An analytical framework for urban fragmentation analysis in the Global South city. Questioning urban planning practices through an institutional approach.

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Introduction

In the last years the analysis of urban fragmentation processes has become one of the priorities in the agenda of public administrations and urban planning departments in the North as in the South of the world. The topicality of the argument is strictly embedded to the current globalising dynamics that are re-designing socio-economic hierarchies, authorities, powers and relational geographies at different scales of urban and regional contexts. Thus several disciplines (including sociology, economics, geography and urban studies) have started to question the phenomenon (this attention appears somehow regularly in moments of crisis of the city’s idea and re-thinking of the discourses/paradigms on the urban development).

Despite its presence in the urban discourse, urban fragmentation conceptualization is still lacking (Cusinato and Michelutti, 2007), and some authors underline the frailty in the analytical interpretations of the phenomenon (Navez-Bouchanine, 2002). This weakness is due mainly to the use (and abuse) of the term "fragmentation", frequently referred to several socio-spatial phenomena, thus fragmentation has become part of a “liquid” lexicon (in the Zygmund Baumann’s meaning of the word) that includes the words “dualism”, “segregation”, “segmentation”, etc. without enhancing a precise definition. In this condition, these words are used incorrectly and the attribution of meaning to a specific term becomes discussible, conducing to misunderstandings and inconsistencies in the concept’s definition.

Looking to the literature, the phenomenon appears multilayered and rich of complexities. In the following lines a brief (and inevitably incomplete) overview of the main positions on the argument consents to identify at least some key perspectives to enter in the analysis of the phenomenon. Five main domains of the question are identifiable:

- the spatial one, where the city is thought as a ensemble of fragments with different socio-spatial characteristics and different uses of urban spaces (Balbo and Navez-Bouchanine, 1995) or where the attention lies on the “fragmented” occupation of the land by the built-up areas (Sobreira and Gomez, 2001);
- the social one, where fragmentation is referred to splintering in social-technological networking, with the presence of different levels of intensity in the relational flows (Graham and Marvin, 2001), to the break-up in services provision (Jaglin, 2005), relational geographies (Coutard, 2008) and social ties between parts/fragments of the city (Harrison et al., 2003; Vranken, 2001);
- the economic one, where fragmentation refers to a kind of economic polarization connected to the disparity in the access to the labour market (Van Kempen, 1994; Sassen, 2002) or consists in inequalities in resources and investments in different parts of the city (Morgan and Marechal, 1999);
- the cultural one, where fragmentation can refer to the co-presence of different and conflictive identities in the city (Harrison et al., 2003), to the development of distinct and unavoidable residential patterns, with consequent phenomena of segregation and ghettoisation (Coy, 2006; Powell and Graham, 2002), or to the relationships between behaviours and fear appearing from segregated urban contexts (Low, 2006);
From the previous references emerges clearly the multi-semantic character of the phenomenon (Cusinato and Michelutti, 2007). This attribute of urban fragmentation results in different reactions to the phenomenon that the literature presents. The authors touching the urban fragmentation discourse can be divided in three groups: the first one is looking externally urban fragmentation, just registering a dynamic characterizing the urban fabric; the second one is trying to explore the causes of the phenomenon; the third group is working on possible actions and policies in order to reduce urban fragmentation trends, orienting urban processes to inclusion, good governance and sustainability.

For most of these authors, the interest seems to lie exclusively in exploring the consequences of the phenomenon (approaching the question from specific sectors with the tools of their disciplines): this tendency implies the use of distinct approaches, between the many, the socio-economic one, the cultural one, etc. The analysis focuses respectively on the fragmentation trends derived by the socio-economic restructuring due to the globalization or by the new GLocal scenarios, with the emerging of identities’ re-affirmation and the presence of conflictive cultures in the city. These approaches reveal several limits, aliment the suspect that it's not possible to talk about a pure “social”, “economic” or “cultural” fragmentation without falling in abstractions and show a general incapacity in identifying actually the generative mechanisms of fragmentation and the relationships between the causes of the phenomenon (wherever they are located) and the their spatial consequences in the city.

