

Shouldn't All Architecture be Designed with Empathy?

A case of affordable-housing design in Zanzibar

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Abstract

Rapid urbanisation and, as a result, fast growing informal areas, increase the need for affordable housing. This urgent need requires new forms of input from the architects active in the Global South. The profession must adapt and evolve. Based on previous research, I argue that to build sustainable communities, the inhabitants must be heard and be part of the development process. To involve inhabitants, architects can use contextually suitable and effective design methods. The study comprised research through design of an affordable-housing design project in Zanzibar, Tanzania. This paper presents the early stages of this design process. The study revealed the potential of developing collaborative methods borrowed from the design discipline in the context of architectural design. The findings show advantages and disadvantages of the different methods applied. I conclude that these methods deepen and enrich the design process while working in settings with contextual constraints in the pursuit of sustainability.

Keywords: Affordable-housing; inhabitant engagement; collaborative design; design methods; empathy

1 Introduction

Although sustainability is a global goal, its achievement largely relies on understanding local circumstances, including its environmental and sociocultural domains. In the case of architecture, we must consider the influence of local climate conditions and available materials to reach environmental sustainability in a project. Further, albeit occasionally imperceptible, locally and culturally specific ways of living and using space usually express communities' enduring traditions, which cannot be easily changed in the near and long term without being strongly disturbed. Previous research has shown that sociocultural dimensions are often overlooked; however, they are essential for reaching a sustainable outcome (Sandman et al., 2018). One way to understand and address these aspects is to engage inhabitants in the architectural design process to ensure that the design corresponds to their actual needs.

Involving users and inhabitants has been strongly advocated within resource-challenged settings, often typical when designing for the lower income population. However, while participatory processes have a long tradition in the Nordic countries there is considerably less practice, experience and capacity

What is the potential of developing methods from the design discipline in the context of architectural design in culturally and socially complex settings?

regarding such approaches in the Global South¹. Most of the urban development and housing design will happen in this part of the world over the following decades (Salama and Grierson, 2016). In fast growing cities, where the pace of change is difficult to follow, there are often obstacles from the perspectives of both participants and architects. To engage people in change can be a chaotic process (Light and Akama, 2012). Nevertheless, inhabitant engagement in the architectural design process can act as a means of empowerment for disadvantaged groups (Hollmén et al. 2018), and therefore support sociocultural sustainable development (Sandman et al. 2018).

While professional architects are necessary (and sometimes legally required) within rapid urbanisation processes, there is a general scarcity of the profession in the Global South. Per capita, there are 20 times as many professional architects in the Global North as there are in the Global South (African Union of Architects, 2018; Architects in Europe, 2014). The shortage of professionals engenders situations in which architects might have too many duties, come from another region, or from another social level than the inhabitants (due to a conceivable lack of educational opportunities for the low-income population). Given the challenges facing professional architects in the Global South, the field requires more research and practitioner attention (e.g. Goluchikov and Badyina, 2012; Salama and Grierson, 2016). Perhaps the practice of architecture can evolve and accommodate new flexible methods for inhabitant engagement in the design process. However, these methods need to correspond to local culturally specific customs (Akama et al. 2019) not to reinforce and recreate colonial legacies (Lokko, 2017).

Design offers a wide range of methods, tools and techniques for user engagement. There is an elaborate discourse on collaboration with users in design that indicates that some of these approaches can be suitable also for architecture in low-income and middle-income countries.

This paper presents a case where four different collaborative design methods borrowed from the design discipline were applied. The paper covers the early stages of an affordable-housing design project that I was involved with in Zanzibar town, the capital of Zanzibar, Tanzania. The project in Zanzibar illustrates how certain design approaches can be applied in the architectural design process, how they complement each other, what adaptations and changes were needed, and what benefits and limitations were detected. The findings suggest that the use of collaborative design methods can influence the architectural planning of housing, and support architects to take better into consideration the sociocultural aspects of sustainable and affordable housing. The findings also illustrate that architects can move towards a better understanding of locality, inhabitants, and users in meaningful ways utilising methods that are time-efficient and flexible.

1.1 Research approach and positioning the author

I am a practicing architect, with experience of working and teaching in the Global South for many years. As a doctoral researcher, I conduct 'research through design' (Dye and Samuel, 2015; Koskinen et al., 2011), in which I, as a practitioner, develop and reflect on my own practice as it unfolds and in retrospect. In this case I have undertaken, modified, tested and critically reflected upon particular, methods for user engagement in design, that I argue may contribute to long-term sociocultural sustainability. These methods were utilized

¹ In this paper, I use the term 'the Global South' when comparing with the Global North, 'low-income countries' or 'low-resource settings' when focusing on constraints in these countries.

to involve the community in the design of potential housing solutions for their neighbourhood. They were not conducted merely in research purpose, but mainly for the design of housing. Retrospectively I have analysed the different activities carried out in the community during the design phase in relation to human-centred design approaches according to a model by design researcher Steen (2008). This qualitative approach is interpretative and subjective, rather than objective, and takes advantage of embodied and situated knowledge, while acknowledging limitations. For instance, the number of people I have involved in the study is small, not equally divided between gender and age-groups, and limited to one particular community in one East African country. The results are thus not directly applicable to any architectural project anywhere without being critically analysed in relation to the situation at hand. Additionally, there is a distance between me and the community on many levels: geographic, cultural and social. My knowledge of the Swahili language is limited, and therefore some of the discussions, in cases in which the inhabitants did not speak English, were conducted with the aid of a local research assistant.

