3.4. A design-led vision of Dharavi	
3.5. Capability space simulation for Dharavi	



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# 1. Development through the lens of the capability approach

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## 1.1 Introduction

How does one conceive ‘development’? The concept of development has undergone many iterations and changes, particularly over the past few decades. Development is largely concentrated around the ‘human’ aspect, assuming different interpretations depending on the particular entry point used, such as economics, medicine, social science or matters concerning the ‘urban’ (Alkire, 2010). The gap between theory and practice has always been a matter of concern particularly in a rapidly changing world where the time between theory and application is often too long for fruitful action and results. “Theory often seems like an expensive luxury, in the face of immediate and critical problems and the need to act promptly and decisively” (Marcuse, 2010, p.5). The gaps between theory and practice point towards fundamental and systemic issues in their approach towards solutions which are conceived as end-states. Analysis points towards an urgent need to be fluid and open towards both the understanding of the problem and towards the solution. This is particularly true in the nature of problems and solutions that are related to the built environment which are more visible as end-states rather than part of an underlying dynamic. It is important to understand the relationship between how development is conceived and urban development practice in order to bridge the gaps.

Traditionally, the three major disciplines that deal with the built environment – architecture, urban design and urban planning – have been segregated according to their scale of intervention and influence (Sternberg, 2000), which is again a reflection of the end-state methodology that is sometimes a barrier for integration of the largely fluid nature of social influences. These end-state methodologies have preconceived notions and forms for each category of scale, urban elements and social domain. Another handicap of this praxis is the commodification of the ‘urbanscape’ (Sternberg, 2000). For example, this deep seated commodification is exemplified within the tools used in master planning – shelter means housing, health means health centre, and public area means park or playground. “... markets tend to fragment, differentiate and commodify space through town planning mechanisms which tend to fragment, rationalize and manage space, and also through the legal and customary distinctions between the public and private spheres, with a constant tension between the two and a tendency for the privatization of space” (Madanipour, 2007, p.165).

Although master planning has been principally abandoned due to its weaknesses in being prescriptive and top-down, it continues to be the legally binding planning document in many countries. At the other end of the scale, architecture as a discipline has the potential of addressing concerns of the poor but at a typological scale of operation which tends to be repetitive and imposes homogeneity. Operating primarily within the brackets of capital and technology, its ‘products’ are visible, yet have limited influence. The discipline of urban design, by its positionality of scale, can deal with both the experiential qualities of the built environment and with the collective socio-economic dynamic, aided by its conventional domain that deals with the public realm. Due to its positionality, it is also best suited for generating the grounds for negotiation between the market and the needs of the poor. In an operative sense, it is best suited to generate a dialogue and a connection between potentially competing goals of market and society due to the range of tools available. “Urban design is an effective tool with which to develop place-based visions and strategies, which can be used as instruments of good governance, bringing together a diverse range of parties and allowing them to agree on a common programme of action and to act in unison” (Madanipour, 2006, p.186). It is here that the discipline can forge a relationship with development theories to establish a rhetoric that is socially responsive.

Alkire (2010) traces the evolution of the concept of human development within the UNDP published Human Development Reports (HDR) since 1990. Throughout its evolution, the concept has stressed expanding people’s choices as one of the major objectives of developmental endeavours. Contemporary discourses on participation and urban design stress similar objectives through the principles of inclusion, equity and social justice, emphasising the collective. From traversing between the basic needs approach and the sustainable livelihoods approach, Nobel laureate Amartya Sen’s writings since 1990 on the ‘capability approach’ offer a philosophical yet practical ground to the enquiry of development (Alkire, 2010). Since then, many theorists on human development have criticised, elaborated on, and expanded the approach, drawing principles for application in diverse fields related to development (Alkire, 2010). “The core characteristic of the capability approach is to de-emphasize an exclusive preoccupation with income-led evaluation methods, and to focus more generally on the ability people have to achieve the things they value”

(Frediani, 2010, p.175). This thought opens numerous possibilities as well as challenges for the various fields of development that had until now worked with normative lists, commoditising developmental initiatives. It also offers new grounds for participatory exchanges and for negotiations in order for people to act as their own agents for development.

Of particular interest to this paper is to explore possibilities of grounding the theory of urban design in development through the capability approach. The paper critically explores and unpacks the parallels between the capability approach and urban design theory in terms of their potential for expansion of 'freedom' and 'functionings'. It further proposes a framework of social and spatial processes that generates spaces for amalgamation of 'freedoms', 'functionings', 'unfreedoms', 'agency' and 'benefits' in order to explore a mutually reinforcing and evaluative expansion of opportunities. An analysis based on secondary data on Dharavi, Mumbai has been undertaken using the framework to reinforce the idea of complementarity between various 'freedoms'.

This section will primarily deal with exploration of the capability approach and associated debates to bring out elements that can be used further along with principles and elements of urban design theory explored in the second section. The second section will deal with formulating a capability-led framework for urban design that will be used in Dharavi as an example in the third section.

## 1.2 The capability approach, its interpretations and operationalisation

### The concept of the capability approach

Clark (2006) traces the development of the capability approach in Sen's writings and through various authors in the past two decades. "It is now widely recognised that the capability approach manages to bring together many of the concerns of basic needs theorists ... into a single coherent philosophical framework" (Clark, 2006, p.3). Frediani (2007, p.135) quotes Sen (2005), "the people have to be seen, in this (development as freedom) perspective, as being actively involved – given the opportunity – in shaping their own destiny, and not just as passive recipients of the fruits of cunning development programs".

Sen offers an approach to look at development as an evaluation of freedoms that the social structures afford to individuals within society and an expansion of the same. Frediani (2010, p.175) quotes Sen (2005) "A functioning is an achievement of a person: what he or she manages to do or to be, and any such functioning reflects, as it were, a part of the state of that person". 'Functionings' is described as "doing 'X' and choosing to do 'X' and

doing it" (Frediani, 2010, p.175). It is associated both with agency and resources in an operational sense. It also deals with 'power' and decision making, where the choice to do something one values lies with one's own self. Capabilities have been associated with 'freedoms', which brings in the importance of governance structures that allow that freedom. Hence, the 'agency' of change (the people themselves) assumes great importance in achieving those freedoms. Capabilities have also been associated with 'values', which brings in the notion of culture and traditions, but also emphasises broader societal values associated with development, such as inclusion and equity.

The capability approach identifies human dignity in an operative sense as 'capabilities' and 'functionings', refocusing the lens of developmental efforts on human agency, throwing out any instances of normative prescriptions to have a bearing on the future direction of development. With 'capabilities' as the driving force, the approach has a temporal element interwoven within it. Changing 'capabilities' and 'functionings' can realign the direction of development with people in the saddle.

### Criticisms of the capability approach

One of the key criticisms of the capability approach is that it does not suggest a set of 'capabilities', which makes it incomplete and open for interpretation (Frediani, 2007). Additionally, "some freedoms limit others; some freedoms are important, some trivial, some good and some positively bad" (Nussbaum (2000) in Alkire, 2007, p.5). It is argued that a central set of 'capabilities' will outline the commitment towards a positive set of freedoms and cull efforts of stronger classes or communities to impose their set of values.

Sen does not elaborate on any universal list of capabilities that would operationalise the theory in different cultures on the premise that a 'list' would be normative and would cull the freedom of participants to decide on capabilities and values important to them. "There is reason to believe that the openness of Sen's approach is a strength, rather than a weakness; it provides an inclusive conceptual framework that captures the multiplicity and diversity of the perception of human well-being" (Frediani, 2007, p.138). Frediani (2010, p.177) quotes Sen (2005) "The problem is not with listing important capabilities, but with insisting on one pre-determined canonical list of capabilities, chosen by theorists without any general social discussion or public reasoning. To have such a fixed list, emanating entirely from pure theory, is to deny the possibility of fruitful public participation on what should be included and why."

In an operative mode, the direction of efforts can focus on people's priorities, on what can be achieved, when it can be achieved and how it can be achieved, rather

than on what 'should' be achieved. This touches on a fundamental principle advocated by the participatory approach which will be discussed later in the paper. Among other criticisms based on the operationalisation of the theory include the question of prioritisation of 'capabilities' (Clark, 2006). The process of prioritisation of 'capabilities' involves a number of choices that are linked to 'functionings'. Here, relative reasoning to value certain choices over others can become subjective and counter-productive. The questions of 'who' decides and 'how' to overcome this constraint need to be addressed. The role of the practitioner then becomes central to the questions and the positionality of the problem.