When the attention goes to the causes of the phenomenon in the Global South city, the question remains unclear and, in the words of Balbo and Navez-Bouchanine, “what drives the Third World city to be, space wise, a ‘city of fragments’ is still unknown”; when the discourse is focusing on the responses, urban fragmentation appears frequently as a given fact. In few cases the attention lingers in questioning urban fragmentation: Harrison, summarising some experiences in South Africa and Brazil, opens to a neutral vision on the phenomenon, where fragmentation is not necessarily seen as a problem (or becomes a problem just when impedes the achievement of human rights and equity); in Navez-Bouchanine, the analysis places urban fragmentation question as crucial fact in the current socio-spatial and institutional dynamics of the city, conserving a certain preoccupation for the consequences that the phenomenon could have in an inclusive and sustainable urban development perspective.

Inside this fluid literature and critical questioning that lies in the urban knowledge context prefigurred by the work of Henri Lefebvre and Micheal Foucault, this essay will focus in outlining an analytical framework as tool to explore the phenomenon in the urban planning dimension for the Global South city: this conceptualization is part of research experimenting the institutional approach as key guide in the interpretation of the urban fragmentation question. Before going inside the framework, it’s needed to clarify the original (and radical) meaning of what it’s considered “institution” here and the use of this definition of institution inside the research methodology. This clarification consents to understand the necessity of the institutional approach in

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1 Françoise Navez-Bouchanine underlines the limits that of a pure socio-economic or cultural approach presents in the analysis of urban fragmentation. The socio-economic approach is put in discussion mainly for two reasons: the existence of a generalised fragmentation of the society is not verified and the spatiality’s importance in fragmentation tendencies and the physical and temporal inertia role in limiting the effects of the socio-economic tendencies of fragmentation are usually excluded from pure socio-economic approaches. The cultural one is criticised because of the analytical (empirical and methodological) weakness in the theory of balkanization of urban cultures. The conflict between globalization tendencies and local identities and the presence of cultural differences and diversities are not always generating fragmentation dynamics in the city (Navez-Bouchanine, 2002).

2 The institutional approach and the lessons learnt on the analytical framework from the South can suggest and open useful perspective also for the analysis of the phenomenon in the North.
urban fragmentation analysis and the key relevance of the urban planning dimension as area of interest.

**Brief notes on institutions and use of the concept in the methodological approach**

In the perspective of this research, institutions are thought not only as expression of the “classic” structures of the Right, Government and Religion but entail also technologies, lifestyles, social relationships and “words and thoughts’ processes” (Benveniste, 1969). The definition of the French-Syrian linguist, rooted in the analysis of the ancient linguistic and cultural (but also socio-politic) structures of Indo-European societies, consents to overcome static definitions of “institution” (institutional arrangements in the global South city frequently adopt solutions that cannot be situated in rigid categories) and to have a fluid tool for the research where classification, analysis of interrelations and hierarchies of institutions have to fit with the specific structures of the society/city analyzed through the framework.

The institutional approach of the research is located inside the institutionalist discourse started in the late ’80 and ’90 and developed by some authors of the so-called “neo-urbanism” in the last years. According to the experiences of that mainstream, the institutional approach is used here to explore the character, the role and the action of all the institutions accomplishing their function, whatever may be, in the urban fabric. The accomplishment of a specific function by the institution means the creation of a complex system of arrangements and solutions that characterize the city’s territory. From the relations (and contrasts) between different institutional systems, processes of urban fragmentation start to break up the urban fabric, producing new hierarchies, dynamics of exclusion, etc.

In this research, the institutional approach is thought as instrument to look inside urban fragmentation dynamics exploring the mechanisms that shape it behind its spatial and socio-economic causes/consequences. In this sense, touching the cultural and political domains of the question, the institutional approach consents to go in depth in the planning dimension and in the area of “urban governance”. Through the work on the normative realm of the question, representing a natural consequence that approaches the relation city-institutions-power, the research seeks to explore the institutional sustainability of current planning practices and policies of urban fragmentation management in the Global South city.

