

Designing 'Dream Houses' in the fringe of development: occupants' perception of low-cost housing in Luanda's urban periphery

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ABSTRACT

This paper explores issues associated with perceptions of low-cost housing in Luanda, which despite being considered one of the fastest developing and more prospective growing cities in Africa, is struggling to cope with a growing population putting extra pressure on an already saturated urban infrastructure. A renewed Luanda is taking shape, whilst the periphery is being gradually populated with thousands of new houses destined to the low-income population, absorbing some of the people displaced from informal settlements (*musseques*) but also open to those who would not otherwise be able to afford living closer to Luanda's centre. Amongst promises of fulfilment of a "dream" of ownership and adequate living conditions, this research investigates the low-cost housing sector of Luanda as experienced and perceived by the inhabitants/occupants themselves. Using a Participatory Post-Occupancy (PPOA) framework, it combines the technical arrangement of a building appraisal tool with a participatory approach intending to provide an accurate insight into the occupants' satisfaction and the performance of low-cost housing in an informal settlement as well as in a newly built low-cost mass housing development located in the outskirts of Luanda.

KEYWORDS Angola, urban development, mass housing programme, low-cost housing

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Célia is an architect and researcher specialised in built environment and international development. Her professional experience includes working in architecture practices in Portugal and the UK, as well as conducting research on sustainability and resilience in Ghana, Angola, Colombia, South Africa and Nepal. As an associate at ASF-UK since 2014, she has developed and coordinated international projects focused on urban resilience and participatory planning.

1. Introduction

This paper is inspired by the current urban dynamics of Angola's capital and was extracted from a wider research conducted towards a doctoral thesis entitled: '*Dream-House' For Luanda's Low Income Population: Analysing Perceptions, Aspirations and Reality through a Participatory Post-Occupancy Assessment (PPOA) Framework*'. It emerges from a post-conflict and renewed Luanda, gradually taking shape whilst contemplating thousands of new houses destined to the low-income

population, some of whom previously inhabited informal settlements within the city fabric. Hence, focusing on houses provided under the *Programa Nacional de Urbanismo e Habitação* (National Urbanism and Housing Programme's (NUHP)) framework, but also looking at occupants and dwellings in informal settlements, this research explores whether current proposals to mitigate high demand for housing are meeting occupants' aspirations and needs, and ultimately improving their quality of life.

Informed by discussions around appropriateness of research methods in development studies, the research strategy designed for the purpose of this work consisted of a PPOA framework that brings together two well established disciplines (Post Occupancy Evaluation (POE) and Participatory Rapid Appraisal (PRA)), which despite of originating from distinct backgrounds, have much to offer to each other. A combination of the technical framework of a building appraisal tool with a participatory approach intends to provide an accurate insight into the occupants' satisfaction and performance of low-cost housing in Luanda.

Considering that a large number of low-cost housing is to be constructed in Luanda in years to come, findings suggest that using PPOA at a large scale could potentially provide an entry-point to assess successes and failures in current projects. This can thus inform future housing programmes, making these more responsive to people's actual needs and aspirations.

2. Background

Luanda is considered one of the fastest developing and more prospective growing cities in Africa (UN-Habitat, 2014). Such view of economic development is frequently associated to a sharp population increase and subsequent physical expansion of cities' footprint. A phenomenon also observed in Luanda, especially as a result of successive rural-urban migration waves in search of safety during more than 30 years of civil war. Although the armed conflict ceased in 2002 this upward demographic trend remains present today, putting extra pressure on an already saturated urban infrastructure. Luanda now accommodates more than 6.5 million people (INE, 2014), although still partially relying on services and infrastructure dating back to the 1970s when it was planned for an approximate number of 475,000 inhabitants. In light of the above a renewed Luanda is taking shape whilst the periphery is being gradually populated with thousands of new houses destined to the low-income population, absorbing some of the people displaced from informal areas (*musseques*) within the city.