### Operationalisation of the capability approach

In the past decade, attempts have been made to 'complete' the theory and make it operational. Foremost is the work of Martha Nussbaum (Clark, 2006), who proposed a list of "central human capabilities" which are of "central importance in any human life", including life, bodily health, bodily integrity, emotions, other species, play and political and material control over one's environment. On Nussbaum's project, Clark (2006) assesses that "...it is not so much the method itself that is fraught but its potential for abuse" (p.7). Alkire (2007) suggests a set of selection methods that can be used to identify capabilities or dimensions. These include "a) existing data or convention, b) assumptions, c) public consensus, d) ongoing deliberative participatory processes, and e) empirical evidence regarding people's values" (2007, p.7). Clark (2006) points out shortcomings of the above by not identifying capabilities with the above methodology through case examples and not considering the many different conceptions of poverty itself. However, the methodology does offer a set of guidelines that is a mix of Nussbaum's normative list and ascertaining facts on the ground through a participatory approach. It offers an opportunity to compare normative assumptions with actual fieldwork and develop a more robust direction for future action.

However, it remains to be seen how the above can be operationalised as the positionality, prejudices, inclinations and assumptions of the practitioner also come into play. Questions that need to be answered include, how to weight normative assumptions against fieldwork findings? How to prioritise? And, how to interpret and attach weight to values? Frediani (2007) emphasises the use of participatory approaches in the operationalisation of the capability approach, also suggested by Alkire (2002). Frediani (2007, p.138) refers to Ellerman (2001), "By choosing and weighting valuable capabilities and functionings through participatory methods, the capability approach can aim at improving people's ability to escape poverty, while still preserving and expanding their social and cultural identities". Alkire (2007) has devel-

oped the methodology for ascertaining the dimensions of poverty with participation as one of the cornerstones. Alkire (2007) recognises that the participatory approach is fraught with shortcomings that require careful judgement along with strong interpersonal skills, hinging on the success or failure on the practitioner and specific methodology employed.

### 1.3 Implications of the capability approach on urban development

The capability approach can offer an alternate perspective in analysis of issues related to urban development at the level of policy and at the practice level. An attempt for expansion of freedoms can potentially have a much larger effect, enhanced by the active economic mass of the city. This idea recalls Sen's dual conception of freedom which on one hand is 'constitutive' to being fully human (by being able to make and pursue one's choices), and on the other is 'instrumental' to achieving greater freedoms (freedom to achieve a particular functioning can lead to additional freedoms and functionings) (Sen, 1999). Policy is the first level of intervention as suggested by Khosla (2002) where the goal should be "removing unfreedoms" and to expand existing freedoms. He points out the existing information base primarily consists of income based analysis that is highly inadequate to advocate effective policies (Khosla, 2002). And, Sen (1999) conclusively points out the deficiencies of income-led analysis of development and poverty. He elaborates that income can be one of the means of achieving something; however, numerous other factors related to social structures, culture, governance, equality and justice play a major role in the access to those achievements. Hence, policy can play a fundamental role in creating the conditions for development with the primary aim of expanding the "capabilities", expanding "opportunity freedoms" and "process freedoms" (Sen, 1999, p.17). "Sen's thinking therefore opens up an opportunity for urban theorists and planners to break from the enlightenment positivist epistemology and accept the dimensions of multiplicity and movement in conceptualizing urban policy" (Frediani, 2007, p.140).

At the practice level, the capability approach offers new grounds for cross comparison of needs, aspirations, capabilities and opportunities within communities and with individuals. It can offer a monitoring and evaluation framework based on effective expansion of 'capabilities' that have been expressed, prioritised, and targeted. Frediani (2007) has applied the theory for a case study of slum dwellers in Salvador da Bahia, Brazil. He has used a participatory approach to undertake a survey of slum dwellers, assessing the impacts of an upgrading program. He comes up with a set of 'freedoms' expressed by the slum dwellers to acquire dignified shelter; "the freedom to in-

dividualize, the freedom to expand, the freedom to afford living costs, the freedom to have a healthy environment, the freedom to participate, and the freedom to maintain social networks” (Frediani, 2007, p.146). Each of the ‘freedoms’ expressed above have a ‘value’, a ‘capability’ (that cannot be a ‘functioning’ due to lacking ‘freedom’), and a (proposed) ‘functioning’ attached to it. Also, each of the above has interconnections that point towards legal structures, governance structures and mechanisms, social structures (customs, traditions, and norms), family structures, and economic conditions. For example, the ‘freedom to expand’ is directly associated with ‘freedom to a healthy environment’ (due to constraints of space) which bring the people in direct conflict with legal and governance structures. For achieving this ‘functioning’, ‘freedom to participate’ and ‘to maintain social networks’ is of utmost importance as it imparts a structure to their efforts through effective leadership and representation. ‘Freedom to afford living costs’ is also directly related to ‘freedom to a healthy environment’ through provision of water, electricity and sanitation. Affording a multi-dimensional analysis of such conditions and magnitude can go miles towards conditioning a solution that deals with effective, measurable, and constantly evolving expansion of efforts and solutions. To afford such an analysis, Frediani (2010, p.178) introduces the concept of “capability space” which has “individual, local and structural factors” influencing “people’s choice, ability, and opportunity to transform resources into achieved functionings”. He also emphasises the concepts of ‘agency’ (ability to choose) and the concept of ‘power’ that become instrumental in operationalising the ‘capability space’. He has used the example of a bicycle as a mode of transport with the ‘capability space’ having other modes available as well, including bus and car. It is through an operation of choice influenced by abilities, opportunities, external factors, and values reaching to that one or more ‘functioning’ of which mobility might or might not be the most desired one (Frediani, 2010).

## 1.4 Conclusions

Development discourse lays emphasis on the ‘human agency’ where tapping the potential of the people is key for achieving sustainable development. The capability approach reorients the focus of development towards the ‘subjects’ and ‘beneficiaries’. It proposes a revolutionary step away from the prescriptive notions that are suggested by ‘lists’ imposing set standards of facilities, amenities and infrastructure. It proposes a framework that is based on ‘capabilities’ and ‘functionings’ that places the ‘decisions of development’ in the hands of the people. This resonates with decades of thought and discourse that centres on employing participatory mechanisms that incorporate the synergies of economic status, social networks, political inclinations and environmental opportunities and constraints. It also suggests grounds for devel-

oping a framework for negotiation within and in between development discourse that would fundamentally deal with ways and means of expansion of freedoms.

‘Capabilities’ and ‘functionings’ offer a complex web that needs to be unpacked in terms of the attached freedoms and values. With ‘freedom’ being the operative word, ‘capabilities’ and ‘functionings’ revolve around the concept in achieving the same through a value-based judgment. Such values are subjective, dynamic, and interchangeable with continuous expansion of freedoms that open new doors and create new opportunities that can lead to abandonment of one value-based judgment in favour of another. Also, what is valued need not necessarily be a ‘capability’ as there may not be enough freedom to achieve it and thus cannot be realised into a ‘functioning’. The concept of ‘capability space’ is useful in understanding such a set of choices that are available towards a desired ‘functioning’; however, it can harbour enormous complexities in understanding it when applied to complex scenarios. The understanding of all of the above terms is an iterative process that involves dimensions of time resulting in redefinition of the terms and renegotiation of relationships between each ‘freedom’, ‘capability’, ‘functioning’, and ‘value’.

There are obvious opportunities for urban development policy to reorient itself towards creating possibilities for expansion of freedoms that can have far reaching effects on practice. In practice, the capability approach offers an alternative framework that can connect its roots with the overall objectives of development itself rather than being an isolated, self-serving, and mono-visionary operation. “By applying Sen’s thinking to an urban development context, it is possible to identify an emerging paradigm that moves away from a dualistic perception of cities (formal and informal; included and excluded) to one based on freedoms, interaction, multiplicity and diversity” (Frediani, 2007, p.139). It can connect to the philosophical and ideological roots of development that through a dynamic framework, can unpack the complexities, repercussions and renegotiations that are usually absent in the analysis, implementation and evaluation of such endeavours that are usually understood as homogeneous in nature, with vague or imposed ideas of quality of life, and are static one-time, end-state interventions.

The next section will delve into a relativistic discourse of urban development praxis, sieving out the positionality of urban design in addressing concerns of the poor. It will attempt to justify the position of urban design as a praxis best suited to gather and inculcate the capability approach towards a framework that, along with participatory methods, can be used in understanding and focusing the energies of a development practitioner in an amalgamative, principle-based methodology, working towards expansion of developmental opportunities of the people in various timelines.

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## 2. Theory to practice: exploring a new basis

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### 2.1 Relative positioning of urban development praxis: planning, design & architecture

In general, the realm of urban development essentially has three core practice areas – architecture, urban design and urban planning (Sternberg, 2000). Each of these deals with specific scales, domains and elements within the city with overlaps between each other. It is with this background that one attempts to understand urban development praxis and explore the positionality of urban design and its alternate value, exploring a basis with the capability approach to reconnect with the core meaning of development, at the centre of which lies the individual and the society.

