Mapping to Disrupt unjust urban trajectories

Lambert Rita, Allen Adriana

[1]Development Planning Unit, University College London

December 20, 2014

Summary

This paper shares the experience of the research project 'Mapping Beyond the Palimpsest' which adopts grounded applications and cutting edge technologies for community-led mapping and visualization, to reframe the understanding of, and action upon, two highly contested territories in Lima; the Historic Centre - Barrios Altos, and Jose Carlos Mariategui, in the periphery. Adopting a participatory action-learning approach, the research seeks to disrupt the exclusionary trajectory of urban change, develop the writing of more inclusive representations and open up spaces for collectively negotiated outcomes between marginalised citizens, planners and policy makers.

Keywords: planning, mapping, visualisation, justice, Lima

Title: Mapping to disrupt unjust urban trajectories

This paper shares the experience from the research project 'Mapping Beyond the Palimpsest' also known as 'ReMapLima', which brings together three departments within UCL: The Bartlett Development Planning Unit (DPU) [led by Adriana Allen and Rita Lambert], the Centre for Advanced Spatial Analysis (CASA) [Andrew Hudson-Smith and Flora Roumpani], and The Bartlett School of Architecture/UCL Urban Laboratory [Ben Campkin]. It is undertaken in close collaboration with CENCA, CIDAP and Foro Ciudades Para la Vida - a network of 57 organisations from 20 Peruvian cities, ranging from local government, academics and civil society groups - as well as local communities from two contested settlements in Lima, Perú.

Building upon the DPU research platforms 'The Heuristics of Mapping Urban Environmental Change' (http://www.bartlett.ucl.ac.uk/dpu/mapping-environmental-change), CASA's world-leading methodological innovations in spatial analysis, and the Urban Laboratory's 'Picturing Place' methodology, this research seeks to develop innovative and critical strategies for the reading, writing and audiencing of maps. It adopts a participatory action-learning approach, enabling local community mappers to explore innovative pathways for reframing their territory, disrupting the exclusionary trajectory of urban change and developing the writing of more inclusive representations. The research interrogates the role that hegemonic representations can play in bringing forth exclusionary socio-environmental processes and seeks to open up spaces for collectively negotiated outcomes between marginalised citizens, planners and policy makers, ultimately contributing towards the planning of more democratic and sustainable cities.

The two contested settlements under study in this research are Barrios Altos and Jose Carlos Mariategui.

Barrios Altos (BA) is located in the historic centre of Lima in an area declared UNESCO World Heritage Site (Figure 1). It is characterised by overcrowded conditions and lack of basic services. Due to its strategic location, it has high land values, however its buildings are left to deteriorate (Figure 2). The lack of public investment for its rehabilitation, together with the illegal change of use into storage, which is occurring at a fast pace, can be understood as a means to evict many of vulnerable inhabitants living on high value land. The process that converts many of the buildings into storage occurs through the retention of facades while gutting the interiors, in order to store containers with merchandise originating mainly from China.

Figure 1- Barrios Altos- The Historic centre

Figure 2- Collapsing buildings of Cultural value in Barrios Altos

The Municipality of Lima has created a special body, PROLIMA, which is in charge of the strategic vision for the renovation of the Historic Centre and its masterplan for 2025. Many of the maps brought together to justify this masterplan are produced by various governmental agencies, and include risk maps, socio-vulnerability maps, crime maps ect. In essence, these justify the renovation of the centre by depicting it as poor, crime ridden, and with high physical risk. Moreover, the renovation is promoted through private investment which would lead to gentrification and the expulsion of the inhabitants. Here, the research seeks to fundamentally challenge what is to be considered cultural heritage, moving beyond the attention solely on the architecturally valuable buildings, to also include the people that have been living there for generations.

The other case study is **Jose Carlos Mariategui**, is in the outskirts of Lima and has developed through a complex history of grassroots invasions and informal land trafficking. Like many other informal settlements in Lima, it is expanding on the steep slopes of the city's margins. In the absence of affordable housing and national housing policies, the occupation of the slopes is the only viable option for the vast masses of the urban poor, which are exposed to high levels of physical risk and water injustices (Figure 3 and 4). The occupation of such 'vertical' areas threaten the sustainability of the city as they coincide with the 'Lomas Costeras', an essential ecological infrastructure for recharging the aquifers that guarantee water for Lima and regulate the effects of climate variability.

Figure 3-The occupation of the slopes in Jose Carlos Mariategui

Figure 4-Exposure to high levels of physical risk

This paper will explain the process of mapping, the technology adopted (including drones, 3D printing, augmented reality and visualization), the spatial analysis undertaken together with local communities, and the learning acquired throughout this process. Two simultaneous modes of mapping were used: from the sky and from the ground. These were conceived with the purpose of articulating grounded applications and cutting edge technologies for community-led mapping and visualization and to explore the political agency and capacity of mapping to reframe the understanding of, and action upon, these highly contested territories.