As a consequence, presently and probably more than ever, the last decade has witnessed an increasing awareness of general housing issues in Angola. Topics such as urban growth, homelessness, housing conditions, amongst others, are now frequently raised and widely debated by academics, the media, national and international NGOs, local authorities and the general population. Moreover, and in line with international initiatives towards rethinking the urban agenda and slum upgrading worldwide - such as the Sustainable Development Goals (SDG) - these discussions have been gradually translating into national policy making. These focus on development of infrastructure, provision of housing and improvement/upgrading of urban fabric in Luanda. The NUHP, a nation-wide programme set up by the government in 2008/9 with the aim of mitigating housing scarcity by providing 1 million houses throughout the country (República de

Angola, 2008) emerged from within this conjuncture. This government programme also became known as "My dream, My house" Programme, a vague but catchy phrase alluding to the fulfilment of a dream of ownership and adequate living conditions, also supported by the article 85.º of the 2010 revised Constitutional Law of Angola which states that "every citizen has the right to appropriate housing and to a decent quality of life"(República de Angola, 2010).

However, the intentions framed by such title have not been free of criticisms. If on the one hand there seems to exist a quantifiable intention with regards to what is to be provided under the housing programme, on the other hand questions have been raised concerning the feasibility of implementing such a programmatic agenda, especially with regards to meeting the population's requirements (Croese, 2012). These concerns have been further highlighted by the successive postponements of the programme's initial deadline (Correa, 2010), which at the time this research began was indicated as 2014. Furthermore, the implementation of the programme has also been shaded by repeated reports of forced evictions (Amnesty International 2008; Amnesty International 2010; Amnesty International 2011) in association with the clearing operations of inner-city informal settlements, to make place for large tower blocks and luxurious developments. An approach to city-making autistic to the financial reality of the majority of the population, who live on less than a 1.25\$ (USD) a day (UNDP, 2011). Considering the above, the successful fulfilment of the programme's targets whilst providing people with their 'dream-house' remains an uncertainty.

3. Methodological Approach

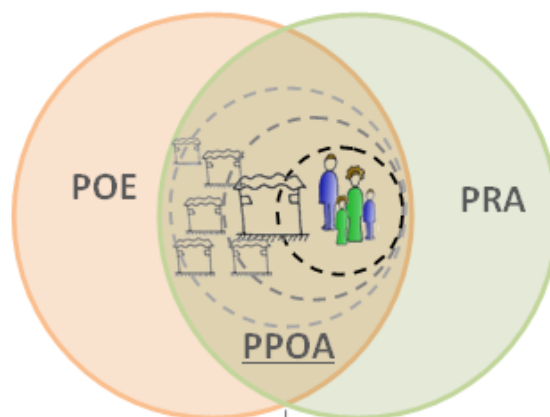
The research work from which this paper is extracted had as main aim to develop and test a framework of analysis based on the combination of POE and PRA, PPOA designated as Participatory Post-Occupancy Assessment (PPOA). PPOA was therefore to be implemented to assess occupancy satisfaction of residents and dwelling performance in an informal settlement and a low-cost mass housing project in the outskirts of Luanda, contrasting informal and formal construction practices in Luanda.

POE is considered by some as the most commonly known building appraisal framework (Aigbavboa and Thwala, 2012) and it has evolved since the 1960s to encompass a number of different methods used to address and collect information in different building types. Currently it combines quantitative (physical monitoring) and qualitative (qualitative evaluation of user perception and behaviour) methods in order to provide a complete picture of the building performance as a whole (Stevenson, 2009). Although combining qualitative and quantitative data gathering methods, a considerable part of POE relies on the collection of quantitative data, through the extensive use of questionnaire surveys. POE provides an insight into how buildings perform after occupation, thus creating a knowledge feedback loop that can inform and consequently potentially improve future projects of similar nature to those evaluated (Preiser and Vischer, 2006). However, apart from some exceptions, POE remains mostly limited to "developed countries" and extending its implementation to the built environment in a developing context, however extremely useful, may prove to be a challenge at various levels. These include for example lack of (or inadequate) building regulations, and therefore of benchmarks, but also the need to develop a methodological strategy responsive to context-specific (economic/social/cultural) requirements.

