Cartographic calculation and the formal/informal architecture of planning in Lima

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With urbanization being one of the defining phenomena of the 21st for the Global South, focusing attention on urban planning becomes a pressing issue. Understanding how planning happens in these contexts and finding means to observe 'it', is a necessary step towards identifying avenues for progressive change towards sustainable cities. This inherently implies an interrogation of what constitutes planning and who does it. It also implies a questioning of the established categories and pervasive dichotomies we use to think and speak about the city, such as the planned/unplanned, the formal/informal. Scholarly advancements in this area have questioned these dichotomies and explored their entangled relationships (McFarlane, 2012; Roy, 2009; Van Assche, Beunen, & Duineveld, 2014; Watson, 2007).

The city of Lima hereby provides an interesting case study. For several decades, Lima has developed through land invasions rather than formal planning (Collier, 1976; Riofrio, 1991). Since the 1940's, the city has undergone an explosive demographic growth to reach an estimated 9 million population in 2015. In the absence of a housing policy, affordable land in the centre and the exhaustion of appropriately located government land, the occupation of the steep slopes at the city's margins have become the dominant mode through which the urban poor access land and housing. It is estimated that 30% of Lima's population, which amounts to 2.8 million live on these slopes deemed 'high risk' (Laos, 2016). These settlements are labelled as informal which implies that they arise through processes altogether separate from the state and are also an exceptionality of urbanisation made up of those who are excluded from the market. In practice, informality is the prevalent form of urbanisation which is produced as much by state action as inaction. Although it is acknowledged that the state has historically played a role in encouraging human settlements in Lima, the myths prevails, particularly in the newer settlements on the steep slopes, that the state is absent which further enables this informality to thrive giving way to invaders, large scale land traffickers ect. This negates the very complex interaction between formal and informal planning that solidifies urbanisation in risk. Planning is hereby taken as an act of prefiguring and coordination which happen in multiple sites and by multiple agents.

This paper departs from the blurred boundaries between the formal/informal and, using a socio-material perspective drawing from Actor Network Theory (ANT) and Institutional Ethnography (IE) as relational ontologies, it seeks to make observable the various tradeoffs and negotiations that occur between the two in the peripheral slopes of Lima. It focuses on cartographic calculation and its co-constitutive relationship to planning as an entry point to make these channels visible. Cartographic calculation is hereby understood as the production, manipulation and circulation of spatial information. Although maps/plans are central in organizing and coordinating work processes in multiple sites, there is very little critical engagement with mapping particularly when it is seen as a mundane activity for planning. In the context of informal settlements in Lima, maps/plans are indispensable for the identification and occupation of land.

Furthermore, settlements are obliged to produce maps as they are compulsory to claim recognition and rights from the local municipalities and service providers.

This paper focuses on the most visible work processes performed by the state through the established official procedures of legitimation that guide settlements all the way from recognition, to the acquisition of basic services and ultimately formalisation. Tracing the travelling of spatial information, it explores what/who constitutes the state, how is formal/informal coordination undertaken through mapping, what calculations are performed and with what consequences for the planning of the slope. Although strict formal rules characterise the processes through to formalisation, which in themselves can be seen as hurdles for the settlements, in reality these can not only be circumvented through informal arrangements but they can only be abided by with informal channels.

Through this analysis, this paper shows what the relationship between formal/informal looks like, and how one can no longer discern between notional groupings as these are defined according to the set of relations in which they are enrolled. It disaggregates the accepted entities that are part of groupings such as the 'local government' or the 'municipality', by exploring how their actions, determined relationally by those of others produce and reproduce this blurring of the formal/informal.

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