

## **REVEALING THE NETWORKS BEHIND 'INFORMAL' URBANIZATION AN ETHNOGRAPHY OF CARTOGRAPHIC PRACTICES**

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### **Abstract**

This paper develops a way of analysing 'the extensions of the extensions', areas on the peripheral steep slopes of Lima- Peru, that keep growing beyond what is considered the edge of the metropolitan area. The occupation and construction of neighborhoods' on the slopes is exposing an increasing number of the urban poor to hazardous living conditions. This urban phenomena has been significant in the last three decades in the Latin American region. In these areas, the practices of the State, land traffickers, disenfranchised peasant communities and those seeking a place to dwell in the city converge. This paper asks: how is it possible to research these processes and capture the amount of improvisation, experimentation and contestation shaping the relationships among all those involved? How to untangle actors and their practices and enable a transversal reading across them? To answer these questions, the paper focuses on cartography - the maps and plans used on the slopes of Lima. Through an ethnography of cartographic practices, it provides a novel methodology for bringing into view the processes, practices, alliances, and agency which are often invisible to policy makers, yet structure outcomes. In so doing, it offers analytical and methodological insights into contemporary urbanization processes across the Global South.

### **Introduction**

The occupation and construction of neighborhoods' on the steep slopes of Lima (see figure 1) is one of the most significant urban phenomena in the last three decades (Limapolis, 2016) found not only in Lima but also in other Peruvian cities and the Latin American region. In the absence of affordable land in the city, this mode of urbanization is a way through which the majority of the urban poor currently access housing, leading to a wave of peripheral expansion (De Mattos, 2002).

Figure 1- 'The extensions of the extensions', areas on the peripheral steep slopes of Lima- Peru, that keep growing beyond what is considered the edge of the metropolitan area. Source: Rita Lambert (2017).