Master planning has been the conventional form of practice that incorporates inputs from all streams of urban development praxis, synthesising them into a spatial development framework that incorporates governance structures, environmental regulations and development standards. However, this process has been criticised heavily primarily due to its prescriptive nature and also due to lacuna in its implementation. Strategic planning has shown new inroads towards a less restrictive form of planning that targets key areas of concern, allowing enough flexibility for local and ground level concerns to have space and exercise influence. “Strategic planning is selective and oriented to issues that really matter. As it is impossible to do everything that needs to be done, ‘strategic’ implies that some decisions and actions are considered more important than others and that much of the process lies in making the tough decisions about what is most important for the purpose of producing fair, structural responses to problems, challenges, aspirations, and diversity” (Healey, 2010, p.440, quoting Albrechts, 2004). This process has also received criticism: “...it may not help to systematise experiences, for example through surveys about opinions and issues, as this may well smooth away the experiential depth out of which clues about what is going on and what is important may emerge..... There is no substitute for becoming “street-wise” as a way of accessing experiential knowledge, or for recognising that any place has many different streets and spaces of encounter” (Healey, 2010, p.448). This reiterates the need for strategic thinking blended with local needs, and a framework that strategically enhances ‘freedoms’, enabling expansion of ‘capabilities’ resulting in ‘functionings’ that are based

on a value set that is self-determined rather than prescriptive. On the other hand, the scale of operation of master planning and strategic planning affords a lesser level of interaction with the “spaces of encounter” which is the primary domain of urban design.

In terms of scale of operation of urban design, it is larger than that of the discipline of architecture and smaller than that of planning, however, it has elements of both within it. “... in ... attempts to define urban design, ... we see a variety of foci: some are dealing with the domains of urban design, especially with its involvement with the physical fabric of the city; others have focused on its scale, its points of departure from, or congruence with, planning and architecture, its political and management aspects, or its place in the planning process” (Madanipour, 1997, p.12). There are a variety of interpretations in defining the scale, domain and elements of urban design as a discipline (Kallus, 2001). One school of thought defines urban design as an ‘outcome’, that which deals with the sensory details. The other defines it in terms of a ‘process’ that deals with management and time. Both impart a great deal of body to the discipline in terms of spatial aspects and the processes behind it. On one hand the definition and scope of urban design comes close to that of planning; on the other, it deals with concerns related to art, aesthetics and architecture (Madanipour, 1997). One of the primary ambiguities has been described as “the spatial or social emphasis of urban design” (Madanipour, 1997, p.13). This, among other ambiguities, places the discipline at the crossroads of the urban development praxis. In a negative sense, this creates enormous ambiguity in the scope of urban design in its applicability in the spatial and social realms. A strong inclination towards the spatial and visual aspects might lose out on the social undercurrents of inclusion, diversity and plurality. “The fundamental relationship between space and social process is inevitably pushed aside when the position of the users is diminished and space is viewed strictly morphologically” (Kallus, 2001, p.135). On the other hand, a contrary position of urban design towards social emphasis creates confusion in terms of the discipline’s primary domain of dealing with the physical realm. In a positive vein, it lends enough flexibility to the profession to base itself on a platform that is both strategic in the sense of the larger whole (in the sense of a master plan), and symptomatic to the issues at hand (in the sense of solutions related to design). It creates a space of practice that can act in between the

boundaries of the physical and the non-physical, lending itself to either, within and outside the strict demarcations of practice. "Urban design therefore can be seen as the socio-spatial management of the urban environment using both visual and verbal means of communication and engaging in a variety of scales of urban socio-spatial phenomena" (Madanipour, 1997, p.16).

## 2.2 An alternate value to urban design

Traditionally, urban design has had elitist undertones serving interests of power and capital. "Design is a sign of social status and good aesthetic taste, providing an added bonus to the products in the marketplace that carry a designer's label" (Madanipour, 2006, p.179). With this standing, urban design as a profession has come to serve commercial interests, adding measurable financial value to development. However, 'good' design can also deliver tangible and intangible benefits in terms of social and environmental aspects (Carmona et al, 2002). Social value of urban design has been defined "as a broad concept that should rightfully spread beyond the confines of the users of the immediate site, requiring in particular that development should be designed to integrate into its surroundings and infrastructure at a larger spatial scale" (Carmona et al, 2002, p.78). This definition has a particular standpoint that deals with urban design within brackets of space, as an intervention viewed from outside, as a product that has attributes and qualities that are directly interacting with the outside world. The environmental value as defined by Carmona et al (2002) is more amalgamative, touching on aspects such as health and hygiene, safety, aesthetic qualities, accessibility and permeability which dilutes the brackets and looks at a continuum. "Better-designed urban environments, therefore, improve the quality of life for more citizens, offer a wider range of opportunity and choice, add comfort and liveability, and encourage cultural exchange and social integration" (Madanipour, 2006, p.186). From a role that is conceived as an end in itself, that which is more visual and dogmatic, urban design is seen as a means to achieve a set of ideals that transcend traditional domains, operating at various scales. "... urban design and its roles are contested along the lines that stratify society, and the success or failure of urban design and development depends on how far they are able to cross these lines and serve large sections of their users" (Madanipour, 2006, p.185). Kallus (2001) gives the example of the Nolli map of Rome (1748) where space, in the interiors as well as in the open, is represented as a continuum that dissolves the boundaries lending an expression to the experience of public space, streets and squares in a flow. Devoid of abstraction, urban space is represented as a set of inter-relationships that are bound to have attributes that define the experience within that space and in transition from an abstracted space such as square-to-street-to-interiors of public buildings.

Hence, in relative terms, within the urban development praxis, the discipline of urban design has the primary potential of interacting with the built environment dealing with the socio-spatial phenomena in terms that are more flexible than the domain of architecture as a discipline, and in terms that are closer to ground than the scale of master planning. Within urban development praxis, it can deal with scales, domains and elements that are common to master planning and architecture, incorporating principles of social justice, inclusion, plurality and diversity, among others.

## 2.3 Drawing parallels between the capability approach and urban design theory

"One of the crucial insights of the capability approach is that the conversion of goods and services into functionings is influenced by personal, social, and environmental conversion factors; and that it should not be taken for granted that resource provision leads to increased capabilities or functionings" (Oosterlaken, 2009, p.92). This argument is one of the cornerstones of the framework of the capability approach, wherein the expansion of freedoms and capabilities can lead to alternate values and "functionings" that were never thought feasible before. Sen (1999, p.62) cites "adaptation and mental conditioning" as one of the critiques of the utilitarian approach wherein status-quo is maintained even with availability of resources. Frediani's (2010) concept of "capability space" offers an insight into the dynamics involved within expansion of freedoms that is influenced by "individual, local and structural factors" (p.178). The boundaries of that "capability space" are defined by the 'freedoms' afforded by and attained by society and individuals directly influencing the rationale of opportunities and choices leading to a set of 'functionings', of which a sub-set of 'values' influences the eventual outcome. The expansion or contraction of this "capability space" is directly influenced by all three factors that subsume both formal socio-structural factors such as laws and governance, and informal socio-cultural factors such as traditions, beliefs and practices. This positive expansion of 'freedoms', 'capabilities' and 'functionings' is fundamental to development and hence, to any such attempt via urban design.

### Towards an expansion of 'freedoms'

Sen (1999) focuses on five types of instrumental freedoms that are essential for an individual to live freely. He describes these as "(1) political freedoms, (2) economic facilities, (3) social opportunities, (4) transparency guarantees, and (5) protective security". Described separately, each forms a part of a complex web of relationships within a larger whole contributing to creation of choices and opportunities for individuals and society. The "po-

political freedoms” as defined by Sen includes freedom to choose ideologies and entitlements. These freedoms go hand-in-hand with “economic facilities” where there are opportunities to utilise economic resources within the formal and informal structures. “Social opportunities” is implied for access to healthcare and education that contribute to the overall well-being of the individuals. The last two, “transparency guarantees” and “protective security” refer to freedom within the process of exercising the above with built-in mitigation measures for combating vulnerability in the system.

These ‘freedoms’ echo Henri Lefebvre’s (1967) concept of “right to the city” which, he describes, “is like a cry and a demand ... the right to information, the rights to use of multiple services, the right of users to make known their ideas on the space and time of their activities in urban areas; it would also cover the right to the use of the centre” (quoted in Marcuse, 2009, p.189). With activist undertones, the concept rallies around the rights of the deprived, but also highlights the conflict in the exercise of those rights between various stakeholders within a city. The “right to information” and “to make known their ideas” is directly related to “political freedoms”, while the “right to use of the (city) centre” is related to “economic facilities”. While Sen’s ‘freedoms’ and Lefebvre’s “right to city” have a characteristic standpoint towards development in general and towards the city in particular, and primarily from the point of view of the deprived, contemporary urban design discourse through Madanipour (1996, 1997, 2003, 2006, 2007), Carmona (2002, 2007), and Kallus (2001) attempt to look at urban design within the urban development praxis serving both ends of the pole, private and public, rich and poor, government and governed. It is acknowledged that the discipline is intertwined with the socio-economic undertones of each society it comes to be used in, and that its position within the praxis places it best to serve in a socio-spatial mode of operation (Madanipour, 1996).