2 Background of a collaborative design approach

The large body of literature on inhabitant engagement and participatory practices in architecture relates primarily to projects conducted in the Global North, as this is where the origin of participatory design resides (Kensing and Greenbaum, 2013). Today, in low- middle income settings, the need for participatory design is widely recognised, and such methods are often taken for granted in design processes (Binder et al., 2008). In development work, various participatory methods are established and have been used successfully for decades. Participatory rural appraisal (Chambers, 1994) and participatory action research have been widely utilised in community development. However, participatory design generally requires long-term involvement in a community, which is not always possible with fast urban development in unorganised, low-resource settings. If present at all, the practised form of participation in general in housing projects in fast-growing cities in contexts of the Global South might remain symbolic (Emmet, 2000; Davidson et al., 2007), and if practiced, be closer to 'consultation', already stated in Arnstein's ladder of participation from 1969 (Arnstein, 1969). Nevertheless, architects need to place people at the centre to gain insights on how to meet the challenge of generating healthier and more inclusive cities (Smith, 2011).

In her reflections on an architectural case involving the urban poor in Thailand, Supitcha Tovivich suggested three roles for the humanitarian architect – provider, supporter and catalyst – when aiming for efficiency, capacity and empowerment through a participatory process (Tovivich, 2010). Whereas, Andres Lepik underlined the importance and continuum of social engagement in architecture (Lepik, 2010). There is a growing focus on social awareness regarding architectural projects in the Global South carried out by architects with a background in the Global North (Lokko, 2014). Kate Stohr from Architecture for Humanity asked whether 'the beginning of the twenty-first century will be remembered as the golden era of socially conscious design'. She asserted that 'this depends on the willingness of the architects and designers to reach beyond the design community and humbly offer their services' (Stohr, 2006, p.53). These arguments support the need for the architectural design process to develop in an inclusive direction and also illustrate that there is a willingness among a growing number of architects to respond to this need.

Co-design researchers Hussein, Sanders and Steinert (2012) proposed that designers should take a strong lead in participatory-design activities, which appears to contradict the intent of typical participatory design (which is premised on social democratic principles; Kensing and Greenbaum, 2013) to shift focus

from designer expertise to user expertise. However, in places where citizens are seldom consulted in social matters and may be either unaccustomed or unwilling to reveal their thoughts and opinions. Regarding a product-design project in Cambodia, Hussein, Sanders and Steinert pointed out that hierarchical structures can affect the outcome of participatory exercises. They also noted the potential for a lack of motivation as well as lack of trust in authorities (Hussain et al., 2012). Vulnerable clients might not have the trust or the strength to stand up for their rights or reveal their dreams; in this case, the responsibility to ensure the influence of the users, rests with the designer (Hussain et al., 2012). There might be a need for long-term capacity building, before a proper participatory process can take place (Drain and Sanders, 2019; Hussain et al. 2012). In the context of urban development, changes can be rapid and as an inhabitant it can be challenging, time-consuming and often impossible to actively influence the outcome (Nielsen, 2014). However, in any project there is a need to develop a common understanding grounded in the community's perspective (Nix et al. 2019). Therefore, it can be favourable to find new innovative ways of inclusion that require less but potentially deeper engagement than traditional participatory processes.

Within product and service design discourse, multiple participatory approaches and methods have evolved over recent decades (Sanders and Stappers, 2008, 2014). These approaches can be useful for architects, particularly those more profoundly engaged with socio-cultural aspects, localities, use and users. Elisabeth Sanders mapped out different approaches in relation to users in 2006 (Figure 1). Design researcher Steen (2008) responded by arranging a matrix to paint a picture of some of the main schools of thought under an umbrella that he chooses to call human-centred design in order to capture the main features of some of the approaches (Figure 2).

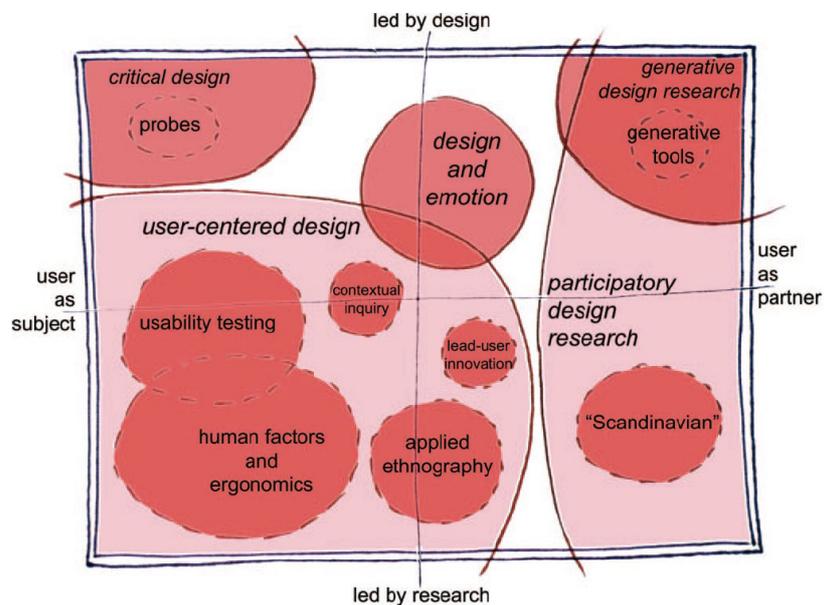


Figure 1. Landscape of design research. Elisabeth Sanders drew out the landscape of design research in 2006 (Sanders and Stappers, 2008).