The latter touches upon a wider discussion on adequacy of research methods used in development studies, which also highlights the dissatisfaction towards methods used in the "normal professionalism" (Chambers, 1986), and has contributed to a shift towards a new paradigm of research in this field. Questionnaire surveys for example, although considered useful when the objective of a given investigation is to provide average pictures, trends or characteristics (Mukherjee, 1993), also tend to follow fixed categories, regarded as a top-down approach that imposes meanings and concepts of those inquiring onto a given local social reality (Chambers, 1991, Chambers, 2008). Reflecting on Chambers' question "Whose reality counts?" (Chambers, 1995), PPOA intends to overcome the limitations above, proposing a framework based on the concept of POE, which used in conjunction with PRA principles, emphasis people/residents as active participants in reflecting and transmitting their own account of the dwellings and context in which they inhabit. This is used as a research design guide to collect and unpack information compartmentalised into four main sectors of enquiry (Contextual, Spatial, Physical and Social) in association to the case study areas' context.

a) Conceptual Framework

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b) Scales & Sectors of enquiry

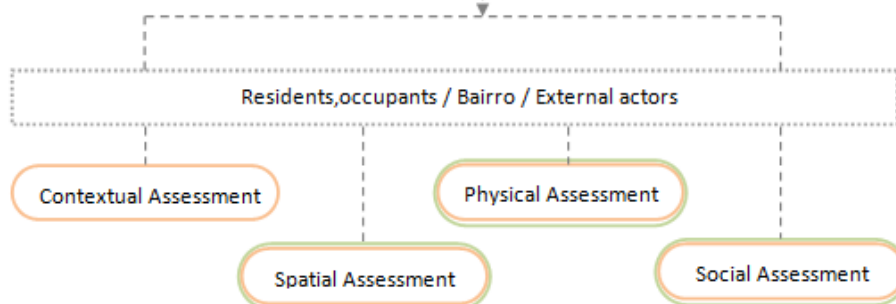


Fig. 1: Diagrammatic representation of Conceptual Framework

Although it is not in the scope of this paper to describe in detail the methodological process of PPOA, the flow chart below illustrates the cycle of a PPOA. This process is devised into six stages designed to respond to the conceptual framework above (1. Setting the scene, planning and overall strategy; 2. Multidimensional site specific context diagnosis; 3. The individual dwelling; 4. Feedback and validation; 5. Analysis; and 6. Feedback loop).

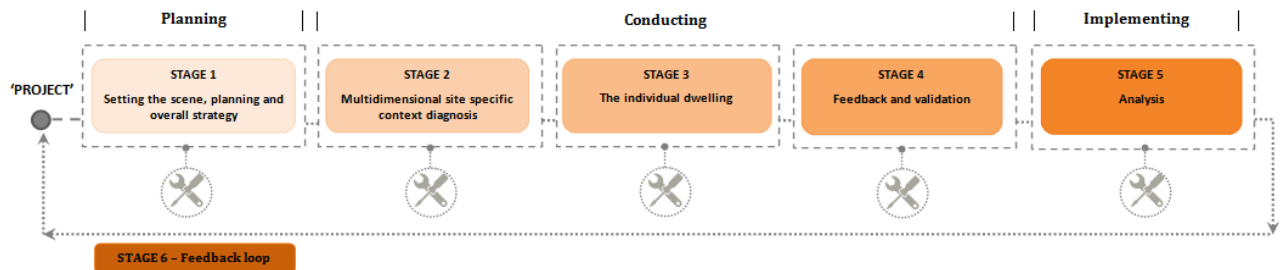


Fig2: Flow chart illustrating stages and process of PPOA

4. Contextual Background

The following provides a brief overview of the context of both case study areas where the research took place.