In urban studies, institutional approach is adopted in several ways. A consistent tradition uses the approach mainly to work on urban-regional dynamics and collective actions (intended as public policy of interventions and planning) (Healey, 1996). Thus, in this literature, the institutional approach is utilised (not only but primarily) to analyse the formal institutional domain of urban dynamics. On the contrary in this research, the analysis of a multi-sectoral dynamic/process as urban fragmentation in the global South cities’ context means enlarging the area of analysis to all the institutions that lie in the informal domain: this operation implies to enter in the different institutional arrangements and solutions that are characterising the “world” at the communities’ level and the so-called “informal city”. These two institutional domains (formal and informal) do not exhaust all the typologies of institutional solutions: the “space” between formal and informal institutions assumes an increasing importance in the city of the South (Cusinato and Michelutti, 2007). This specific institutional ambit, that for its nature is liquid and un-definable (and thus slippery) and can be called, just with an operative abstraction, “bridging/intermediate institutions”, in the South reveals all its complexity for different reasons: the border between formal and informal sectors assumes different connotations case by case, subverting what is normally stated in the North; the tendency of formal institutions to work as informal ones increases;

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3 In this research, illegal/criminal institutions will be considered only when are part of the planning dynamics of the case study.
different kinds of recognition by the Law design panoramas where traditions, ideas, technologies derived by traditional mental models are just partially considered, creating an overlapping (or in other cases an unbundling) between institutions on the same territory.

Of course this kind of categorization in three institutional domains is just a “forced simplification”, operated with the intent of offering an easy-readable tool but obviously the institutional arrangements can include various overlapping between the categories and institutional “co-presence” in the same specific urban context, not to say about the fact that in several formal institutions there are “areas of informality” where decisions are taken outside the “official” rules of the game but anyway “tolerated” by the institutional systems. In particular in the intermediate and bridging area the classification arises a critical point: those institutions are connecting in different levels the formal and informal spheres that work with specific (sometimes contrasting) mechanisms and logics. The nature of the connection has to be analysed case by case.

This research will study urban fragmentation in a specific spatial-temporal condition (Mumbai, India, 2010-2011), trying to conceptualize synchronic and diachronic processes of fragmentation, building, through the research activities, an analysis of the institutional basis of the dynamic and using a working “neutral” definition for the phenomenon: urban fragmentation is thought, in this phase, as co-presence on the territory of different institutional solutions, carrying specific mechanisms of formation, logics of action and designing specific arrangements between actors and stakeholders (excluding other institutional entities/devices or overlapping between them). Thus the city, and in particular the Global South city, appears as a whole of socio-spatial fragments that can be visualized through the image of the mosaic and/or archipelago of pieces of territory⁴, through separated or unbundled networks, through different approaches and uses of places, through contrasting scalar dynamics: to this socio-spatial universe corresponds a whole of different institutional devices (visible and invisible; legal, illegal or simply tolerated) that shape the structure of the city.

Socio-spatial engagement rules and the institutional approach

In front of city dynamics’ complexity, urban fragmentation cannot be analysed in depth following exclusively one specific category or single discipline’s tools: this approach may conduce to partial visions of the phenomenon and difficulties in conceptualizing a process that reveals a multilayered character. To face this situation, the research will be based on an analytical framework that entails two preliminary choices: the first consists in working on urban fragmentation in its socio-spatial phenomenology. This choice enables the researcher to engage urban fragmentation in its multi-morphologic perspectives without falling in singular disciplines’ fetishisms. Once taken this direction, the second step consists in opting for integrated tools in the analysis of socio-spatial dynamics: this choice consents to get a holistic vision of the theme without yielding to the temptation to solve every question using pre-set answers and logic characterizing singular interpretative instruments.

Considered that there is no absolute agreement in the definition of the interpretative tools for socio-spatial analysis, the research will work with four key concepts (territory, place, scale and network)⁵ that are very consistent in the literature. Of course these

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⁴ As mentioned previously for the socio-institutional/spatial matrix, this image remains an evocative instrument and does not have to lead to misunderstandings: urban fragmentation maintains a complex nature and the “normal” condition includes an overlapping between the pieces of the mosaic.