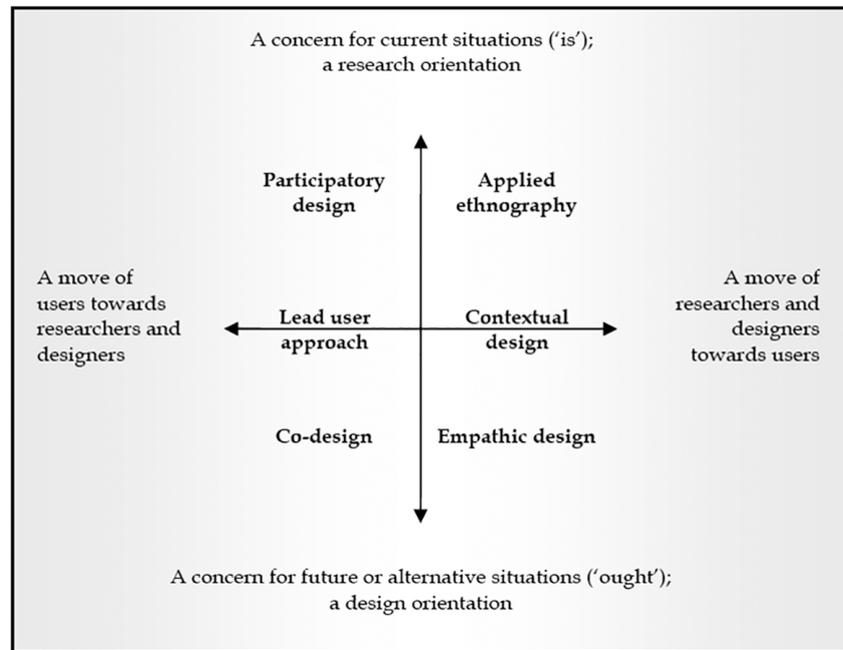


Figure 2. Model for tensions in human-centred design.
Marc Steen's doctoral dissertation (2008).

In this paper the overview of the different approaches and the tendencies underlying them is presented to give a background for the methods applied in the case study. In the following paragraphs, I will briefly elaborate on the user-engaging orientations utilised in this study.

2.1 Ethnographic observations

Ethnography is traditionally practised in anthropology, sociology and ethnomethodology, ethnography as a methodology has also recently become a common approach in design (Steen, 2008). Salvador, Bell and Anderson explained ethnography as a methodology used to represent the perspectives of everyday lives. Design ethnography does the same, while also framing the focus on what is relevant specifically for the development of new products and services (Salvador et al., 1999). Sanders defined applied ethnography as a qualitative description of cultural practices (2006). Steen further elaborated on the method suggested it to be used to understand people's habits only to a certain extent for a particular purpose. This is characterizing, in my understanding, a more superficial and short-term ethnographic activity than traditional ethnography practised in anthropology. In both Sander's map and in Steen's model applied ethnography is placed as a research-led approach, opposed to a designer-led. In an ethnographic study, it is also clear that the designer is the active party, moving towards users while studying their lives, as Steen proposed in his model (Figure 2). An ethnographic approach studies a situation as it is, striving for an authentic portrait of reality. Thus, Steen's reasoning that this orientation focuses on 'what is' is *not* arguable. Sanders (2006) positions applied ethnography in the middle between 'users as subjects' and 'users as partners'. In this case, it is questionable, as the users are mainly observed, and does not have an active role in the design process.

2.2 Design probing

Design probing is an empathic-design method (Mattelmäki, 2006). Whereas the origin of design probing, cultural probing did not have any intention to empathize

with users (Sanders, 2006). The original methods were introduced by Gaver, Dunne and Pacenti (1999). In that method the aim is to ask the users to generate material in order to give inspiration to the designer. Whereas in design probing, the designer is supposed to be affected, with empathy, by the material produced by the participants. The design probing is supposed to provoke the users to observe and think about their environment in new ways, as well as to stimulate and inspire the designer to come up with novel solutions. If the designer remains receptive and lets herself or himself be inspired by the material produced by the participants, the results can have a substantial effect on the design (Gaver et al., 1999; Gaver et al., 2004; Mattelmäki, 2006). For the designer, there is creative freedom in the development of the probes; the tasks presented to the users or inhabitants can vary substantially. Probing allows the designer to obtain a view of the participants' lives without the participants influencing each other (Gaver et al., 1999). Executing design probing exercises does not require physical presence of the designer.

Steen (2008) suggested, empathic design is an orientation whereby the designer has an active role, moving towards the user by focusing on 'what ought to be'. Sanders (2006) also placed probing in the position of being led by the designer, where the users are seen as subjects. This is arguable, as the users have an active role through their contribution.