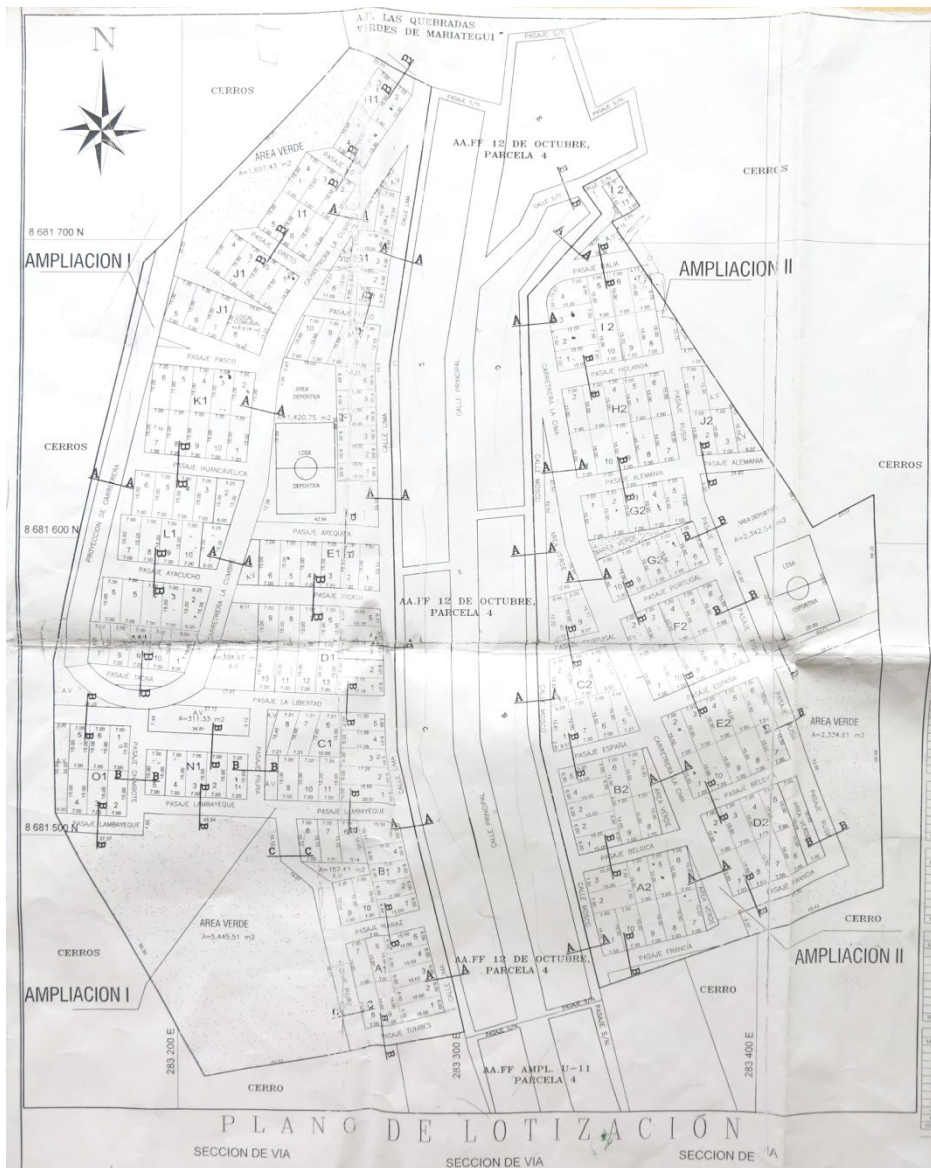


Various officials interviewed for this research frame these areas as 'lawless' and 'no man's lands'. The geographic remoteness and somewhat 'hidden' nature of the activities on the hillsides is frequently presented as one of the barriers to State intervention. The urbanization of the slopes is therefore often misunderstood as a process altogether separate from the State, working 'outside' the planning system, and criminalized for violating property rights and zoning laws. Contrary to the belief that this is an entirely independent process, formalized interactions with State institutions and the planning system are entrenched, facilitating the establishment of settlements, their recognition and their access to basic services. They are therefore not consolidating outside of the planning system but enter into dedicated planning processes.

The various ways in which settlements are first established on the slopes and how they develop show that diverse actors and practices overlap and collide in the same geographical space. These include not only those seeking a place to live in the city, but also officials from the district municipality, technicians and engineers working within and outside governmental institutions as well as speculators or so called land traffickers who capitalize on these areas by claiming desert land, subdividing and selling to those in need of housing.

One of the most important devices, used by many actors to urbanize the slope, are maps and plans (see figure 2). They are important devices to claim and defend territory, and are compulsory documents to navigate the planning system and advance in the ladder of entitlements. Not only do these coordinate actors within the planning sphere (such as municipal officials, engineers, technicians within utility companies amongst others) but they are also incorporated in the practices of the various actors operating outside public institutions (such as settlement leaders and land traffickers).

Figure 2: Example of a settlement layout plan used to claim territory and to obtain recognition from the district municipality and water and electricity from service providers. Source: Rita Lambert (2016).



As actors do not act alone, they enroll others, including material artefacts, to serve their interests. It is therefore difficult to attribute responsibility for this form of urbanization to any one group, rather it needs to be understood as the result of networked actors. Moreover, although the practices of various actors lead to the same outcome, there are different interests and rationalities at play and therefore a need to consider diverse networks of actors. In popular and media discourse alike, the actors that are often seen to play a role on the slopes are the State, land traffickers and the urban poor. Although these are more often treated as coherent entities, I am here starting from the premise that these need to be unpacked because they are constituted by heterogeneous actors (human and non-human). Unraveling these networks and examining the relations thus becomes important to better understand the urbanization of the slopes.

Methodologically, there are a few challenges which the research confronts: in this context where ambiguity structures the mode of production of space, how is it possible to research these processes and capture the amount of improvisation, experimentation and contestation shaping the relationships among all those involved? How to untangle actors and their practices and enable a transversal reading across them?

### **An ethnography of cartographic practices**

I hereby propose to enter through cartography, an instrument of planning. I focus on the conventional maps/plans that have been professionally produced by engineers but commissioned by a range of actors such as settlement leaders, land traffickers, utility companies, which follow conventions and stem from a formalized knowledge system for capturing space. These types of inscriptions are dominant and mediate the planning system. They are operative throughout the various stages of the urbanization process and are also 'conveners' of different actors since they move and coordinate between them.

Although, the approach through instruments of planning is not common in planning studies, a handful of scholars see them as productive, arguing that instrumentation is a significant avenue for reflection, particularly because it produces its own effects (see Lascoumes and Le Galès, 2004; Rydin, 2012; Rydin and Tate, 2016). A focus on instruments inevitably leads to a double interrogation: how practices use cartography towards desired outcomes; as well as how cartography itself as an active agent plays a role to precipitate outcomes.

Maps can therefore be taken as intermediaries or mediators to use Bruno Latour's language. An **intermediary** is that which transports meaning or force without transformation. On the other hand, a **mediator** transform, translate, distort, and modify the meaning or the elements they are supposed to carry (Latour 1996). Although there is a fundamental difference between seeing maps as intermediaries or as mediators, it is worth maintaining these conceptualizations together because they present different entry points for the research.