The position of urban design to deal both with the process and the product of urban development is unique and imparts the profession a freedom to act with a similar characteristic standpoint as described above. The transition of reading space from purely an abstract form to a more subjective interpretation (Kallus 2001) is key towards formulating the foundations for operationalisation of ‘freedoms’ and interpreting their relationships in space and time. At the same time, the “expressive-subjective process” (Madanipour, 1996) of design imparts the element of flexibility and dynamism leading to the creation of opportunity space for the exercise of choices not only from the practitioner’s view, but also from the users standpoint. Carmona (2002) gives examples of the benefits of ‘good’ urban design (in the United Kingdom) delivering benefits which are economic, environmental and social in nature driving towards an expansion of opportunities and ‘freedoms’.

### Towards expansion of ‘capabilities’

Oosterlaken (2009) highlights that design has an “effect on human capabilities”. However, real and effective enhancement of capabilities is not only a function of resources (which can be in terms of new design), but also in terms of horizontal expansion of choices afforded by that design. This is fundamental to Frediani’s (2010) concept of “capability space” wherein multiple choices are afforded by presence of multiple ‘freedoms’ which then translates into ‘functionings’ based on certain values. How can urban design as a practice work towards expansion of ‘capabilities’ of individuals and society? Carmona (2002) expresses the social benefits of urban design as enhancements in accessibility, identity, security, inclusivity (also Madanipour, 2007), diversity and, not least, economic value. Public spaces can and have been appropriated in a variety of ways by societies to express themselves either through congregations or meetings exchanging experiences. Accessibility to facilities and amenities means lesser degree of duress for individuals enhancing their productivity affecting other ‘capabilities’. Greater security, especially for women, enhances their ‘capabilities’ manifold, contributing towards development of other ‘capabilities’. Security is also achieved through inclusion which in itself promotes mixed use and diversity within the community, bringing approaches and experiences of varied nature into the mainstream. The most measurable benefit of ‘good’ urban design is in terms of enhancing economic capabilities in terms of reduced maintenance costs and greater investment. An expansion of such capabilities can be termed as “real and effective” that enhances opportunities and affords choices to individuals and societies.

Frediani (2007) tested the capability approach in Brazil in outlining a set of ‘capabilities’ expressed by the inhabitants of Salvador da Bahia. His analysis included ‘freedoms’ to individualise and expand, which were directly related to their built environment. These can be termed as expressed or proposed ‘capabilities’ of the population as there are specific sets of ‘freedoms’ required to achieve those ‘capabilities’. For example, expansion of their dwellings would not only command financial resources, but also require ‘freedoms’ to negotiate and appropriate the space, which takes us back to the interpretation of “instrumental freedoms” of Sen (1999), specifically “political freedoms”, and “economic facilities”. Their ‘capability’ to expand is limited by ‘freedoms’ to do so even when they have necessary financial resources. Hence, the process to expand becomes more important than the actual ‘functioning’. The use of current ‘freedoms’ for negotiation of desired ‘freedoms’ needs to be addressed through the process as well as the product, offering enough dynamism and flexibility in the built environment for expression of newly acquired ‘capabilities’ to be translated into ‘functionings’. Here, the “objective-rational process” (Madanipour, 1996, p.93) in

urban design assumes alternative goals that deal with future products (with foreseeable negotiated ‘freedoms’ and ‘capabilities’) within the present set of ‘capabilities’. An example of this is the work of ‘Elemental’ in Quintas Monroy, Iquique, Chile. Available financial resources (government subsidy, loans, etc.) permitted a built volume of 50% per household. Hence, the design incorporated a porous structure that could be expanded when the family had more resources. Cultural considerations did not permit them to build high-rise and one family per one lot were accommodated reducing the number of families that could be settled on the same site. However, they achieved the required density at site with a semi-private space for 20 families each (Elemental, n.d.). They used the existing ‘capabilities’ of the families and the group as a whole towards designing an environment that negotiated with foreseeable ‘capabilities’ to expand and appropriate the space. The tools of urban design were used along with the technical capabilities of architecture to achieve a dynamic and flexible solution.

While the example has received criticism, for example, for being far from city services, Quintas Monroy highlights the importance of design as an integrated realm of operation that not only dealt with public realm, but also

defined and designed the private space to encapsulate the essence of the approach using what is present and usable, while preparing for the future. It also highlights the importance for negotiation as a tool within the process that was present within the design, and that was aided by the design of the public space itself. The public space jointly used by 20 families presented a platform for all stakeholders to participate in a process of iteration that kept all possibilities open before their eyes. Madanipour (2003) emphasises the importance of design of public spaces as places of vitality and expression that lend a platform for the voices of the people to interact and mix. They are more visible and hence can form an exemplar for endeavours that stretch beyond the public into private and also into other parts of the urban fabric. The ranges of possibilities that can be explored within the public realm are enormous and far reaching. Market squares, public gardens, streets, pathways, pedestrian walkways and ceremonial or religious spaces, among others, offer a potential for negotiation of conflicting and contrasting realities that be used to shape potential ‘capabilities’ for the future.

## 2.4 Participation as a tool within the process

**Figure 2.1.** Quinta Monroy - before and after. Source: <http://directoriarco.blogspot.com/2009/01/elemental-architecturequinta.html>



Frediani (2007, p.138) quotes Ellerman (2001), “By choosing and weighting valuable ‘capabilities’ and ‘functionings’ through participatory methods, the capability approach can aim at improving people’s ability to escape poverty, while still preserving and expanding their social and cultural identities.” Sen (1999) recognises the need for participation as key for developing a contextual set of ‘capabilities’ rather than a normative list which assumes so-called universal values. Frediani (2007, p.139) draws parallels with John Turner’s self-help approach where “people are perceived as agents of change, and not mere recipients; commodities are analysed by what they do to people’s lives and not by what they are.” The translation of ‘freedoms’ to ‘capabilities’ to ‘functionings’ and to utilities has the key covenant of ‘values’ attached to the process that can primarily be assessed through participatory methodologies. ‘Values’ can often subscribe to the subjective judgement of the individual or the society, or can be based on cultural or religious preferences. Sen (1999) has emphasised that certain values hold greater urgency than other seemingly obvious ones and a participatory weighted valuation is required for ascertaining the same.

Participatory Action Planning, by Hamdi et al. (1997) proposes a movement between problem-based analysis to a strategic solution-based process. A generic Action Planning process is described sequentially as Problems and Opportunities, to Goals and Priorities, to Options and Trade-offs, to Resources and Constraints, to Project

Teams and Tasks, and to Implementation and Monitoring. The process attempts to work with the existing 'capabilities' of the people identifying how they can be used in the best possible scenario. It also identifies how those capabilities can be expanded in the future through assessment of current trade-offs and options. These can then be negotiated with development of future capabilities. Values are built into the decision making process through the identification of goals and priorities where tasks can be identified based on a timeline with most valued (read important, preferred or urgent) tasks gaining precedence over others. These are then realised into 'functionings' through implementation strategies that either work with individual capabilities or pooled resources and collective capabilities. The solutions proposed within the whole process aim to be strategic by addressing core issues such as gender, empowerment and health, albeit through visible and feasible tasks. These strategic issues are the 'freedoms' that need to be achieved for real and effective development.

The Baan Mankong (secure housing) programme in Bangkok, Thailand exemplifies the principles of participation used towards expanding the 'freedoms' and 'capabilities' of slum dwellers towards achieving large scale housing and slum redevelopment. The programme places the people's agency as the focal point of all development activity. All efforts are focused towards expansion of their financial capabilities, technical skills, and decision-making powers. Through the Community Organizations Development Institute (CODI), the programme channelled cheaper funding for the upgrading works directly to the communities and individuals in the form of subsidised loans. It also helped communities network together and, with non-governmental organisations, to develop a collective knowledge pool of experiences and technical knowhow. The people themselves recognised and chose the direction and type of development as per their capacities – in terms of land, types of houses, materials, open spaces and even neighbours. Community plans developed with active participation of the people have resulted in communities taking charge of their surroundings and spaces with regards to safety, security, access to amenities, and identity (Boonyabanha, 2009).