2.3 Workshops

Workshop activities are used in many participatory design approaches, for instance in participatory design and co-design. Steen saw co-design as a contemporary form of participatory design, where tools and techniques are added from different traditions (Steen, 2008). In her map, Sanders (2006) proposed that the users in participatory design are seen as partners. Sanders and colleagues explained co-design as the combined creativity of designers and people not trained in design (Sanders et al., 2008). In co-design, stakeholders from all levels, regardless of skills, are facilitated to work together on a design task. Users, as well as other participants, can contribute as experts based on their particular experiences (Sleeswijk Visser 2009). In co-design, the users go through all levels of design: doing, adapting, making and creating (Sanders et al., 2010). Steen suggested, regarding participatory design, in his model that the orientation is focused on 'what is', and that the users have an active role: moving towards the designer. In this regard, the focus on 'what is' is not as clear as in, for instance, ethnography. However, when considering work like the case studied in this paper, a situation where users do not long for change could easily lead to a focus on the status quo.

Steen placed co-design in a position where users, as in participatory design, move towards designers, focusing on 'what ought to be'. It is easy to agree that that co-design activities require a lot of input from users; and in this case, their position, opinions, and thoughts are revealed and can have a strong influence on the design. The focus on creativity explains the direction of what 'ought to be' instead of 'what is'.

2.4 Theme discussions

Theme discussions carried out with users as part of the design process can be seen as a form of contextual design or contextual inquiry (Beyer and Holzblatt, 1998). Contextual design is influenced by ethnography and participatory design. This orientation allows to focus on defined smaller parts of the design process. In contextual design, Steen suggested that the designer stay in the active role and move towards the user. This is understandable, as the designer decides both the context and what parts of the projects should be reflected on. The orientation is positioned in the middle, between 'what is' and 'what ought to be'. Likewise, Sanders (2006) positions contextual design in the middle of her map, where being

both a method for research and for design and seeing the users either as partners or as subjects.

In the case, illustrated in this paper, I used a variation of the design methods appearing in Sanders' map and in Steen's diagram presented in the previous section. The early phase of the design process contained observations in the form of applied ethnography, design probing as a method of empathic design, workshops as used in participatory design and co-design, and theme discussions that are part of contextual design. The methods used were adapted to the project and to local circumstances. The practical use of these methods and learnings from the process will be reflected upon in the following sections.

3 Affordable-housing design in the Ng'ambo neighbourhood

3.1 Context of this research

The focus of this paper as well as the case description is on inhabitant engagement early on in the design process; this is due to the importance of the fundamental direction of the design, which is established in the beginning of a project.

This paper presents a case study of the early phase of an affordable-housing design project in Ng'ambo neighbourhood in central Zanzibar town. Zanzibar town, even if moderate in size, faces the same challenges as big urban centres in the Global South (Figure 3). There is a need to accommodate more inhabitants in the central parts of the city, as urbanisation is accelerating. Urban sprawl is encroaching on valuable agricultural land, which is a threat to the densely populated island (Juma, 2014).

Figure 3. Air view of Zanzibar town. Stone Town peninsula on the left and Ng'ambo on the right.



I became involved in this project through the director of the Department of Urban and Rural Planning (DoURP) of Zanzibar. The DoURP has a shortage of architects. When I proposed, after being informed of local needs, involving a housing design project in my doctoral studies, and thereby providing the DoURP

with architectural plans as a result of my study, my proposal was appreciated. I was asked to design affordable-housing with a higher density than the present building population. I was involved purely through my own interest, while holding a doctoral candidate position within the New Global research group at Aalto University. The architectural plans created as a result of the design process would be useful for fundraising purposes and, in the future, for construction. My intention was to involve the local inhabitants from the beginning of the design process in order to study different methods of inhabitant engagement borrowed from the design paradigm. The motivation was threefold: From the perspective of the inhabitants, they would have the opportunity to participate in the development of their own neighbourhood and to establish contacts with the DoURP; from the perspective of the DoURP, the design process would advance their plans and test the possibilities of developing dense housing in collaboration with inhabitants in the area; and from my perspective, the process would help me explore the potential of methods from the design discipline in the context of architectural design.

3.2 Ng'ambo

In the recently finalised Master Plan of Zanzibar, Ng'ambo has been defined as the new city centre of Zanzibar Town. Ng'ambo has approximately 50,000 inhabitants and 4,700 predominantly one-floor houses, many of which were constructed at the beginning of the 20th century (Juma et al., 2014). The DoURP of Zanzibar is putting particular efforts to the development of the Ng'ambo area because there is a risk that the local cultural heritage may vanish if the real-estate market alone guides the development (Juma, 2014). It is likely that the original population will migrate towards the peripheries of town, as they might not be able to afford apartments in the buildings constructed based on market price. This migration could lead to both additional urban sprawl and the weakening of the cultural, intangible heritage of the area. Consequently, social sustainability will be disturbed. The DoURP strives for sustainability on all levels and is strongly motivated to preserve both the tangible and intangible heritage of the city. Yet, to preserve the intangible heritage, the original inhabitants would preferably need to remain on-site and be involved in the development of the area. For the affordable-housing design, the DoURP suggested an area with 13 houses and approximately 100 inhabitants (Figure 4). Many of the inhabitants have lived in the area for generations.