Maps are enrolled for their coordinative abilities to extend and translate intentions into actions. Because they are wielded as a technology in line with a rationality (beliefs, values and ideologies that sustain some representations of nature and the social world at the expense of others) they are a window into those that adopt them. In examining how maps are used to coordinate interests,

one is attentive to the ideological stance that accompanies them, the discourses they embody and the practices they coordinate. Following how the map/plan circulates and who it coordinates is productive for bringing into view the different actors and observing how the different networks interrelate. At the same time, it exposes the sites it lands in which can be analysed further to understand the practices: what is done with the map and because of the map. As in institutional ethnography, which examines work processes and studies how they are coordinated through texts (see Smith & Turner 2014)- where a text refer to documents or any type of representation that has a “*relatively fixed and replicable character*” (Devault and McCoy 2002, 765), taking the map as a coordinative inscription, one is drawn to examining how the map orients and shapes the reader's consciousness, organizes readings and talk, and coordinates the knowledge and actions of diversely located co-readers of the same text (Turner 2014).

In addition to the coordination of different sites through its travelling, a map as an actant (Latour 2005), also brings different actors into association during its production. Because it is a manifestation of an association it can itself be examined as a site of coordination. For example, settlement layout plans that are used to translate urban norms into build form, bring together different elements such as conventions, regulations, the grid, the territory, past inscriptions amongst others. Therefore, the map not only moves between places coordinating different sites but is itself a site where actors are brought together from distant places and times. As Hanna *et al* (2004) notes, representations such as maps work because “*they help make connections to other representations and to other experienced spaces*” (Hanna et al. 2004, 464). As mediators, maps themselves can play an important role to structure outcomes. This brings attention to how social actors as much as non-human actors interact with each other, with a potentially competitive streak to precipitate effects. Moreover, in conceptualizing maps as mediators, one is drawn to analyze the negotiation and transactions that take place between actants.

I demonstrate below, in the case of Lima's auto-constructed settlements, what can be made observable through the ethnography of cartographic practices.

### ***Visibility of important but hidden actors***

Tracing the circulation of the plan and analyzing the work processes and the negotiations and tradeoffs that occur with the plan and because of the plan, brings different and otherwise hidden actors to the fore. This is not only the case for non-human actors, like the everyday instruments used such as the computer or the plan itself, but also invisible human actors such as engineers and technicians, either commissioned by the settlements or part of government institutions (such as the civil engineer, the risk estimator or those who 'do work' with spatial information), that are often overlooked in studies on ‘informal’ settlements.

Moreover, this methodology helps to understand the function of actors within a network and identify strong obligatory points of passage and mediators. Some actors are strategically positioned and have an advantage over others in determining what form the urbanization of the slopes will take because they have knowledge, mobilizing and negotiating capacity, resources and legitimacy that others do not have, placing them in a better position to influence outcomes.

### ***Informality and forced deviations***

When examining the coordination that occurs with the maps/plans, one is also drawn to examine the information and money exchanges that occur. This evidences the way formal and informal transactions occur. In the case of Lima, the findings demonstrate that to comply with the regulations, actors must deviate from the rules. In order to undertake a processes, one is able to see the kind of information that needs to be drawn-in from other sources; in many cases this is acquired unofficially because it is not in the public realm and institutions do not share their information. For example, the various independent technicians such as the sanitation engineer must resort to 'buying' information illegally from government institutions in order to ensure an outcome which is compliant with the regulations. Compliance and deviation are here seen to be co-constituted contributing to the urbanization of unserviceable areas.

### ***Alliances between disparate actors***

This methodology also brings to light the alliances amongst different actors in mutually beneficial relationships that give continuity to a particular development path. One can see the ties that are formed between inhabitants and engineers or/and technicians within or outside governmental institutions. In the same way, alliances that are also forged with non-human actors can also be identified. For example, the civil engineer or the settlement leader enroll the plan and make themselves stronger in relation to others, gaining legitimacy and precipitating effects.

### **Conclusion**

This paper has demonstrated how combining ontologically different conceptualizations of maps, can be productive to research urban processes. As intermediaries, the tracing of maps/plans' circulation facilitate the disaggregation of the heterogeneous networks that play a role in urbanization processes and unraveled the aspirations, interests and rationales of different actors. The methodology reveals actors which are otherwise invisible to existing analytical categories but have a crucial function as obligatory points of passage and mediators determining and stabilizing particular urbanization paths. As mediators, maps/plans also draw attention to the important role of non-humans in structuring outcomes and bring into view the transactions that take place between actors to produce effects. More specifically, an ethnography of cartographic practices provide a way of reading transversally across actors and make observable the micro politics at play that determine specific outcomes. This approach reaffirms the need to question power as something that is not held within monolithic entities but works through various channels. Without a detailed ethnographic analysis to unravel associations, one risks overlooking where the politics lie and therefore missing important dynamics.

An ethnography of cartographic practices also provides a way of researching sensitive or illegal subjects by using technical aspects as entry points that are easier to observe and use as a basis for interviews. Generally, the approach of tracing information flows and money exchanges are productive and holds potential for researching 'not so obvious' and hidden processes.

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