⁵ Without entering in the philosophical/epistemological debate on the meaning of these concepts, and looking mainly to fit these spatial categories in the perspective of urban fragmentation’s dynamics, the research adopts the following “working” definitions:

- Territory: “A unit of contiguous space that is used, organized and managed by a social group, individual person or institution to restrict and control access to people and place” (Agnew, 2009). For the research, a key point will be not only the “control on the access” but also a control/regulation of the action in a defined portion of space.
four categories do not exhaust all the possible socio-spatial relationships and other categories, as environment/nature and positionality (Sheppard, 2002), can be used for analysis. The literature presents several attempts of integrated analysis for urban fabric dynamics (Jessop, Brenner and Jones 2008). Several works in geography and urban studies have combined two or three of the mentioned socio-spatial categories, showing how the interpretation of urban phenomena needs to be tackled by different perspective to achieve actual results. In this sense, the exercise done by Jessop, Brenner and Jones seems a suitable starting point for urban fragmentation analysis: the authors proposed to work on the four categories thought as structuring principles and structured fields at the same time, composing a matrix where interrelations between categories are explored.

In the context of urban fragmentation analysis (that focuses this specific phenomenon without the presumption of having a comprehensive overview on all the dynamics characterizing the city of global South), the attempt will consists in giving an institutional dimension to the four socio-spatial categories. In this case the strategic-relational approach of Jessop, Brenner and Jones will be integrated with an institutional component. The research methodology will be built, for one hand, focusing the influence of the spatial categories on the institutional domain of the urban fragmentation dynamic (figure 2) and, for the other hand, analysing how different typologies of institutional arrangements and solutions (that will be included in basic institutional categories) are influencing the socio-spatial structured fields (figure 3).

Building the analytical framework

The analytical framework of the research is structured with the aim of clarifying the character of urban fragmentation phenomena in the Global South city: to achieve this scope, a necessary step seems to entail the use of an institutionalist perspective in order to overcome mono-disciplinary approaches and understand the mechanisms

- Place: here it is not only “a unit of space that has discrete boundaries, shared internal characteristics, and that changes over time and interacts with other similar units” (Henderson, 2009) but, in urban fragmentation’s discourse, it denotes also the (alterable) state of belonging versus exclusion (Cresswell, 2004).
- Scale: here scale is seen as social construction (Jones et al., 2009; Swyngedouw, 1997), outcome of “social activities and processes that connect up or down to other hierarchical levels to which it contributes through a spatially uneven and temporally unfolding dynamic”.
- Network: “A particular kind of spatial arrangement that consists of linked elements which typically exhibit a decentred and non-hierarchical form” (Bingham, 2009). In its wider meaning this includes social networks, network-based model of organization, etc.
Two interpretative tools/bases/principles shape the framework: the first one aims to explore the socio-spatial relations inside the different fragments (and between them); the second one uses an institutional categorization to detect on the institutional roots of the urban fragmentation process. The understanding of the relational geographies and the revealing of the institutional causes and logics in the development of the phenomenon enable to define an horizon of action, to think to possible responses and to outline a priority agenda for the actors involved in urban planning.

The construction of the research methodology has to face the theoretical passage between abstract-simple and concrete-complex, already outlined in several socio-spatial researches (Jessop, Brenner and Jones, 2008). Facing this process in urban fragmentation analysis includes three moments. After the definition of this abstract and inevitably draft theoretical framework, the analysis implies a consequent step/focus on the typology of information and the sources needed to clarify the contents of the relationships between socio-spatial and institutional categories and therefore the definition on the activities to analyse the condition of urban fragmentation characterizing a specific city. This paper seeks to define just the first moment of the methodological process.

<table>
<thead>
<tr>
<th>Urban fragmentation</th>
<th>Institutional fields of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-spatial structuring principles</td>
<td>Formal Institutions</td>
</tr>
<tr>
<td>Territory</td>
<td>Boundaries</td>
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<tr>
<td>Place</td>
<td>Identity</td>
</tr>
<tr>
<td>Scale</td>
<td>Levels of government</td>
</tr>
<tr>
<td>Network</td>
<td>Formal services, relationships, flows</td>
</tr>
</tbody>
</table>