Case area One, Bairro Chicala is one of Luanda's various informal settlements. Despite being located in the heart of the city's urban fabric, due to its particular contained setting - on one side it is bordered by the Atlantic Ocean and on the other side by Luanda's historical centre - the physical expansion of the neighbourhood's footprint has always been restricted. Although it is a smaller neighbourhood considering the wider context of informal settlements in Luanda, in terms of urban fabric, Chicala shares spatial features with other settlements of the same nature located elsewhere in the capital. This is particularly the case either in terms of general arrangement of urban space or dwellings typologies. Bairro Chicala, spreads over a part of the coastal strip of Luanda which has been gradually cleared out of informal constructions as a consequence of government-led interventions towards reducing the prevalence of informal constructions in Luanda - including the "My dream, my house" Programme. The spatial metamorphosis resulting from such interventions was noted by the researcher between the period of 2011 and 2013. It was observed that a significant part of the neighbourhood had been affected by such interventions and been cleared out between field visits, to make space for a "mega real-estate project" (Amorim, 2013).

Case area Two, Zango, is located in the periphery of Luanda. This area was previously used for agriculture purposes and had no history of urban occupation (Neto, 2012). Although it started with modest numbers (20 houses in 1999, built in order to house population displaced from Boavista, an informal settlement built in a risk area (Videira, 2012)), today it comprises thousands of dwellings spread over a large extension of land. The earlier houses of project Zango can be found approximately 60 kms away from the centre of Luanda, in what is now the area designated as

Zango 1. Currently the 'Zango Project' spreads out on either sides of *Estrada do Zango* (Zango road) through a linear extension of roughly 10 km towards South. With regards to spatial organisation, although usually the denomination 'Zango' covers a vast area it is numbered in delimited areas ranging from 1 to 5, where the former represents the first constructions and the latter the latest. Given its ongoing expansion it is anticipated that subsequent numbers will be attributed as the built area expands. It is not clear how many houses have been built since the early 2000s in Zango or how many families currently reside in this area. It is known however that in 2014 the construction of 5 thousand "economic houses" in Zango was approved by Presidential Decree (Diário da República, 2014). A result of a contract worth 158.5 million USD celebrated between the government and the company Odebrecht. Furthermore, according to a 2015 press statement, the Angolan government celebrated an 85.5 million Euros contract with the company Alfermetal SA, in order to built 4 thousand "evolving houses" (low-cost houses delivered partially complete) in the area of Zango IV. These would be targeted to accommodate people displaced from so called "risk-areas" (usually referring to informal settlements) within Luanda (OJE, 2015).

