

Territory, engineering and nature: explorations from Maricá, Rio de Janeiro – Brazil

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In March 2006, Brazilian national government had announced the installation of a huge industrial complex based on oil and gas exploitation, guided by PETROBRAS, in the city of Itaboraí – named COMPERJ. The Pandora’s box was opened. The current work focused on these massive ongoing transformations within the eastern Baía de Guanabara region, which represents a drastic rupture with its historical, territorial and institutional precedents. The local and regional scale reveals a complex and diverse urban fabric, due to simultaneous land concentration/dissolution, urban’s fabric fragmentation and soil’s privatization. Within this erratic framework, the role played by the infrastructure into the urban planning arises pursuing new demands regarding the environmental, spatial, and institutional dimensions. Additionally, the land occupation pattern has also been investigated into the current research. In fact, the physical-territorial fragilities have signaled the deep need of a dialogue between urbanism and environmental engineering. A bachelor thesis and a scientific research¹ have conducted an exploration that, as an outcome, has promoted new discussion and debate moments where strong apprehensions have emerged within Maricá’s foggy scenario. For instance, the huge demographic growth on a ten year time lapse², land speculation, non-infrastuctured spaces³, informal settlements and gated communities, low sanitation levels, transportation based essentially on cars etc. All of which indicate the persistence of the “progress at-all-costs” rationale, destroying

preexisting lifestyles and nature. From this perspective, and based on theoretical reflections on the production of space on the fringes of Rio de Janeiro's metropolitan area, some aspects must be considered given these new senses of territorial reorganization that is currently occurring in Rio and its overall influence area – e.g. public-private partnerships, the political project legitimation by means of “sustainable development” speech. Therefore, it is an attempt to expand the limits of traditional engineering – for both conception and practice. It also proposes the assimilation of technics' ideological and symbolical features, from the light of critical theory, by questioning engineers' and decision-makers' authority regarding the so-called development and well-being. Thoroughly analyzing the technical objects dynamics and its relationship with the surrounding community, which nowadays is more or less restricted to what Milton Santos (2013) called spatial alienation. Instead of supporting a study proclaimed only on allegedly truths – i.e. distant from the omniscient planner or engineer – the work aims to give a singular analysis of this turbulent time for maricaenses⁴ in general, in order to encourage the collective construction of truth. In other words, praising the communicative rationale as pointed out by Gert De Roo (2007), which is a key element towards social empowerment and self-management inside its territory. The current engagement of social movements like APALMA⁵, among others, is extremely important for this change. Currently, it is possible to visualize Maricá as an ambiguity: sacrifice zone versus the idyllic zone. On one hand, the urbanization driven by COMPERJ (in a regional level) requiring the installation of support infrastructures for its functioning, e.g., the Ponta Negra harbor and the gas pipeline, and two marine outfalls (COMPERJ's effluent and the other to the city center wastewater) – works of substantial impacts. On the other hand, Maricá's imaginary as a peaceful place, environmentally rich, with multiple ecosystems (such as lagoon complex, oceanic beaches, marshes, and so on). Undoubtedly, this tension between the so-called development and the nature is precisely the core issue observed in these last ten years. One way or another, abandoning or not the COMPERJ's plan⁶, the territory will unavoidably carry these scars and marks triggered by the expansion of the speculative frontier, and the investments vertically imposed – especially the east side of the Baía de Guanabara. Transform in a ghost city with several empty houses and

buildings, like Ordos in China; or if becomes a successful city with its project of an “exclusive city”, dominated by the gated communities and private spaces. Indeed, this duality (between the ghost city/exclusive city or sprawl/compact city) reiterates the economist way of intervening on the territory, where the money is the main actor on reorganizing the space. Fearfully, these paradoxical scenarios are possible to occur, given the present untamed development⁷. Topics like natural capital, information, structures and urban system’s function, products and services, and knowledge should be aligned with a future perspective, i.e., concerned with the sustainability of Maricá’s territory itself. For example, Maricá’s resources depletion, most noticeable the land consumption by the real state agencies and the environmental degradation of water bodies, indicates the inept planning approach taking place now. That, directly or indirectly, nurtures the material basis degradation, independently of the possible definitions of “sustainability”. Aware of this panorama, which ways are possible to the city of Maricá, due to the continuous practice of do, undo, and redo of its territory? Finally, a dilemma is revealed in face of current subjects, especially climate change and environmental justice, suggesting the necessity of a multilevel approach to cope with them. Can the city, in its urban scale, have the proper conditions to face these problems without the support of other spheres of public administration? Considering the environmental, spatial and political, presupposes the acknowledgment of planning as a tool to deal with the major themes.

NOTES

1 – In Brazil, the research program organized by the CNPq (the National Council of Technological and Scientific Development or “Conselho Nacional de Desenvolvimento Científico e Tecnológico”) called “Iniciação Científica”, which is dedicated to promote the research practice for the bachelor students.

2 – During the period of 1991-2000 the city of Maricá had displayed an increase of 94% for its urban population while its rural population had a minor decrease of less than 4%. However for the period of 2000-2010 (pre and post COMPERJ announcement era) the rural population had drastically decreased by 85%, remaining less than two thousands individuals, and the urban population has doubled again thus reaching the amount of 125,491 inhabitants (PNUD, 2014).

3 – Despite the fact that Maricá has received around R\$ 100 million just by the national government (Ministério do Planejamento, 2015), within the context of the program for acceleration of growth (PAC). This budget is mainly oriented to essential public services, such as health, social housing, education and sanitation. Evidences of a totally unplanned urban growth.

4 – Portuguese word for the citizens born in Maricá, demonym.

5 – Associação de Preservação Ambiental das Lagunas de Maricá (Association for the environmental preservation of Maricá lagoons’).

6 – Considering PETROBRAS’ internal crisis, and the delaying of COMPERJ’s plan.
<http://oglobo.globo.com/brasil/comperj-dara-prejuizo-de-45-bilhoes-petrobras-15799133>

7 – The same pattern can be observed in Itaboraí.

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