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Empowered, excited, or disenfranchised? Unveiling issues of energy access inequality and resource dependency in The Gambia

Anne Schiffer

School of Planning, Architecture and Civil Engineering, Queen's University Belfast, University Rd., Belfast BT7 1NN, United Kingdom, United Kingdom

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ABSTRACT

The study assesses the impact of energy service provision in The Gambian settlement of Kartong through a qualitative study that employs immersion and mapping methods. In time for the 2013 Ramadan celebrations, the first 19 households are connected to a regional electricity grid. Shortly after a bus service is introduced that runs from Kartong to Banjul, the capital city of The Gambia. It provides a reliable alternative to so-called bush taxis that operate without a set schedule. While the provision of energy services including electricity and transport is recognized as important in supporting people's livelihoods, it poses questions about a shift from energy self-sufficiency to increased dependency on outside resources. Locally there is also an increased emphasis regarding inequality in accessing these services. For example, grid infrastructure is currently limited to the longer established parts of Kartong, putting households on the edge of the settlement in a disadvantaged position.

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1. Introduction

Access to modern energy services provided through national infrastructure projects is often associated with increased living standards. The same is true for The Gambian coastal settlement of Kartong where grid electricity and motorised transport are gaining importance.

However, mapping and immersion in Kartong provide in-depth understanding of the local energy context which also highlights issues of increasing resource dependence as well as local inequalities.

Following an introduction to the energy metabolism framework, the paper presents the methodological approach of the research. Research results from immersion and mapping are presented in a contextual narrative "A day in the life of Sambou-Kunda", which was written during the rainy season in August 2013. A visit to Kartong during the dry season the following April, prompted a follow-up story "Eight months later", which is also included here. Both narratives centre around the Sambou family that hosted me during visits to Kartong.

The narratives are followed by a brief discussion section and conclusion, which highlights the fact that human insights gathered through immersion can offer deeper and important insights into local energy metabolisms that may be overlooked by top-down approaches to energy development.

2. Urban metabolism as a framework for assessing the sustainability of energy development

Underlying all human activities are forms of energy that allow us to move resources and people, heat homes and manufacture goods. Even the metabolic processes and physical work of the human body rely on energy sourced from food or stored as protein, fat and carbohydrates. Energy is commonly defined as the 'ability (or capacity) to do work.' While policy makers tend to shy away from this broad definition, it is precisely this ambiguity that urban design relies on, for it is the foundation of understanding the urban metabolism—the holistic flow of resources and services in, out and within the urban environment.

The urban metabolism is often compared with metabolic processes of the natural system "in which every output which is discharged by an organism also becomes an input which renews and sustains the continuity of the whole living environment of which it is a part" [1,2], making it inherently circular. Like the 'cradle to cradle' approach proposed by McDonough and Braungart in relation to manufactured goods [3], circular metabolisms are put at a par with sustainable whereas linear metabolisms are wasteful, polluting and unsustainable.

The 'energy metabolism' is inextricably linked to all other metabolic processes and human activities in the urban environment and is therefore paramount to tackling issues of sustainability. However, a reduction of energy metabolisms to quantifiable resource inputs, outputs and their economic value as measured in

E-mail address: aschiffer01@qub.ac.uk

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monetary terms happens “at the expense of understanding qualitative differences [4,5].”

Perhaps the most basic form of a circular energy metabolism is in the context of people sustainably managing local natural resources such as wood fuel or food as commons [6]. Beyond that there are examples from across the world of citizens owning, managing and sharing energy infrastructure to provide modern energy services at a local level [7–9]. Here, energy resources such wind and solar are also increasingly seen as common good instead of private property [10].

In a linear energy metabolism communities are typically dependent on fuels and services that are transported over long distances from outside. Governance structures behind linear energy metabolisms tend to be highly centralised [11,12]. Here the notion of the consumer is established because people have to pay for commodities and services that are bought in. At the same time these consumers are spatially and psychologically removed from negative environmental and social impacts elsewhere [13]. Girardet [14] states that the world cities of today have the monopoly on the planet’s fossil fuels and other resources. Therefore, “the vitality of cities depends on spatial relationships with surrounding hinterlands and global resource webs [15].” The same is true for smaller settlements that predominately rely on external resources.

3. Methodology

This research set out to collect and use quantifiable data including land resources to assess the energy metabolism of Kartong. However, through early engagement with the research context, it became clear that quantifiable data was less important in the lives of local people than I had anticipated and it was therefore difficult to source. This is illustrated by the following transcript from a semi-structured interview with Sankung Sambou, the former administrator of the Kartong Association for Responsible Tourism (personal communication 26 October, 2010):

SS: “So. Kartong is bit densely populated. The population is about you know 3,500 to 5,000 inhabitants.”