## 2.5 Capability-led framework for urban design

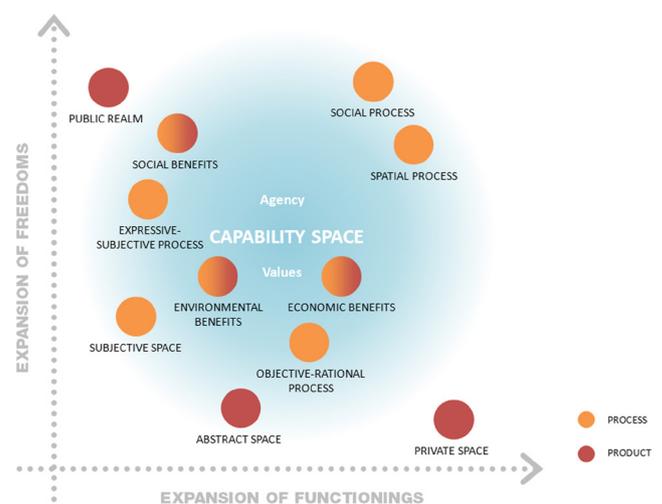
The connections between contemporary urban design theory and the capability approach can be translated into a framework that operationalises the theory into practice. An examination into the parallels will lead to further clarity for the framework as a means to explore the connections between theory and practice. Figure 2.2 explores the relationship between capability ap-

proach and urban design theory as a means and ends of expanding 'capability space'.

'Capability space' has been conceived as an intersection of expanding 'freedoms' and 'functionings'. It can grow when "real and effective" freedoms are translated into 'functionings' through the filter of values and agency. It creates a field of opportunity that allows this translation to take place. Various aspects of urban design theory have been plotted within the capability space in terms of their influence on expansion of freedoms and 'functionings'. They have also been segregated within 'process' and 'product' dimensions to emphasise the characteristics of operation of the theory within capability space. This also reiterates that both 'process' and 'product' play a crucial role in expansion of 'freedoms', 'capabilities' and 'functionings'.

Figure 2.2 also suggests a temporal dimension to the whole process of expansion of 'freedoms' and 'functionings'. An expansion of 'freedoms' leads to expansion of the capability space which can lead to alternate "functionings". This is the central idea for developing a capability-led framework for operationalising urban design within the capability approach. The framework not only needs to link design practice with the expansion of capability space, but also needs to incorporate the changes brought about by expansion and inform the transformation of space itself. It also inherently needs to have an evaluative mechanism to go back and forth in assessing whether "real and effective" expansion has taken place. The framework should have means to explore alternate freedoms and capabilities in order to explore how best to utilise current capabilities and to negotiate for future expansion of capability space.

**Figure 2.2.** Drawing parallels between urban design theory and the capability approach. Source: author



The framework is conceived as a social process that moves from an assessment of ‘current ‘functionings’ towards establishing ‘current capabilities’ of the people. This can generate information on current ‘freedoms’ afforded by formal and informal structures and the nature of agency ‘freedoms’. The assessment of ‘current functionings’ towards ‘current capabilities’ also establishes the values that go towards translation of those ‘functionings’ from ‘capabilities,’ informing the process of translation of opportunity to choice. According to Sen (1999), Alkire (2007) and Robeyns (2005), the process of participation is fundamental towards enriching the debate on expanding capabilities and therefore capability space itself. Hence, it is pertinent that any such framework have participation as one its primary processes in establishing a list of desired capabilities that works towards a set of ‘functionings’. These ‘desired capabilities’ stem from the set of “instrumental freedoms” which can be expanded further. An assessment of these freedoms needs to be undertaken in order to establish connections and conflicts between each other, and for the establishment of further capabilities that they might lead to. “Desired capabilities” are also linked to the values expressed earlier, adding and subtracting older values along with expansion of ‘functionings’. As a social process, these ‘desired capabilities’ and ‘desired functionings’ form the basis of the spatial process which can point out the action areas based on a prioritisation of ‘desired functionings’. Each ‘desired functioning’ needs to be examined within the overall framework for connections, conflicts and congruence with other ‘capabilities’ and ‘functionings’. It is important to note that some ‘desired capabilities’ will need to be negotiated with other stakeholders generating the required agency freedom for their translation into ‘functionings’.

At the start of the spatial process, each of the ‘functionings’ needs to be unpacked for its social, economic and environmental benefits, again establishing connections, conflicts and congruence, working towards determination of the ‘spatial realm’ – public realm, private space, or a combination of both. Each element within specific ‘spatial realm’ will spawn its own process requiring an assessment of alternatives and negotiations between stakeholders. The results of this process depend very largely on agency freedoms afforded and negotiated by and between the various stakeholders. The design of the product itself needs to be part of the larger process, as a means to generate more opportunities and increase the choices available for further expansion of the capability space through expansion of ‘freedoms’ and ‘capabilities’. The design is informed by the process of translation of ‘capabilities’ into ‘functionings’ through careful consideration of the catalytic nature of values. It not only delivers the benefits where required, but also informs the design in terms of its transformation in the near future.

Figure 2.3 and Figure 2.4 synthesise the framework into a set of relationships that generate various types of spaces within the social and spatial process. ‘Space’ here is not meant in physical terms, but in terms of interactive, correlated and cogenerated fields that arise out of the synergies of ‘freedoms’, ‘functionings’, ‘benefits’ and ‘agency’. The temporal and expanding nature of these aspects is represented and incorporated in the framework. The spaces also interact with each other contributing and exchanging aspects and elements between each other. These spaces can expand or contract along with the axial elements, however, the boundaries of the spaces are not dependent on the elements, but on the nature

Figure 2.3. The social process. Source: author

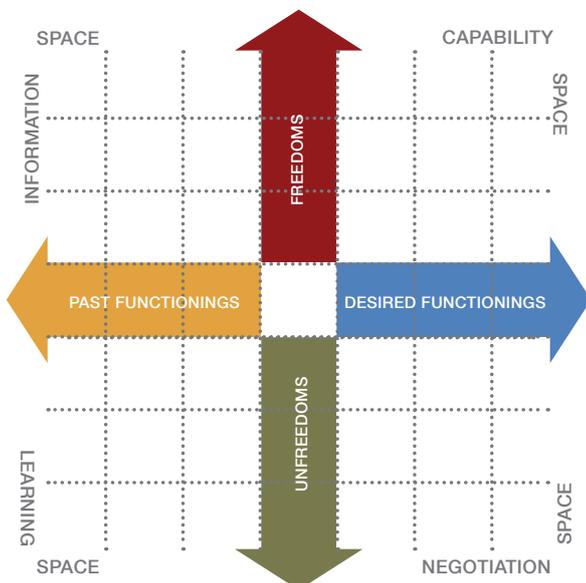
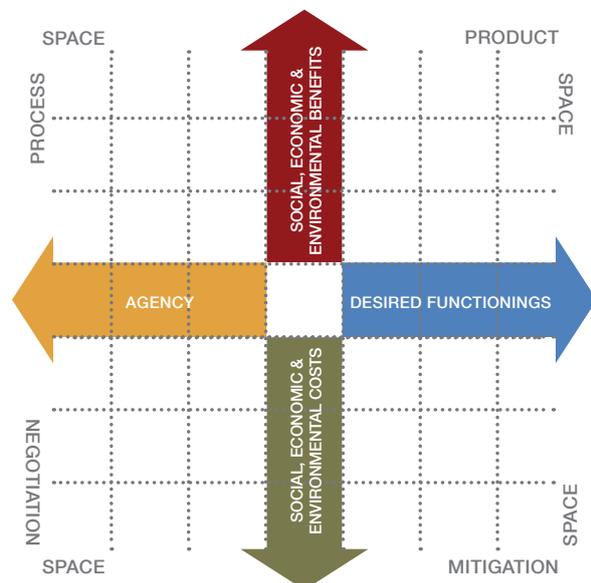


Figure 2.4. The spatial process. Source: author



of the aspects being discussed themselves. Past ‘functioning’ contributes to the development of an ‘information space’ that yields an exploration into ‘freedoms’ that are available to the community and the individual. This ‘information space’ consists of the ‘values’ that led to those ‘functionings’ informing the catalytic process with which opportunities were translated into a choice. This space also consists of the components of those ‘functionings’ in terms of agencies involved, costs incurred and interventions undertaken. Similar to ‘information space’ is the ‘learning space’ that is generated from the interaction of past ‘functionings’ and ‘unfreedoms’. ‘Unfreedoms’, a term used by Sen (1999), is not only opposite in meaning to ‘freedoms’, but also includes exclusionary practices, lack of access and vulnerability, among others. The ‘learning space’ generates information regarding ‘unfreedoms’ both in relation to past ‘functionings’ and as a field of information, analysing the interplay of various stakeholders and their standpoint. They directly contribute to determining the boundaries of the other two spaces. The axial element of ‘freedoms’, apart from existing freedoms, also includes ‘freedoms’ that would be required for ‘desired functionings’, and the space generated with the interaction of the two is the ‘capability space’. This space directly borrows from ‘information space’ the values that existed towards conversion of ‘past functionings’ and from ‘negotiation space’ which is generated with the interaction of ‘unfreedoms’ and ‘desired functionings’. It has an indirect relationship with ‘learning space’ borrowing aspects via ‘negotiation space’ and ‘information space’. ‘Negotiation space’ itself discussed aspects related to ‘unfreedoms’ (vs. ‘freedoms’) and other vulnerabilities in relation to ‘desired functionings’, searching for aspects that can contribute to the expansion of ‘capability space’ itself.