The matrices (Figure 2 and 3) are not exhaustive of all the dynamics and the aspects embedded in urban fragmentation processes, anyway they concentrate the attention on key aspects of the phenomenon. The matrices represent one option for the visualization of the connections between socio-spatial categories and institutional realms that constitute the roots of the urban fragmentation mechanisms. Of course the cells are not containing all the possible themes but just the key questions to be considered in the analysis the phenomenon. The condition of fragmentation will be readable with an overview on the whole rows and columns. The Matrix 1 (Figure 2) shows the areas of interest where the socio-spatial categories shape with the different institutional arrangements. The Matrix 2 (Figure 3) shows how the institutional categories contribute to shape the socio-spatial fields. The matrices define a panorama where the columns represent distinct institutional logics (that regulate the actions on the spaces of the city) and where the rows outline the morphology of the urban
fabric. From the relationships between these spheres, different fragmented patterns characterising the city should appear in the analysis.

<table>
<thead>
<tr>
<th>Urban fragmentation</th>
<th>Institutional structuring principles</th>
<th>institutional sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-spatial fields of operation</td>
<td>Formal Institutions</td>
<td>Bridging Institutions</td>
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<tr>
<td>territory</td>
<td>State apparatus</td>
<td>Space of interaction</td>
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<tr>
<td></td>
<td>Private initiative</td>
<td>Territories of institutional overlapping</td>
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<td></td>
<td>Organized civil society</td>
<td></td>
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<tr>
<td>Place</td>
<td>Public design of places</td>
<td>Bordering and urban edges</td>
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<tr>
<td></td>
<td>Private production of places</td>
<td>Tribal and informal mechanisms of place appropriation and production</td>
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<td></td>
<td></td>
<td>Promotion and dialogue between identities in the places</td>
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<tr>
<td>Scale</td>
<td>Regional, urban, neighbourhood policies</td>
<td>Scale adapting</td>
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<tr>
<td></td>
<td></td>
<td>Infra-scalar policies</td>
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<td></td>
<td></td>
<td>Micro-scales</td>
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<td></td>
<td></td>
<td>Bottom-up movements and actions</td>
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<tr>
<td></td>
<td></td>
<td>Empowerment of bottom-up movements and control on top-down tendencies</td>
</tr>
<tr>
<td>Network</td>
<td>Public/private services</td>
<td>Dynamic of interconnection</td>
</tr>
<tr>
<td></td>
<td>Formal networks, welfare system</td>
<td>and interdependency between networks</td>
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<td></td>
<td></td>
<td>Facilitation in social networks' extension</td>
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<td></td>
<td></td>
<td>Informal arrangements and management of networks</td>
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<td></td>
<td></td>
<td>Policies of connection between formal and informal networks</td>
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</tbody>
</table>