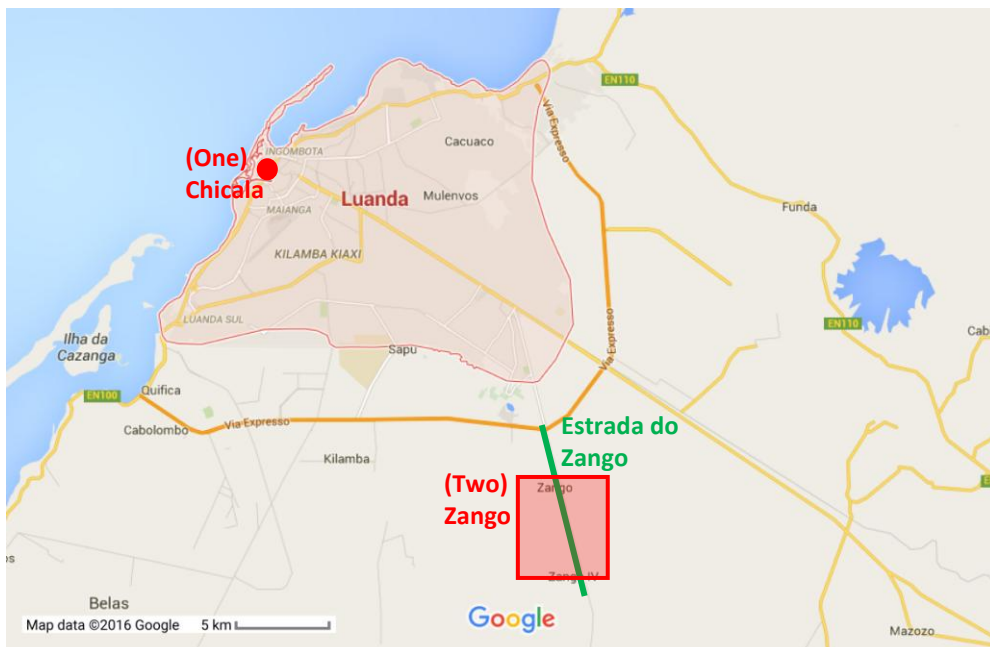


Fig. 3 - Red circle marks approximate location of case area One, Red square marks location of case area Two. Green line indicates approximate location of Zango's main road (*Estrada do Zango*). (Google Maps, 2016)



Fig. 4 - Typical street case area One (Macedo, 2011)



Fig. 5 - Typical street case area Two (Macedo, 2013)

5. Findings and Discussion

Although not intending to be statistically representative, this research revealed a gap between intentions and actual capacity of the NUHP's "dream-houses" to meet resident's aspirations. It suggests that the fulfilment of such goal relies on an holistic approach to housing that takes into account a variety of factors beyond the dwelling as a structure. One that also contemplates and acknowledges owner-driven adaptation strategies, whilst guaranteeing the contextual conditions and support of a fully functional planning and legal framework.

This research has ascertained that assuming that the way towards improvement of quality of life relies on the implementation of policies based on radical approaches, such as clearance of informal settlements and urban fabric design practices based upon the repetition of a single typology of dwelling - regardless of environmental conditions, social and cultural precedents -, may be leaving out the views of those inhabiting dwellings in informal settlements. In addition to revealing an unclear and vague concept of a "dream-house", such measures raise the question of whose "dream" the production of mass housing programmes is intending to fulfil. These plans further imply that urban space produced through informal practices does not meet standards of life and must therefore be reversed. However, according to occupants enquired in informal and formal areas, adequacy and appropriateness of dwellings are not necessarily dependent on four walls and a roof, as the combination of these elements alone does not compose a "dream-house". In addition to a sound structure, this research showed that occupants prioritise a house well integrated with its environment which provides them with opportunities and access to services and is able to accommodate changing needs and cultural background of a household, as well as being able to provide protection from extreme climatic events and against criminality.

In addition to the above, mass housing programmes such as the one in which case area Two is integrated, would benefit from a strategy based on a continuous monitoring, prior, during, and post implementation (occupation) working on a feedback loop of information. This includes the need for the development of site assessment in order to determine appropriateness (mainly environmental factors) prior to construction; the provision of technical assistance or training to self-builders in order to avoid structural issues in new construction or extensions during construction phase; and implementation of monitoring and evaluation system after occupation. The latter would allow for a better understanding of issues associated with programmes of this nature and avoid or reduce the occurrence of future problems. Furthermore, considering the particular context of this research, in which the NUHP contemplates the provision of technical assistance to those engaging in self-building activities (República de Angola, 2008) in case area Two, this information could be further incorporated as an element of capacity building and technical guidance, thus benefiting self-builders, who at the moment rely mostly on unskilled labour.

6. Conclusions

In light of the above, considering that a large number of low-cost housing is to be constructed in the fringes of Luanda in years to come, findings suggest that using a PPOA approach at a large

scale could potentially provide an entry-point to learn from failures and successes in current housing programmes. However, mainstreaming this approach in low-cost housing as part of project delivery process in a context lacking a fully functional planning structure and regulatory framework covering the building industry may prove to be a challenge. It may be difficult to formally implement it as a stage of building design and construction in itself when these are not clearly defined in the first place – and where usually construction carries on after delivery. Even if surely relevant, not having a structure in place in order to facilitate continuous feedback of information within the industry and occupants could result in one-off PPOA studies with very little impact on future projects.

Nevertheless, having access to this information can potentially contribute towards and inform future housing programmes by making these more responsive to people's actual needs and aspirations, thus paving the way towards materialising dream houses into reality.