Figure 4. The site for the project. Thirteen homes and a street view with the Michenzani building in the back.

3.3 Ethnographic observations

Observation as such is not new to architecture and is generally a part of any architectural project, even when only on a superficial level, due to time constraints or lack of resources. In this case, the observations that I practised is of the kind that Steen referred to as applied ethnography.

The ethnographic observations were accomplished in two stages, in periods of one to two weeks each, during which I spent the days in the community. The first stage comprised more general observations of the neighbourhood with the purpose of understanding the essence of the area. In the second observation period, I followed the families who were part of the housing project closely. Combined with observations and note taking, I took photographs to use for analyses. The observations of the families were completed while simultaneously taking measurements of the domestic spaces for later architectural drawings. This activity gave me a clear reason to enter homes and spend time there without having to disrupt the families with my presence. This also avoided awkward communication barriers due to language differences, as the ethnographic observations were done without an interpreter. The measuring had a dual purpose, as it also fulfilled a real need of the project to obtain measurements of the existing buildings.

Through ethnographic observation, I familiarised myself with the area and the use of both public and domestic spaces. During the first period, I got to know the area as a whole, including urban structures, patterns of movement and webs of social activities (Figures 5 and 6). I followed the personal activities of the inhabitants and noticed, for instance, how women and the elderly often gathered on verandas to chat with each other in the afternoons, and how men met in bigger groups a bit further from their homes. During the second period, I entered the homes and gained an understanding of the interior use of space and spatial hierarchies. The backyard, which was used either as a kitchen or an extension of the kitchen, was used more by women than by men. The bedrooms were used for storage, while the living rooms often seemed to be a more public part of the home, and more organised.

Figure 5. The street is a public living-room. It is common for men to gather outside the homes in public spaces in the evening.





Figure 6. Private outdoor spaces are useful in the climate of Zanzibar. The backyard is an important space for kitchen activities.

3.4 Design probing

The purpose of design probing in this architectural project was to initiate contact with the community on a personal level. By 'personal' I refer both to the intention that inhabitants share their individual views without being influenced by their families or neighbours (as there might have been unknown hierarchical levels within or among these groupings) and to the intention to allow for personal meetings between individuals and myself. I asked five of the 13 households to participate in the probing exercise.

The probing-package contained artefacts and exercises designed to enable recipients to illustrate what daily life is like in Ng'ambo. The pursuit was to make the inhabitants reflect on their personal relationships to their home and to encourage them to observe their surroundings. Through our discussions, they would also receive information about the future plans for the area. The package consisted of a set of questions, drawing tasks, a disposable camera, pens and stickers (Figure 7). I strived to make the probing package personal and yet familiar, using locally available material. The exercises were explained thoroughly and designed to be concrete – not abstract. The reason for this choice was that I did not, as a main objective, seek to obtain artistic inspiration, but rather to obtain a view of the lives of the inhabitants in order to better empathise with them.



Figure 7. The probing-package. The last picture shows a completed exercise indicating important spots in the neighbourhood.

Introducing the probing exercise required personal contact to create trust and an appropriate framing of the situation (Figure 8). The distribution of the packages was combined with an introduction. In this introduction, I explained the purpose of the project and went through the exercises in detail. The participants were given two weeks to complete the probes.



Figure 8. Introduction of the probes. Neema is introduced to the exercises, and an example of a red spot showing her dislike for the absence of a proper sink for dishwashing in the kitchen.

The assignments in the probing package included marking things or parts of the home that were either favoured or disfavoured with coloured stickers (Figure 8 and 9), taking pictures with the disposable cameras of places and people the participants visited during the period of the exercise, drawing a map of places visited during the allotted time, drawing a plan of the homes they lived in, drawing the home of their dreams, and replying to a couple of questions in written form.

After the two-week period, I collected the probe packages together with the research assistant. In each household, we had a thorough discussion about the exercises and the replies. In the outcomes, I noticed a wish for modern, new spaces and furniture and a dislike of worn-out parts of the home and broken furniture. The inhabitants also criticised items that consumed a lot of electricity due to the high price of electricity and frequent power cuts. The participants wished for more privacy, particularly concerning the toilet and bathroom spaces. The responses also showed a lack of proper cross ventilation in the houses (Figure 9). Through the photos, I could see how the participants spent their time and what parts of the home drew their attention. I learned whether the participants studied or worked, as well as what parts of the home were significant for them.

The exercises made it clear that these people took advantage of living in the centre of a Zanzibar town. The exercises also pointed out some spots in the neighbourhood that were of particular importance (Figure 7). The general opinion was that life in Ng'ambo is peaceful and nice, while the infrastructure, like

garbage collection, drainage, electricity and water supply, could function better. Additionally, they revealed a wish for better sanitation and technological advancement.