The third matrix represents another step in the definition of the analytical framework of the research. One of the key objectives is to provide a comprehensive vision of the phenomenon, without confining the debate to a specific sector that could lead to a narrow view of the concept. In this case, the theoretical model is applied to a cross-sectoral area of activity, urban planning, which contains key elements for the understanding the phenomenon. Urban planning reflects different dynamics related to urban fragmentation and can provide consistent elements in exploring the institutional dimensions of the problem. In this case, the matrix is constituted by questions: the theoretical scheme remains the same with the four spatial categories, the empiric domain with institutional typologies and a normative domain oriented to explore institutional sustainability scenarios. For each cell, only one question has been chosen, without thinking to an exhaustive exploration of all the possible themes regarding the interrelations between one spatial category and an institutional typology, just focusing on one key argument in the research.
<table>
<thead>
<tr>
<th>Urban planning in DC cities in relation to urban fragmentation</th>
<th>Empiric domain</th>
<th>Bridging institutions</th>
<th>Informal institutions</th>
<th>Institutional sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spatial categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Territory</strong></td>
<td>TFI.1</td>
<td>TBI.1</td>
<td>TI.1</td>
<td></td>
</tr>
<tr>
<td>Which are the dynamics of territorialization of social</td>
<td>How are formal institutions dividing the territory of the city?</td>
<td>How are bridging institutions connecting formal and informal territories?</td>
<td>Which kind of organizational framework is characterizing the un-planned informal settlements/territories?</td>
<td></td>
</tr>
<tr>
<td>fragmentation in different urban fragments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Place</strong></td>
<td>PFI.1</td>
<td>PBI.1</td>
<td>PII.1</td>
<td></td>
</tr>
<tr>
<td>In what ways do different forms of planning support the</td>
<td>Are formal planned places containing elements of socio-spatial fragmentation/exclusion?</td>
<td>Which are the dynamics of interchange between formal and informal circuits in the places of interconnectivity?</td>
<td>Which are the dynamics in generation of informal places of reference for the communities in informal settlements?</td>
<td></td>
</tr>
<tr>
<td>inclusive or exclusive use of places by different social</td>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fragments?</td>
<td>Do formally planned places cater for specific social groups to the exclusion of others?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scale</strong></td>
<td>SFI.1</td>
<td>SBI.1</td>
<td>SII.1</td>
<td></td>
</tr>
<tr>
<td>What are the interrelationships between formal and informal</td>
<td>Which are the relationships between planned parts of the city and the dynamics at urban/regional level?</td>
<td>Are bridging institutions playing a role between the micro-dynamics at community level and the macro-dynamics at urban/regional level?</td>
<td>At what scales are informal dynamics operating in relation to planning and what impact does this have on urban fragmentation?</td>
<td></td>
</tr>
<tr>
<td>planning institutions at different scales and how do these</td>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>affect urban fragmentation at different scales?</td>
<td>At what scales do formal planning institutions operate and what impact does this have on urban fragmentation?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>NFI.1</td>
<td>NBI.1</td>
<td>NII.1</td>
<td></td>
</tr>
<tr>
<td>To what extent and in what ways do socio-spatial networks</td>
<td>How do formal socio-spatial networks create different levels of connectivity in the city?</td>
<td>Which is the character of the interconnection between formal and informal socio-spatial network and circuits?</td>
<td>Which are the interconnections and the possible planning choices in order to empower and give sustainability to the socio-spatial networks?</td>
<td></td>
</tr>
<tr>
<td>ranging from formal to informal link up with each other and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>how does this affect urban fragmentation?</td>
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</tbody>
</table>

Fig 4: Application of the framework to urban planning dimension
First feedbacks from the case study and lessons learnt

The case study is located in Mumbai, capital of Maharashtra State, India. Mumbai has an estimated population of 13.4 million of inhabitants (if the city-island and the suburbs, the Greater Mumbai, are considered) but, including all the metropolitan region, the population increases to 20 million of people, third urban agglomeration of the World after Tokio and Mexico City (UN, 2009). Mumbai is struggling to become a “World Class City”: this tendency to the competitiveness for entering in a leading position as a city of reference in the globalizing Asia is accompanied with the growing phenomena of inequalities and urban poverty. Considering the Greater Mumbai, approximately the 55% of the population lives in slum areas (UDRI, 2009): 7 million people are living in the almost 3,000 slum pockets of the city.

The case study is developed in two field trips: in the first one (August 2010-October 2010) the research seeks to collect documentation, enforce the networks needed to develop the research activities, explore the different kinds of areas in the urban fabric, complete a first test on the analytical framework and find key problems to focus urban fragmentation analysis at the local scale; after a period in Scotland, dedicated to the review of the materials and information collected in the first field trip and in refining the analytical framework, a second field trip (December 2010-February 2011) is planned in order to complete the research activities on the field.

The first trip in Mumbai have shown different kinds of problems in the phenomena approach that can be summarized in five key groups of questions (that are inter-related each other):

1) Is possible to work in a comprehensive way on urban fragmentation in a context that presents a universe of different situations (or various spatial temporal applications of the phenomenon) and multiple layers of the question? To what extent is possible to work on fragmentation processes taking in consideration one fragment (or a small number of fragments)?

2) Are the fragmentation processes connected to the different levels of vulnerability in the main sectors of analysis of the Global South city (land tenure, housing and urban services)? Or are these dynamics depending from other factors?

3) Can the identified spatial categories be applied in all the fragments (are the categories fitting with the dimension of the fragments)? Or are we assisting to a proliferation of micro-fragments where some of the spatial categories adopted cannot be applied (or can just be partially applied)?

4) Which position have the different institutions of the city between the formal and informal polarities? Which is the role played by the bridging institutions inside the formal-informal polarities and which is the influence of the criminal institutions outside the two main polarities?