The spatial process takes off in parallel with the ‘desired functionings’ in the social process. An iterative process can be undertaken for determining the optimum ‘desired functionings’ in conjunction with their ‘social, economic and environmental benefits’. The interaction of these two elements is translated into a ‘product space’ where options can be discussed for implementing the ‘desired functionings’ in the spatial realm along with the nature of that intervention. The interaction between ‘social, economic and environmental benefits’ and ‘agency’ leads to ‘process space’ that deals with the delivery of product or intervention and its possibilities. ‘Process space’ is also influenced directly by ‘capability space’ in terms of the discussion between what capability and whose agency is being employed for contribution towards the ‘product space’. The interaction between ‘social, economic and environmental costs’ and agency discusses aspects related to functioning of the agency and draws from the ‘negotiation space’ in the social process in terms of the ‘unfreedoms’ expressed earlier. It indirectly contributes to ‘product space’ influencing its boundaries and nature of intervention. ‘Mitigation space’, a result of ‘desired functionings’ and ‘social, economic and environmental costs’

works in parallel with both ‘product space’ and ‘negotiation space’, and indirectly with ‘process space’, in order to mitigate ‘costs’ or foreseeable effects of ‘desired functionings’ such as severing of social networks, gentrification, commercialisation and rising rentals resulting in a push-out effect on the population.

The foundations of the framework are within the capability approach which deals with the creation of opportunities and the possibilities of choices available to individuals and communities. The different types of spaces generated in the framework offer a degree of self-evaluative flexibility due to their intersections with each other, and relationships with others. Each space has to be dealt with independently and together as a whole tying up with the larger picture.

## 2.6 Conclusions

Urban Development praxis is fraught with issues in terms of its analysis of the urban, being influenced by a multitude of subjects and disciplines at the same, and more often than not, the analysis being partial and exclusionary. It is a practice that is divided between brackets on the basis of scale, domain or element that is dealt with. Nevertheless, these brackets are important enough to bring order to our comprehension of a very large reality, although bringing with it a lesser hold on the larger picture.

Within urban development praxis and between the three disciplines, urban design has come to be recognised as having to deal with attributes of architecture and urban planning. It is placed in-between the scale of practice of architecture and urban planning, dealing with both social and spatial aspects that also creates a great degree of ambiguity in its scale, domain and elements of operation. It places the discipline at the crossroads of practice, in a debatable positionality of being a process or delivering products. However, this ambiguity lends it the freedom to deal with urban socio-spatial phenomena better than the other disciplines. ‘Good’ design is known to deliver social, economic and environmental benefits that lead to an expansion of opportunities for individuals and communities. This has a direct link to the expansion of the ‘capability space’ of individuals and communities that is determined by ‘freedoms’ and catalytically influenced by their values.

The expansion of ‘freedoms’ has an echo of Henri Lefebvre’s concept of ‘right to the city’ in terms of the “instrumental freedoms” described by Sen (1999). The positionality of urban design in dealing with the socio-spatial, public and private, government and governed, rich and poor, offers it a unique opportunity towards delivering positive expansion of ‘freedoms’ for the deprived. The enhancement of social benefits such as accessibility,

identity, security, inclusivity, diversity and economic value has a direct impact on the expansion of 'capability' of individuals and communities. Design can offer solutions geared towards enhancing the flexibility and dynamism of the built environment in order to horizontally increase the number of options available for the future. It has been argued that dealing with both 'process' and 'product' simultaneously will truly have a "real and effective" impact on the expansion of 'freedoms' and 'capabilities'. Sen (1999) argues for a participatory basis of negotiation for further increase in the number of options, and more importantly, for identification and prioritisation of 'capabilities' and 'functionings' based on the catalytic attribute of values. Proponents of participatory theory such as John Turner have argued in a similar tone (Frediani, 2009). Active participatory programs such as Baan Mankong in Bangkok, Thailand, have displayed that with agency freedom, development within communities has taken effective dimensions that years of policy and planning could not achieve.

These warm linkages between the capability approach and urban design theory have been used to propose a framework of a social process and a spatial process aiming towards an expansion of 'freedoms' and 'functionings' through an expansion of 'capability space' which is defined by the translation of opportunities into choices through the catalyst of values. The framework proposes a number of 'spaces', starting with 'capability space', that are fields generated out of the synergies of the axial elements. Expanding and contracting in an interactive mode, 'product space' within the spatial process yields the results of a temporal process that is also self-evaluative.

The next section tests the framework in Dharavi, Mumbai, India, which is the largest slum settlement in Asia. Although limited by data from secondary sources, the framework examines the issues from the perspective of the capability approach, exploring new opportunities and capabilities.

## 3. Dharavi: searching for new ‘capabilities’

### 3.1 Introduction

“Social opportunities” is a form of “instrumental freedom” described by Sen (1999) that is fundamental for our futures. Multi-dimensional poverty as described by Sen (1999) is also related to absence of ‘freedom’ or ‘unfreedom’ that are imposed by practice, perceptions or dogma. Discussing “rights to the city”, Marcuse (2009) highlights the fact that it is the demand from the oppressed, deprived and have-nots that is usually involuntary, and is itself subject to marginalisation (also Boano, 2009). Then, this paper takes a view of the need for ‘freedom’ for those deprived to be addressed as a qualification for “real and effective” development process. The marginalised are often deprived of the supposedly mainstream planning process as well, a process that has evolved along the lines of market-based economies with land as a commodity. Having no access to sufficient resources for a fruitful participation in the real estate market of large metropolitan cities, these people, largely consisting of migrants, settle in seemingly uninhabitable parts of the city or encroach on unused (usually government) land, giving birth to slums. Their financial deprivation also results in other forms of marginalisation such as that within the formal planning process or design also owing to their illegal occupation of land. Over the decades, communities have flourished in these slums. Treated as vote banks, many of these slums, such as Dharavi in Mumbai, India, house the third or fourth generation of slum dwellers. Living in an extremely complex web of social, cultural and economic interrelationships, these slums pose a significant challenge for redevelopment efforts in terms of comprehension of spaces within a tightly woven built environment. These spaces have been created and transformed through the agency of the slum dwellers to offer them ‘freedom’ towards expanding their ‘functionings’. Piecemeal efforts in terms of slum redevelopment projects are just symptomatic in addressing the problem.

The capability approach offers an alternate view towards understanding the issues of development within these settlements. The role of ‘freedom’ as described by Sen (1999) is both “constitutive and instrumental”. The social and spatial process proposed in Chapter 2 recognise this and evaluate ‘freedom’ and ‘functionings’ in a web of spaces that draw from each other and maintain a series of ‘checks and balances’, keeping the boundaries loose and flexible for exploring alternatives. The product

is the start of the next cycle that helps towards further expansion of ‘freedom’ and ‘functionings’. This section will analyse Dharavi through the proposed framework, in order to explore the potentialities offered through expansion of ‘freedom’. Limiting the paper to this exploration, the analysis will help identify and solidify the linkages between the capability approach and urban design, as an alternate means of interpreting and propagating the agenda of development.

### 3.2 Conflicting realities

Dharavi in Mumbai is dubbed as “Asia’s largest slum,” housing an estimated one million people (Savchuk et al, n.d.). Spread across 550 acres of land at the heart of Mumbai, Dharavi is sandwiched between the posh southern Mumbai referred to locally as ‘town’, and the posh central suburbs of Bandra and Andheri. Mumbai, with an inner city density of around 35,000 persons/ sq km, is bursting at its seams, limited by its geography (Urbanage, 2007). And it is places like Dharavi that are facing pressure from the rest of the city towards lending space, leveraging the squatter’s illegal status as the land is owned by Municipal Corporation of Greater Mumbai (MCGM). “... the poor are used as bulldozers to fill swamps, even out the land, make it habitable and just after this happens the city moves in and they are moved out – to another uninhabitable plot of land” (BUDD, 2009 quoting Jockin, leader of National Slum Dwellers Federation).