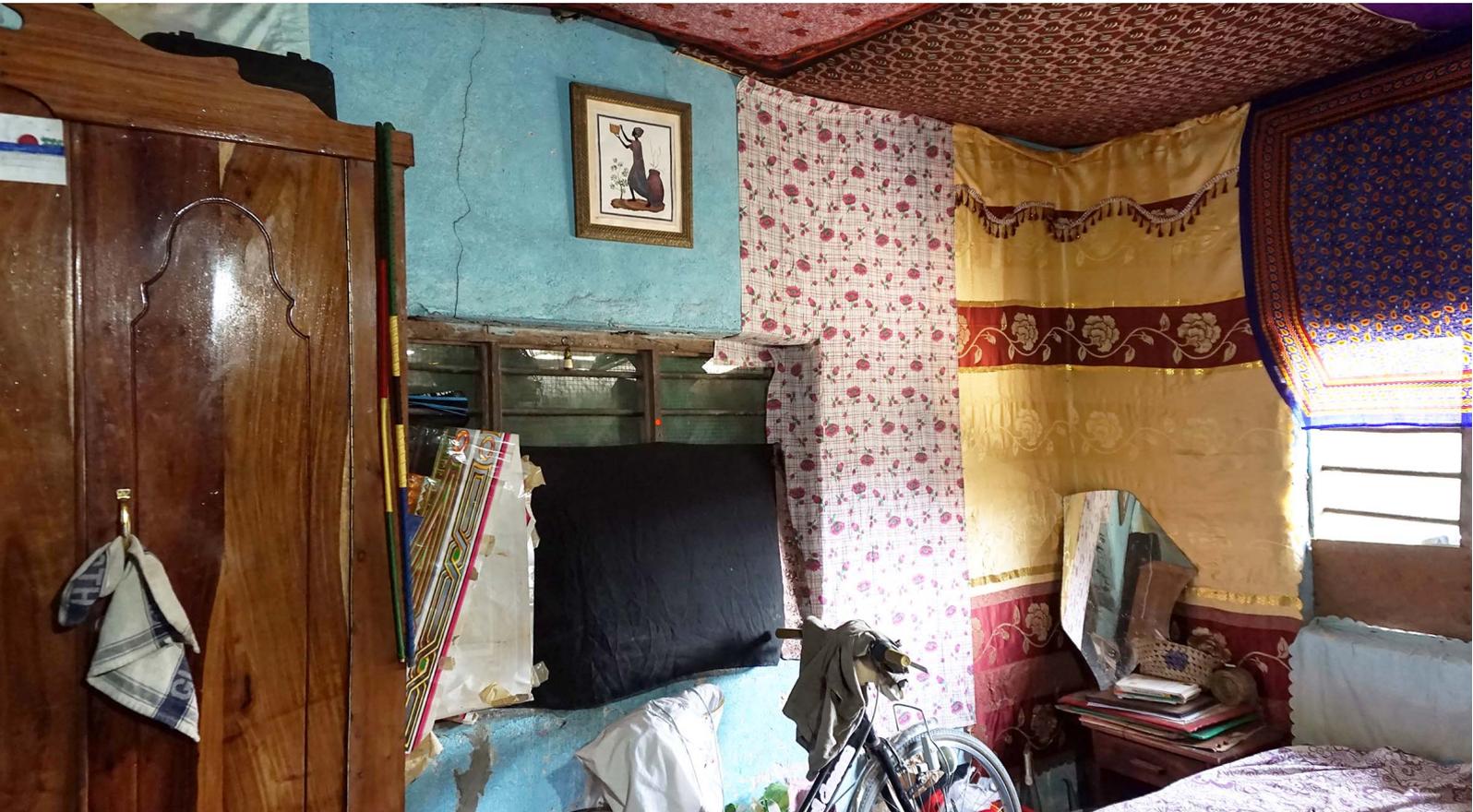


Figure 9. Ali's room. He disliked the fact that one of the windows in his room was closed and prevented cross-ventilation due to an extension of the house.

In each household, according to cultural habit, we approached the eldest person to ask him or her to choose who would take on the probes. They often chose a younger person. The participants who completed the probing were three women and two men, of which only one woman was the head of a household; the other four participants were younger, although still adults. Letting the eldest representative of the family choose the person to carry out the probing exercise led to a natural inclusion of different generations, thereby yielding a variety of views. The probers were in most cases young adults – except one, who was the head of the house and a single mother. The elder generation was included in the introduction in the beginning and in the discussion at the end of the probing. The five different participants all had personal views and illustrations of the exercises.

3.5 Workshops

For several reasons that I will discuss below, I cannot claim that the workshops conducted in Ng'ambo entirely fulfilled the requirements those of co-design, even if this was the original attempt. However, a group of inhabitants were involved in the design process in workshop settings and contributed to the design process.

One representative from each household was invited to take part in the workshops. The DoURP suggested that the workshops should be arranged in a space in the building where the department was functioning, situated in Stone Town, approximately 2 km away from Ng'ambo. I agreed to this arrangement, due to a lack of alternatives, even though I was aware that the space was not ideal, as it was not placed in the middle of the community and it belonged to the

authority, the DoURP. At this point of the project, I could not know whether the inhabitants were in favour of governmental institutions or not.