5) To what extent is urban planning showing fragmentation dynamics in the city? Is urban planning one of the factors for fragments' definition? Can we think to juxtaposition between formal institutions/“formal planning” and informal institutions/“Informal-spontaneous planning” in Mumbai?

The first question entails the dimension of the fragmentation processes in the city of Mumbai. The question can be approached in different ways: it’s possible to extract two main options. For one hand, the tentative to cover all the aspects of the phenomenon through a sectoral approach that produces a categorization of the dynamics⁶; on the other hand, the effort in focusing one particular area that can represent the

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⁶ The case study represents one of the parts of the my PhD research carried out in the UNESCO Chair of Sustainability, Technical University of Catalonia (UPC) and in the Centre for Environment and Human Settlement, Heriot-Watt University, Edinburgh.

⁷ This attempt was adopted in the study on “splintering urbanism”, called “Respace Project 2009”, conducted by the university of Utrecht in Mumbai in 2009. That study, that was a part of a project that involved other five cities in Asia, was divided in ten parts and carried out in three months by a team of ten students. The sectors were: manufacturing industries, service industries, private housing, public housing, informal housing, road infrastructure, rail infrastructure, utility infrastructure, retail development and leisure development (Wissink, 2009).
main character of the phenomenon and can be representative of the fragmentation processes in the city. The application of the analytical framework has to face a question of “scale”: the first option consents a general overview of the problem but inevitably remains on the surface of the dynamic; the second approach consents to go deep inside the dynamic facing the risk that the outcomes of the analysis could not be generalised for all the urban fabric. From the first experience in Mumbai, the first choice seems to be not suitable due to the city’s dimensions, the second causes concerns due to the variety of the fragmentation processes in the urban fabric.

The second group of questions seeks to approach the holistic character of the fragmentation processes. The first feedback from the field visits in the informal urban fabric of Mumbai seems to confirm that the grade of fragmentation does not depend directly to a particular level of vulnerability in a specific sector (land tenure status; condition –consolidation- of the housing; quality, quantity and continuity of provision of water, sewage, electricity services, etc.). Of course this consideration can have significant consequences in the definition of the “fragments” of the city. The approaches can be very different: one option is trying to classify settlements in categories of the land tenure, of housing, etc. and see if this classification, applied to the reality on the field, conduces to outline a fragmented panorama of different territories that have an internal homogeneity; a second possibility consists in studying communities that have a common origin and history, a political-religious identity (Hindu-Muslim communities), etc. and verify if the fragmentation processes have contributed to create different institutional frameworks with distinct planning logics, conducing to exclusion/inclusion dynamics with the rest of the city. In Mumbai, the complex nature of the informal communities and the dis-homogeneity in some big slum pockets seems to suggest to merge these two approaches.

The third group of questions entails the character of the fragments. Not in all the hypothetical fragments the application of the spatial categories of the model is significant. Again a “question of scale” touches the efficiency of the analytical framework: some communities-parts of communities in Mumbai share key “places” with other communities and these places are located outside the fragments and “work with the rules” of other fragments: in these cases, there is an overlapping between institutional categories as structuring principles in one spatial structured fields. One example could be the community of Rafi Nagar 2, located in Shivaji Nagar quarter⁸, a small community near one of the principal dumping ground of the city. This community does not have independent filling points and takes water in Rafi Nagar 1; the filling points of Rafi Nagar 1, without any doubt, are a key place of inter-relation for the people of Rafi Nagar 2. The same situation is represented by the bus stop or the health centre (that are in Shivaji Nagar). People of Rafi Nagar 2 seem to have no places of reference inside the community: this fact aliment the idea of dense interchange between the fragments (and the role of “proximity” as spatial category in urban fragmentation dynamics). Another consideration could suggest the fact that Rafi Nagar 2 is just a part of an “extended fragment” including other nearby communities. Anyway all the people living in Shivaji Nagar consider Rafi Nagar 2 as a separate entity, due to the strong Muslim component of the population and the high criminality that is based in that territory.