AS: “That’s a big, a big gap.”

SS: “Maybe 3,500–4,000. . . It could go up to 5,000.”

Similarly basic energy surveys of households carried out during the early stages of the research revealed the felt irrelevance of certain quantifiable data in the lives of local people. The most challenging question was always ‘how many people live here?’ Once, I was asked to return two days later to give people enough time to count the residents of what turned out to be the largest compound in Kartong, which had over 50 residents at the time. Other data such as recent national statistics on average household income or national census data from 2013 was simply not available.

I came to realise that based on my personal histories, values and attitudes, I had bought into what Chambers [16] refers to as the ‘Neo-Newtonian paradigm.’ As he warns, here “‘measurement matters’ blurs regressively into ‘What is measured is what matters’ and then ‘If it can’t be measured, it can’t be important’, ‘If it can’t be measured it isn’t real’, and finally ‘If it isn’t measured it won’t happen.’”

I concluded that a predominately quantitative approach as I had initially envisioned, was not appropriate in this context. Instead, I decided to tackle the analysis of Kartong’s energy metabolism by immersing myself in local life. What emerged as a methodology, was a flexible design action research framework in which immersion and mapping provided the desired insights into local energy cultures. Here, storytelling became a suitable medium to showcase my findings [17,18]. The insights I gained also formed the basis for my engagement with local people on energy strategies later on. Therefore, the stories are design anthropological accounts which

are “more oriented toward intervention and transforming social reality than traditional anthropology [19].”

In other words I used a reflexive approach, which originates in feminist development literature following what is known as the ‘reflexive turn’ of the 1980s [20,21], to confront personal attitudes with which I entered the research context. Reflexivity during reflection phases of the action research cycle allowed me to critically engage with and challenge personal beliefs, and therefore improve the way I engaged with people in Kartong. Importantly, reflexivity advocates the ‘I’ in research or as Shacklock and Smyth [22,23] put it: “To assume value free positions of neutrality, is to assume an ‘obscene and dishonest position.’” This allowed me to embrace the fact that I have personal relationships with people in Kartong, instead of creating a false sense of distance between myself and the research (Figs. 1 and 2).

Between January 2010 and January, 2015, I visited The Gambia eight times for periods between one week and up to three months (Fig. 3). I was able to observe trends while visits during different times of the year also helped me to avoid what Chambers [24] refers to as ‘season blindness.’ Chambers describes how researchers and government officials visit poor communities during the comfortable dry season and therefore have limited understanding of the realities of poverty, which is more severe during the wet season when hunger and disease are also more prevalent. In this research ‘seasons’ included periods of time that are not just characterised by climate but also cultural and economic factors, for example, the tourist season or Ramadan.

During initial visits to Kartong in 2010 I was able to build relationships that allowed me to stay with the Sambou family during subsequent stays in The Gambia. This enabled me to immerse myself in local life. Shea [25] defines immersion as “any number of ways you spend time with the community” and includes a variety of examples such as taking a neighbourhood tour, conducting focus groups and regular meetings with community leaders. In contrast Laurel [26] talks of “intense immersion” where “spending time observing, interviewing and participating in the multi facets of a subject’s life” help to build empathy. In this research immersion is understood as living with and participating in the life of local people, who are not ‘subjects’ but potential collaborators. Here, my ‘embodiment’ [27] including equally engaging in physical activity alongside women gardeners was important. It helped me gain empathy as well as challenge negative preconceptions of what it means to work with a *toubab*—white foreigner.

Where appropriate immersion was supported by other methods including participant observation, semi-structured interviews and visual ethnography [28].

Mapping was used to make visual sense of Kartong’s energy metabolism and compliment findings from immersion. Here, the term mapping is used for both geographical maps and other visual abstractions that communicate complex energy information in an accessible manner. Similarly Brook and Dunn [29] define a map as “any form of representation that reveals unseen space, latent conditions or narratives in and of the city.” I traced Google satellite images and triangulated or added to information by physically moving through the settlement area and surrounding landscape on the ground.

Mapping also resulted in various visual tools that were later used in discussions with local people which highlighted the increasing linearity of Kartong’s energy metabolism.

¹ The word *kunda* means home. Family compounds are usually named after the family that lives there. Therefore the home of the Sambou family is referred to as Sambou-Kunda.

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