Dharavi is far from being a squatter settlement by definition. It has around 5000 industrial units (KRVIA, n.d.), boasting a vibrant economy estimated to be around US\$ 500 million (Savchuk et al. n.d.) with activities like pottery, textiles, leather processing and services being carried out and exported to rest of the world. The land alone is estimated to be around US\$ 10 billion (Narain, 2008). The Dharavi Redevelopment Plan (DRP) proposed by the Slum Rehabilitation Authority and prepared by an architect Mukesh Mehta proposes to divide the land into pockets to be taken by developers for building high-rise buildings that also house the slum dwellers and sell extra space in the real estate market for profit. The state government has raised the Floor Space Index (FSI) for Dharavi to 4 compared to 1.33 for rest of Mumbai. This has intensified the issue as slum dwellers have

been promised only a 225 sq ft one-room house per family, increasing the floor space available for developers to sell. The design of the proposed buildings plans to house the small scale industries in ghetto-like conditions in 2 to 4 floors at podium level. This will severely disrupt many businesses that are dependent on space, access, light and air, apart from networks that have formed over the years. The buildings pose a threat to social spaces interwoven in the daily lives of the community as places of meeting and socialising that create a sense of security and identity within communities (BUDD, 2009). These conflicting realities stare deep into the lives of the slum dwellers, who have raised a voice with the help of non-governmental organisations like the Alliance constituting of Society for the Promotion of Area Resource Centres (SPARC), NSDF and Mahila Milan (a community micro-finance organisation) assisted by KR VIA.

### 3.3 A design-led solution

In Dharavi, at one end of scale, the design propagated by the DRP is being used to justify evictions or least of all, a realignment of the way the population relates to space, and on the other end, design-based solutions are being mulled to resolve issues of density and infrastructure. A wealth of work has been undertaken as an answer to DRP, exploring alternatives that are sensitive to the diversity of Dharavi (KR VIA, n.d.).

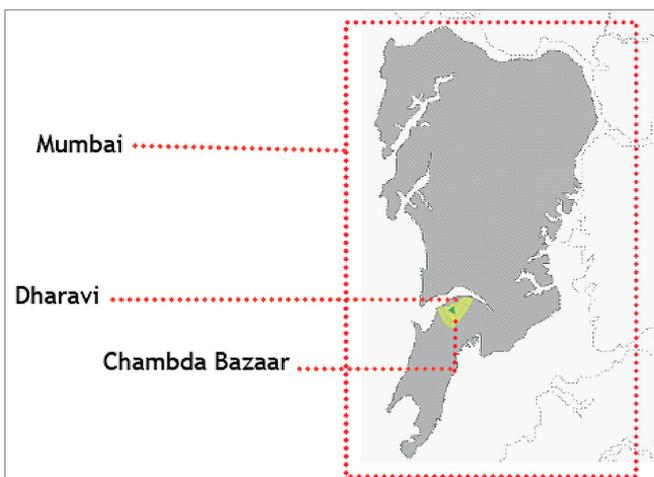
The primary criticism of DRP comes from its sweeping proposal of ‘podium’ typology of buildings that will disrupt the livelihoods and functioning patterns of the residents drastically. The other criticism of DRP is in relation to the high floor space index resulting in high-rise towers generating saleable floor space as means of com-

pensating the developers. Schwind and Kärcher (2008) have explored this aspect in detail in their thesis work. Dharavi displays a variety of shapes, sizes and configurations in terms of internal and external space that are organised along the lines of trade or along community structures.

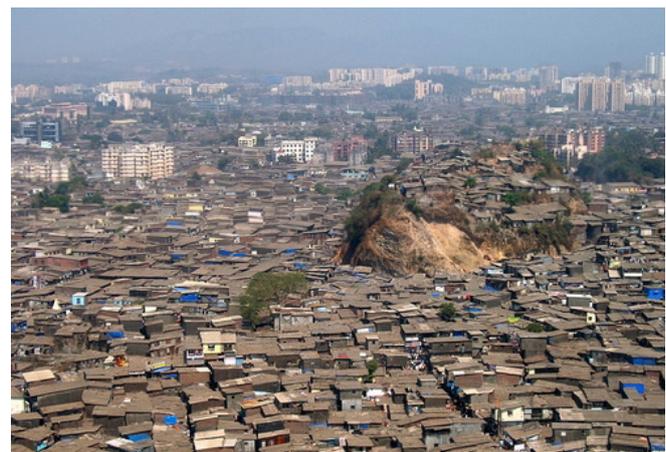
The above debate highlights the role of urban design within the larger issue of ‘who has rights to what’. On one hand, the product-based approach of DRP is colluding with the interests of developers whose aim is to get maximum returns, and on the other, alternate proposals like KR VIA’s highlight the livelihood and cultural debates. Both the approaches are concentrated around the product debate, aligning with opposite camps. And secondly, both approaches deny importance to the process of people’s agency. Although KR VIA’s and Schwind and Kärcher’s work realise the importance of a process, it is more aligned towards the eventual outcome or its possibilities. It is pertinent that for “real and effective” development, those possibilities include the people’s agency within the design process as well, rather than just a means of resistance or for consent.

The role of design here is that of negotiator between contrasting and conflicting realities of the city and the site. The enormous real estate value of Dharavi, and its importance in the geography of Mumbai cannot be ignored. At the same time, the rights of the residents of Dharavi cannot be marginalised. DRP and KR VIA are attempting to design a product that negotiates between these two realities through production of space. However, the process of production leaves little room for development of the residents themselves. ‘Freedoms’ achieved through that process hold greater importance than the product itself. The process will primarily influence the expansion of ‘functionings’ through production of space.

**Figure 3.1.** Location of Dharavi in Mumbai, India. Source: BUDD, 2009



**Figure 3.2.** Dharavi. Source: [http://www.pwindia.in/News/Metro/09-12-10/Dharavi\\_Redevelopment\\_still\\_mired\\_in\\_controversy.aspx](http://www.pwindia.in/News/Metro/09-12-10/Dharavi_Redevelopment_still_mired_in_controversy.aspx)



### 3.4 Applying the framework

The process, as proposed in the earlier sections of this paper, attempts to connect the purpose of the product with a methodology that has its roots deep within the capability approach. The goal is expansion of 'capability space' that can translate into real 'functionings' based on values. This scope of this paper is limited in application of the framework because of the lack of primary engagement with the communities to ascertain 'freedoms' and 'desired functionings'. There is an attempt to overcome this limitation by gathering information from interviews conducted by BUDD students in 2009 (BUDD, 2009) and from online sources. This paper limits its scope to analysis of the 'capability space'. The interviews in recently built buildings along with others in the huts give a number of indications regarding 'freedoms' and 'desired functionings'. For the people in the huts and buildings alike, 'participation in design' is a means to express themselves in either the process of rehabilitation or in the DRP. This can also be termed as an 'unfreedom' as women and non-committee members were excluded from the process. Nevertheless, a desire to do so indicates attainable 'capabilities' that can lead to 'functionings'. 'Social Capital', or the lack of it, is another 'freedom' that people in the buildings express as important or lost from their prior environment. People in the huts also expressed the same in one way or another leading to 'desired functionings'. 'Economic facilities' is one of the priorities of many of the dwellers of Dharavi and attaining the same leads to many other 'freedoms' for both people in the buildings and huts below. A few

direct 'functionings' were expressed in the interviews. People in the buildings and huts below emphasised the need for space for both family and business. This is an 'unfreedom' for people in the buildings as they have no scope for expansion with their growing families. People in the buildings also expressed the need for having community spaces that they lost from being in the huts.

'Tenure' was an important 'capability' expressed by the building dwellers that was achieved, and was desired by the hut dwellers. The interrelationships between 'freedoms' and 'functionings' are visible in terms of the values that have been expressed towards the 'capabilities'. Multiple 'freedoms' are required for similar 'capabilities'