My plan for the first workshop was to conduct it according to the World Café Method², starting with a personal reflection and continuing with teamwork around the question, 'What is "home" to me?'; then, a new team would build on that question, where the reflection of home would be grouped around four different categories: social, physical, emotional and functional. Nevertheless, the plan needed to be adjusted ad hoc, as the participants did not arrive on time but dropped in randomly. In the end, 11 households were represented out of 13. The activities started as planned, with each participant writing a short text around the theme. After this, the discussion continued, and different thoughts were loosely gathered on larger paper according to the different categories.

The plan for the second workshop was to envision the neighbourhood 10 years from now from a sustainability perspective, taking into consideration inevitable changes due to the central position of Ng'ambo. The workshop was to start by looking at an aerial view together and marking out important places in the area to be preserved. After this, the participants would be asked to envision how they would like Ng'ambo and their homes to look in 10 years. This workshop had to be restructured, however, as the representative of the DoURP had forgotten to print out the maps as planned. I had to skip the mapping part of the workshop and only carried out the part dealing with Ng'ambo in 10 years and inhabitants' visions regarding the neighbourhood. In this workshop 9 households out of the 13 were presented.

In the first workshop (Figure 10), where the aim was to broaden understanding of the perception of home, the discussion ended in homogenous, thorough descriptions of physical facts about current homes, e.g., how many rooms, what activities and how many inhabitants. All suggestions and questions concerning shared space with neighbours were neglected. There were also multiple wishes for private bathrooms to be connected to master bedrooms. The envisioning of the future in general seemed to be a difficult task, as participants mainly explained how the situation was right now; or, if one of the participants came up with a new idea, it was copied by the rest. The main outcome was a wish for a street pattern that allowed ambulances and fire engines to pass through. The pictures of dream homes were either suggestions of future homes depicted as luxurious hotels, copied from the city, or copies of their existing homes.

Referring to the wish of even street patterns emphasized that before reaching a basic level of safety, it is difficult to consider issues like sustainable development in a broader sense. The surprisingly luxurious wish for private bathrooms can be interpreted as hygiene, meaning safety. It could also reflect uncertain relations with neighbours, as many of the households also rented out rooms. Other responses regarding the issue of sharing also indicated that trust between neighbours did not seem to be very high.

² The World Café Method can be used for creating dialogue in groups by instructing people to move around and participate in different constellations (The World Café, 2020).



Figure 10. The first workshop.
The neighbours Salama and Sharifa are discussing what 'home' means to them.

3.6 Theme discussions

The intention of the theme discussions was to receive input from the inhabitants concerning their own neighbourhood and other kinds of neighbourhoods in Zanzibar. Further to get their opinions of examples of affordable-housing projects from different parts of the world. In this scope of contextual design, I conducted theme discussions around a map of the neighbourhood (which was not used in the workshop due to printing problems, as mentioned above) and around photos of various low-cost housing projects from other locations. I met the inhabitants together with my research assistant/translator and spoke with inhabitants who had a moment to spare. We sometimes talked on the porch; in some cases, we were invited to the living room or to the backyard. I intentionally tried to engage in a relaxed discussion by being very open with my own personal life and my own views of things in general.

The meetings resulted in interesting discussions around how was to live in Ng'ambo and how the inhabitants perceived their neighbourhood in comparison to other neighbourhoods in Zanzibar town. They all preferred to live where they currently did. They did not like high-rise buildings and preferred to have their own courtyards surrounded by some greenery. Regarding other affordable-housing projects the most popular example out of ten very different ones was a Mexican housing project formed as atrium houses of three floors with a shared courtyard.

4 Discussion

Table 1

INSIGHTS ON THE USE OF DESIGN METHODS			
What was done?	Inhabitant experience	Architect experience	Insights
Ethnographic observation (observations and visits in the 13 homes in two separate periods of two weeks)	<ul style="list-style-type: none"> No participation Not much opportunity to impact or be actively part of the design process Potentially awkward for the inhabitants to be observed 	<ul style="list-style-type: none"> A way to get an overview of the area, use of space and observe social activities 	<ul style="list-style-type: none"> Useful as a first step in in the very early stages of a design process It was proved useful to engage in something while observing, to be part of the community for that moment, in this case measure the houses
Design probing (with five inhabitants from different households)	<ul style="list-style-type: none"> Personal engagement Individual views are spotlighted and participants were heard in person 	<ul style="list-style-type: none"> Opportunity to establish a personal contact with inhabitants and also get input even if not possible to be present a lot 	<ul style="list-style-type: none"> A flexible method Insight into the lives of the inhabitants in a short period of time Customize exercises according to local culture, present challenges, and inhabitants' capabilities
Workshops (two separate workshops with 11 and 9 participants from different homes)	<ul style="list-style-type: none"> There is a need for trust of authority and lack of friction between hierarchies The participants were not used to creative exercises Good for avoiding the feeling of not getting equal information 	<ul style="list-style-type: none"> Possibility to gather many people to share equal information 	<ul style="list-style-type: none"> Important to operate on neutral grounds Mixing groups might hinder creation of trust Similar ideas by all individuals; descriptive, not creative results Flexibility and promptness needed
Theme discussions (five theme discussions)	<ul style="list-style-type: none"> Possibility to share personal views in a particular area and in a particular field of interest 	<ul style="list-style-type: none"> Deepen connection to the inhabitants Focused activity 	<ul style="list-style-type: none"> Time-consuming Listening skills and openness of value to create trust Language barriers, pay attention to translator's capacity