The fourth group of questions entails the institutional patterns the are characterizing the city of Mumbai. The co-presence of formal and informal arrangement/devices in the same institution results to be the rule not the exception in Mumbai: the clarification of the formal/informal patterns of an institution could require information that is not always accessible or just partially accessible). For whom stays outside some institutions (that happens when the analysis touches particular organizations, but also when the approach involves mental models and even frequently “processes of thoughts and words”), the institutional framework can remain covered by a shadow

⁸ Shivaji Nagar is a big quarter in North West suburbs of Mumbai. The population of the quarter is around 700 thousands inhabitants: Rafi Nagar 1 and 2 are small communities in the Northern part of Shivaji Nagar. The population is unknown but the NGO Apnalaya has estimated 650 houses in the two communities.
and the institution lies as a “black box”. Of course this situation is the most frequent one when the research involves criminal institutions, that in Mumbai play a key role inside the fragments and between the fragments (as bridging institutional solutions), representing a factor in the relational geographies of the city. From the first feedbacks of the field work, it’s clear that the division in three categories (formal/informal/bridging) is just a draft guideline that could change radically case by case.

The fifth group of questions lingers on the role of urban planning in fragmentation dynamics. For sure, urban planning choices aliment urban fragmentation in Mumbai and this is a predictable fact. The question here lies in the supposed presence of distinct-dualistic planning logics inside the urban fabric of the city: in particular in a contrast (but also inter-relations or even co-operation) between formal planning logics (in Mumbai in the hands of several state and municipal agencies involved in different ways in urban development) and “informal-spontaneous” planning logics that are somehow perceptible just in the recent (or in many cases Muslim) slums that have not been characterized by any redevelopment or even upgrading interventions. In these slums, mainly concentrated in the suburbs and in lands where there are no speculation interests, it’s possible to see organizations of spaces that can remind to distinct (informal) logics. Analogously these logics remind to different institutional frameworks. To define these logics it’s necessary to come back to the deep meaning of institutions: here not only the organizations are involved in the formation of urban planning logics, but also mental models (processes of thought) and technologies play a key role. The actual consistency of these distinct planning logics has to be demonstrated by the research. Also the urban planning dimension is correlated to the problem that entails the fragments’ definition: also in this case, the first feedbacks from the field show how a change in the urban planning pattern does not represent necessarily the constitution of a fragment in the urban fabric. Two contiguous communities can be thought by the people as two separated (and conflictive) entities also when the space follows the same land use and urban design, and the organizations (and political parties), ruling the area, are common.

Conclusions: way forward for the research

The first field work in Mumbai has clearly shown the complexity of the urban fragmentation dynamics in the urban fabric of a Global South city. The proposed model based on the merger of spatial and institutional categories seems to provide all the basic elements needed to analyse the phenomenology of the question. The main concerns are referred to the feasibility of the analytical framework’s application in Mumbai’s context and in particular in the passage between the definition of the areas of interest that appears in urban planning matrix and the activities to be implemented on the field.

To face this situation, several options could be explored. At this stage we consider just some representative examples:

1) Limiting the work on the field to one specific fragment and its inter-actions with the other fragments of the city in order to define the relation geographies of the fragment and to have a detailed example of fragmentation processes;
2) Centring the analysis on a limited number of fragments that interact each other and can be representative of the fragmentation dynamics that are occurring, in other scales, at the city level;
3) Operating a classification of fragments’ typologies, analysing the character of the fragmentation dynamics in each condition.

The three options consent different levels of analysis (with the first one, the work can go in details much more than in the other two cases) and can be representative of the phenomenon in distinct ways (the third one can provide an overview of the global fragmentation trends in the city more adherent to the reality than the other two).

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9 It’s necessary to mention at list the municipality (BMC), the state agency for the housing (MHADA), the state agency for the infrastructures (MMRDA) and state authority for the slums rehabilitation (SRA). Here, of course, it’s considered “state” the Maharashtra State, not the central government of India.
The first part of the field work shows the sensitiveness of the question inherent the "definition of the fragments", with all the implications that this operation could have in the geographical and institutional analysis of urban planning dynamics and the importance of working on the institutional approach with a radical coherence with the deep meaning of the word "institution", thus analysing organizations, mental models, technologies and the other structuring principles of society, facing the "costs" that this coherence implies.
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