Mapping from the sky used drones to capture 2D and 3D outputs (Figure 5 and 6). Moving beyond militaristic and surveillance applications, their value for planning was explored in the case studies undergoing otherwise 'invisible' change. In Barrios Altos, the bird's eye view captured through the use of drones made visible the otherwise 'unseen' processes of slow eviction and land use change occurring behind both conserved and deteriorating facades. In Jose Carlos Mariátegui, the maps produced enable a detailed understanding of the difficult terrain that has to be negotiated by the inhabitants and the practices that make the slopes habitable. It also captured the shifting borders, the increased risk and the threatened ecological infrastructure, as well as the apprehension of the ravine as a system of interconnected settlements. Here the mapping is a means to open up dialogue between the inhabitants and the institutions which have various uncoordinated programs and projects in this area. It also seeks to enable the integrated planning of such areas and also support the preservation and management of the 'protected' ecological infrastructure for the functioning of the city.
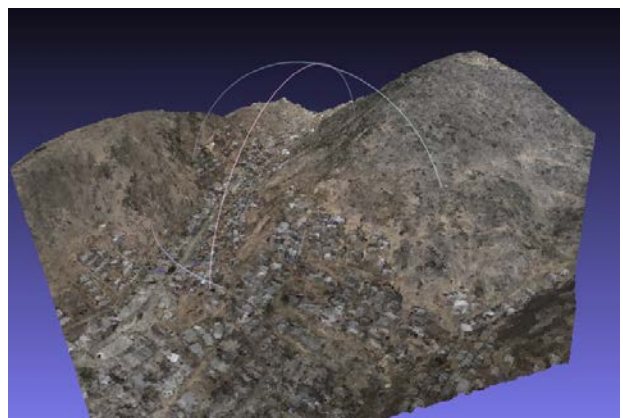

Figure 5- Drone flying in Jose Carlos Mariategui

Figure 6- 3D output from drones

The outputs produced by the drones were then used as the basis for mapping from the ground. Moreover, the drone 3D outputs were sent remotely to London from Lima, in order to be 3D printed. These are converted into meshes and are then printed using a Makerbot 2 Replicator (Figure 7 and 8). The intention is to use the resulting models for community planning purposes in the two areas.
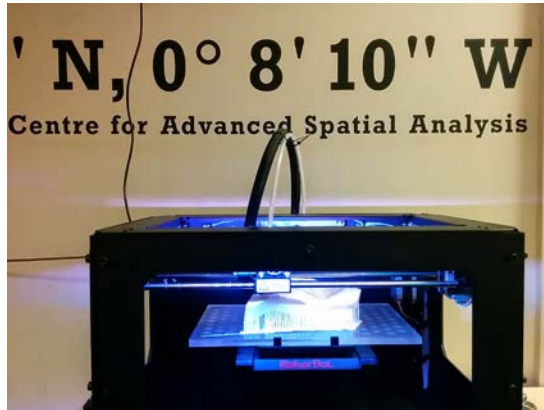

Figure 7- 3D printing of drone output

Figure 8- 3D model of Jose Carlos Mariategui

Mapping from the ground brought together men and women from each of the two settlements, to discuss and decide what to map, why and how. Mapping was discussed by the residents as a way to apprehend their territory and a means to document and denounce otherwise invisible processes of unwanted change in their neighbourhoods. It was also seen as a strategic activity to foster dialogue between stakeholders and to expand the room for manoeuvre to promote strategic interventions. Once decisions were made about what was important to map, pilot transects were traced to collect the required information. The fieldwork tested various crowd sourcing applications using mobile phones to collect data. Moreover, the pilot walks served to reflect upon and refine the mapping focus, the selected variables and methods for further mapping (Figure 9 and 10).

Figure 9- Preparing for a transect walk

Figure 10- Identification of illegal storage and evictions in Barrios Altos

In a subsequent phase, DPU and CASA are further developing a mapping methodology tailored to the unique contexts of Jose Carlos Mariátegui and Barrios Altos. This phase focuses on data collection as well as explore planning scenarios based on the printed 3D models captured by the drones. The process activated by 'Mapping beyond the Palimpsest' is also feeding into the other processes such as the practice module of the DPU MSc Environment and Sustainable Development, to deepen and consolidate this spatial mode of enquiry and action planning.

The main output, which is being developed, is a digital archive and mapping platform in José Carlos Mariátegui and Barrios Altos which would have information in various formats including text, photos, video and audio.

The latter will act as a repository for research on the urban Global South and an archive of knowledge accessible to those with interest in urbanisation, sustainability and justice. At the policy level, its intention is to encourage better planning practices, representing wider citizens' perspectives, ideals and aspirations. Moreover it seeks to stimulate public debate and awareness and be a showcase for cross faculty and cross global collaboration.

Two websites have been created to share the experience gained through the research 'Mapping Beyond the Palimpsest':

https://www.bartlett.ucl.ac.uk/dpu/mapping-beyond-the-palimpsest

http://remaplima.blogspot.com/

Biography

Rita Lambert is a Teaching Fellow for the MSC in Environment and Sustainable Development and researcher at the DPU-UCL. She trained as an architect and has over 10 years of professional experience. She is currently undertaking a PhD Interrogating the role of mapping in planning in the urban global south.

Dr Adriana Allen is a professor of Development Planning and Urban Sustainability at the DPU-UCL, with over 25 years of international experience in academic research and applied work. Straddling the social and natural sciences and examining the interface between development planning, environmental change and urbanisation in the global south.