Architects need to understand both the current living conditions and the future aspirations of the people they are designing for. Therefore, both orientations, i.e., focusing on 'what is' and 'what could be', are relevant and methods with both objectives are needed. The ethnographic observations focusing on the existing situation, even if not involved in communication, left a stronger impression than studying a context in literature. My presence might also have made the upcoming exercises more fluent, as the inhabitants became used to me. The key lesson learned on a practical level for practising ethnographic observation was the benefit of being involved in mundane activities while at the same time conducting observations. From a theoretical point of view, in relation to Steen's diagram, the architect has an active role and is moving towards the users. If ethnography is

used according to the origins of the methodology in anthropology and the social sciences, then involvement should be long term and thorough. However, this is often not possible due to time constraints or lack of professionals. Nevertheless, ethnographic observation is useful, even in this lighter form of applied ethnography.

The design probing exercise generated solutions that neither I nor the participants would have been able to create on our own.

The probing exercises, focusing on future changes resulted in heterogeneous informative material that both engaged the users and allowed me an entrance at an early stage to life in the community. The design probing opened doors to the lives of the participants, which otherwise would have been challenging to access, within the constraints of the present project. Having had the honour of being introduced to the personal reflections revealed in the probes, partly illustrated above, made me deeply grateful and touched by the openness and trust the participants showed.

Discussing the exercises together with the participants and their family members, and reflecting together on the concept of home, with its similarities and differences, opened my eyes. Thus, the actual designing of the housing was strongly influenced by the probing exercise. This design probing exercise generated solutions that neither I nor the participants would have been able to create on our own.

Considering the short time frame of a probing exercise and the depth achieved, an empathic approach represents a suitable form of participation in architecture in settings with multiple constraints.

In the context of this case the users did not 'move towards the designer' nor did the users have a role as active partners in the design process, contrary to what Steen (2008) drew out in his model and what Sanders (2006) indicated in her map for participatory design or co-design, in this case the workshops (Figure 1 and 2).

The workshops functioned as a gathering of the households participating in the study. They also ensured that the same information was shared with all households and could therefore side-step rumours. In this case, there were nevertheless many challenges to achieving the level of co-design that I had aimed for. The invisible hierarchical structure between neighbours, as well as between the inhabitants and the authorities, influenced the freedom to act or speak. Also, the absence of experience with similar situations and being asked to be creative and show opinions seemed to be a barrier. It is challenging to make everyone feel equal, understand hierarchies, and political undercurrents – if the designer is not part of the society, it might even be impossible. To meet this challenge, it would have been important to gather in a familiar place, neutral to the participants. In this case, where the workshops were held in a space belonging to a governmental institution, it represented authority for the inhabitants, who were in danger of losing their homes. This may have been a reason for the mostly superficial outcomes. If it is not possible to create a psychologically neutral environment for co-creation, where cultural, educational and income level borders are erased, then this method will be a challenge.

The input generated was greater in the personal meetings of the theme discussions than during the workshops. The participants shared unexpected information, and their personal views came to light. In these moments, true connections between myself and the participants were forged more so than with participants in the probing exercise. The results of the theme discussions were very useful while forming the housing project. This method was time-consuming; however, it was possible when addressing particular parts of the project.

In an ideal situation the collaboration presented in this study could have represented a starting point for a process that potentially could have allowed equal creative activities for participants and architects. However, for that kind of situation to emerge collaborative work over multiple sessions and over a long period of time would be required. Regarding these inhabitants, a fruitful co-design session would still be a challenge to arrange, as they did not have an initial motivation for change. Indeed, they were not the ones who wanted change indicated in the master plan of the city in the first place.

5 Conclusions

This paper was written from the perspective of the practitioner and the case, looking at collaborative orientations in design as well as methods within the orientations that can constitute solutions for bridging the divides between different stakeholders in an architectural project for the lower income populations. Applied ethnography, design probing and theme discussions provided the most rewarding results. However, adaptation to the local environment was necessary. The workshops, representing co-design and participatory design in this case, provided substandard results due to the constraints mentioned in table 1.

Comparing the results of the design methods used shows that a pragmatic near-term development plan would be to continue using these methods with an emphasis on customisation according to local habits and the current situation with empathy. Empathy can be defined as appraising the world from others' points of view. As an architect seldom designs for herself or himself, this ability would be assumed to be a core competence in the profession.

A contribution of this paper is to combine methods in a particularly challenging context, in order to discover and elaborate on benefits as well as difficulties. With this study, my intention was to explore, test and critically reflect on the potential of developing methods from the design discipline in the context of architectural design in culturally and socially complex settings. I conclude that looking into methods from design is valuable for architecture. These methods should be adapted further to match particular cases and local practice.

The example from Zanzibar is likely to represent other, similar cases, and the findings probably have relevance to design processes under similar circumstances. This can be a source of learning for other architects active in similar settings as well as for architecture in general, when seeking new research-based methods and approaches. Through developing the design process, the architect can move towards a better understanding of local circumstances and inhabitants in meaningful ways that are both time-efficient and flexible. Ultimately this contributes to the potential for longer-term sustainability of architecture in the Global South.

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