**Figure 3.4.** A design-led vision of Dharavi. Source: Schwind et al, 2008



**Figure 3.3.** Developer's vision of Dharavi. Source: <http://www.skyscrapercity.com/showthread.php?p=60448115>



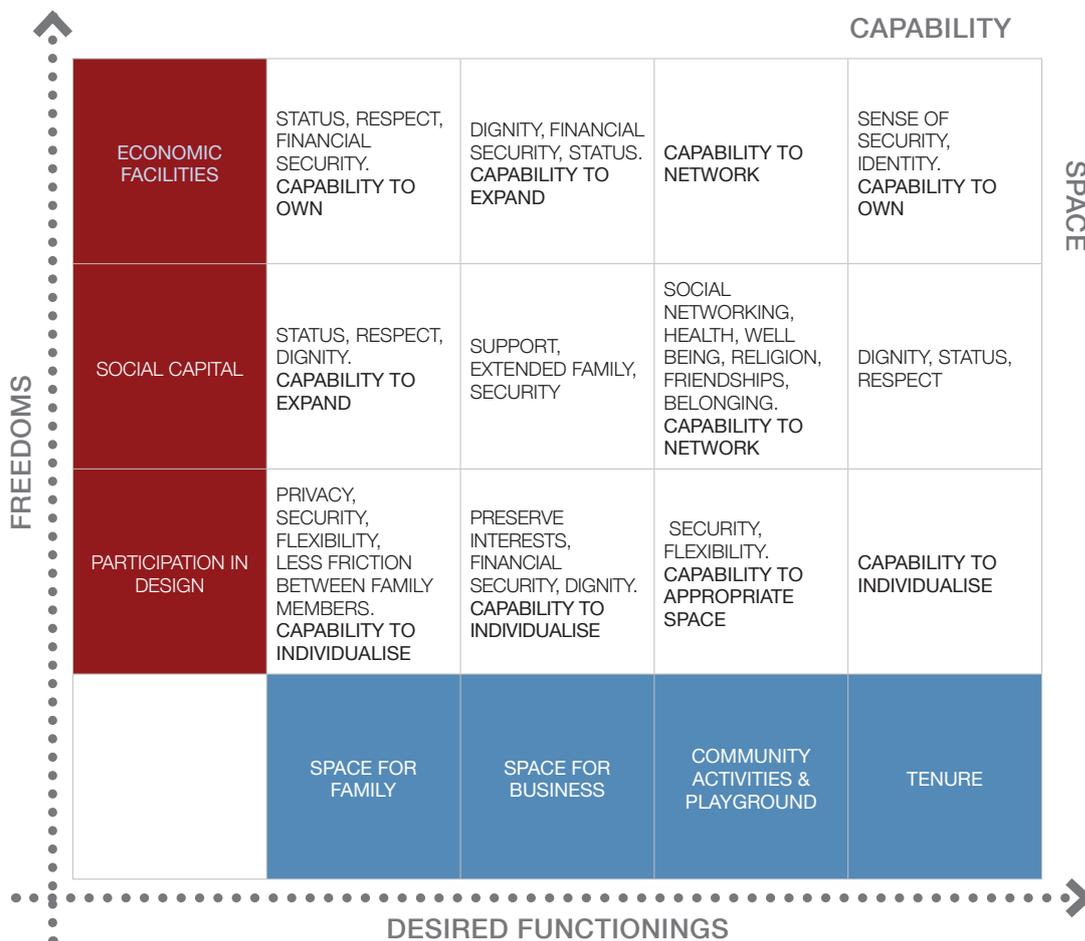
and 'functionings', and multiple 'capabilities' are required for one or a set of 'functionings'. 'Freedoms' and 'functionings' have been examined within the 'capability space' for values that go towards translating 'freedoms' into the particular 'functioning'. 'Space for family' as a 'functioning' has embedded values of privacy, security, status, respect and dignity that go towards a better quality of life. They directly point towards the 'capability to own and expand' the space that in both cases is limited by many factors. 'Space for business' has a similar undertone as that of the above, having a direct relationship with the 'freedom' of economic facilities that allows financial security, enabling other 'functionings'. 'Capability to expand and individualise' have similar undertones as that analysed by Frediani (2007) for the dwellers of Salvador da Bahia, Brazil. Space is thus pertinent for future expansion of 'freedoms' and 'functionings', keeping the family together in one case and increasing business opportunities in the other. Similar values have been expressed for the need for community space that brings the community together. It creates a sense of belonging and imparts a sense of identity to the place apart from providing a secure place for children to play. This has parallels with

Madanipour's (2003) analysis of public spaces. For the dwellers of Dharavi, their 'capability to network' is also dependent on the 'capability to appropriate space' for that use, which in itself is extremely limited. The demand for tenure is an expression of these very insecurities stemming from 'unfreedoms' of economic facilities and social opportunities. The interplay of multiple capabilities requires further examination in terms of 'past functionings' and 'unfreedoms' to further unpack various other spaces that are part of the framework. These spaces then contribute to the 'process space' and 'product space' with 'negotiation space'.

### 3.5 Conclusions

The capability approach holds a promise in furthering the cause of development for the marginalised and deprived. The framework emphasises the need for participation as a means and an end in attaining those 'freedoms', highlighting the role of people's agency. Urban environments, such as slums, exhibit the 'unfreedoms' plaguing today's society and unpacked

Figure 3.5. Capability space simulation for Dharavi. Source: author



through the capability approach, are part of a larger socio-economic dilemma that assumes political and systemic overtures. While design can allow many 'freedoms' to manifest into 'functionings', it can also work towards liberating the potential of people's agency to create new 'capabilities'.

Dharavi showcases the ability of people to use space in an optimum and efficient manner. Design liberated a select few from the huts to create new 'capabilities', but also created new 'unfreedoms' in terms of lack of personal and community space. In Dharavi, design is being used as the meeting ground for conflicting realities of the city. Attempts by KRVI and others showcase the importance of design in order to attain a better standard of living for the people, and at the same

time, allow the city to venture in. This negotiation, both at physical and political levels, is towards the expansion of 'freedoms' for the people of Dharavi.

The analysis of Dharavi through the framework proposed in Chapter 2 reveals the relationship between space and the expansion of 'freedoms'. The needs and aspirations of individuals expressed through the interviews point directly towards a set of 'desired capabilities' that are a result of multiple of 'freedoms'. These sets of 'capabilities' then contribute towards one or multiple 'functionings' that need to be further examined along with 'past functionings' and 'unfreedoms'. How these can then be translated into a process and product requires further application of the framework in the social and spatial processes.

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## 4. Conclusions

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Over the past decades, urban design has been struggling to break away from a product-based approach to a process-based approach. As a profession, it has seen its role redefined to serve multiple scales, function in various domains and deal with various elements of urban development. From a purely product-based visual interpretation of reality, urban design has come to encompass not only the physical, but also deal with the social. In its ambiguities lies its true strength. In this socio-spatial mode of operation, the responsibility of urban design becomes ever more critical in furthering the cause of development.

This paper began on the premise of searching for parallels between urban design and the capability approach. ‘Functioning’ both as a means and an end for development, the positionality of urban design offered it the liberty of operating within and in-between the urban development praxis. The end product has to conform to the means, which itself becomes the means for liberation. This premise is captured with the capability approach by Amartya Sen (1999) where ‘freedom’ is seen as both the means and the end of development.

The “instrumental freedoms” are a reading into developmental aims that define existential values. These offer a set of ‘capabilities’ to individuals and communities to be translated into ‘functionings’ based on their value judgments. The creation of fields of opportunity – a ‘capability space’ – allows multiple capabilities to interact with each other and expand the field of ‘functionings’. Human agency is an important factor in this whole process that lays the foundations for “real and effective” development to take place. Participation is key to the process of involving human agency in this endeavour. Principles of participatory processes, such as John Turner’s Self Help Approach, have parallel idioms that run deep within capability approach (Frediani, 2009).

Urban design theory developed in the past few decades has emphasised the importance of process and product aspects of design to be amalgamative and complementary. From being a mere means of visual representation, urban design can no longer be a witness from the sidelines towards what ends it serves. As a responsible practice, its reinterpretation is key for the practice to remain relevant. This reinterpretation has many parallels with the capability approach in terms of expansion of ‘freedoms’ and ‘functionings’. As a social process, urban design has enormous effect on the expansion of

‘freedoms’ in terms of generating a ‘capability space’ whose boundaries are further negotiated by opportunities for negotiation. Urban design theory exhibits the benefits of ‘good’ design of public spaces as having enormous impact on the health and wellbeing of communities delivering spaces that are accessible, secure, diverse and inclusive. This has a direct impact on the opportunities available to individuals and communities in order to realise their aspirations. As a spatial process, urban design has the potentiality of delivering a product that increases the opportunities of individuals and communities in various ways. Foreseeable ‘functionings’ can be realised with sensitive design of the built environment that has an enormous liberating effect on the community. This has been exhibited in Quintas Monroy by Elemental in Chile. The delivery of social, environmental and economic benefits by ‘good’ urban design have been documented by Carmona (2002). The duality of these benefits is parallel with the expansion of ‘capabilities’ based on past ‘functionings’.

This paper proposes a framework of social and spatial processes that can integrate the two theories into an operational model. The framework operates with various ‘spaces’ that are a result of the interaction between ‘freedoms’, ‘functionings’, ‘unfreedoms’, ‘agency’ and ‘benefits’. The framework exhibits the interrelationship between various ‘freedoms’ and ‘functionings’ to be mutually dependent and, at the same time, to be cohesive towards contributing to the expansion of the ‘spaces’. Serving as a means to highlight practices for the deprived and marginalised, in the same vein as the ‘right to city’ approach, the framework has been used to partially analyse the relationship between ‘freedoms’ and ‘desired functionings’ and how ‘capability space’ is fashioned in Dharavi. It was observed that ‘freedoms’ have a complex web-like relationship with the ‘capabilities’ they enable, which further has a web-like relationship with ‘functionings’ that are achieved. Values act as the catalyst within this process translating ‘capabilities’ into ‘functionings’. Further analysis of the framework is required to establish the translation of the social and spatial processes into products.

Further research is warranted into the effects of design on ‘freedoms’ and ‘capabilities’ to solidify the relationship between urban design theory and the capability approach. These contributions can be amalgamated into urban design theory, further enriching it and grounding it in a developmental basis.

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