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References

- Aigbavboa, C. and Thwala, W., An appraisal of housing satisfaction in South Africa low income housing scheme. *The international journal of construction management*, Vol. 12 (1), pp. 1-21, 2012.
- Amorim, R., "A Luanda do Futuro: Megaprojeto imobiliário vai mudar o cenário da baía da capital angolana " in *Expresso Economia*, 2013. <http://expresso.sapo.pt/a-luanda-do-futuro=f822280> (Accessed November 7, 2013)
- Amnesty International, *Joint letter to UN-Habitat* [Online]. London: Amnesty International, 2008. <http://www.amnesty.org/en/library/info/IOR40/021/2008/en> (Accessed March 12, 2012).
- Amnesty International, *Angola: Amnesty International urges end to forced eviction and protection of human rights defenders* [Online]. Amnesty International, 2010. <http://www.amnesty.org/en/library/asset/AFR12/007/2010/en/6577eb71-c4a1-4e23-8d8f-36560baf51e0/afr120072010en.html> (Accessed August 3, 2011).
- Amnesty International, *Angola rehouses victims of forced evictions* [Online]. Amnesty International, 2011. <http://www.amnesty.org/en/news-and-updates/angola-rehouses-victims-forced-evictions-2011-06-10> (Accessed August 3, 2011).
- Chambers, R., Normal professionalism, new paradigms and development . *Agriculture and rural problems*. United Kingdom: Institute of Development Studies, 1986.
- Chambers, R., Shortcut and participatory methods for gaining social information for projects. In: Cernea, M. (ed.) *Putting people first: sociological variables in rural development*. 2nd ed. New York; London: Oxford University Press, 1991
- Chambers, R., "Poverty and livelihoods: whose reality counts?." *Environment and urbanization*, Vol. 7.1 pp. 173-204, 1995
- Chambers, R., *Revolutions in development inquiry*. London: Earthscan, 2008
- Corrêa, C., "Auto-construção dirigida, ruled self-help housing" in *Vivo Angola*, p.5, 2010
- Croese, S., One million houses? Chinese engagement in Angola's national reconstruction. In: Power, M. and

- Alves, A. C. (eds.) *China & Angola, a marriage of convenience*. Cape Town, Dakar, Nairobi and Oxford: Pamzabuka Press, 2012
- Diário da República, Despacho Presidencial n.º 47/14 - Presidente da República Diário da República Iª Série n.º 82 de 2 de Maio de 2014, (p. 2059), República de Angola, 2014
- INE, Resultados preliminares do recenseamento geral da população e da habitação. Luanda, Angola: Instituto Nacional de Estatística de Angola (National Institute of Statistics Angola), 2014.
- Mukherjee, N., *Participatory Rural Appraisal: Methodology and applications*, New Delhi, Concept Publishing company, 1993.
- Neto, M., Impacto da urbanização - Unpublished academic research work for the module Demography - Universidade Agostinho Neto - Faculdade de Engenharia, 2012
- OJE, Mais de 3 mil casas para realojar famílias em Luanda, Digital OJE - O jornal Económico, 2015
<http://www.oje.pt/mais-de-3-mil-casas-para-realojar-familias-em-luanda/> (Accessed July 15, 2015)
- República de Angola, Programa do Governo 2009. Luanda: Governo da República de Angola, 2008
- República de Angola, Constituição da República de Angola. Assembleia Constituinte, 2010
- Stevenson, F. Post-occupancy evaluation and sustainability: a review. *Urban Design and Planning*, Vol. 162, pp. 123-130, 2009
- UN-Habitat, *The state of African Cities 2014: re-imagining sustainable urban transitions*. Nairobi: United Nations Human Settlements Programme, 2014.
- UNDP, *Human Development Report 2011 - Sustainability and equity: a better future for all*. New York: United Nations Development Programme, 2011
- Videira, M., Impacto da urbanização - Unpublished academic research work for the module Demography - Universidade Agostinho Neto - Faculdade de Engenharia, 2012
- Vischer, J. and Preiser, W., *Assessing building performance*, Oxford: Elsevier Butterworth-Heinemann, 2006.