

# Empowering women through electrification: experiences from rural Zanzibar

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## Approaching gender and energy

This article discusses the extent to which the arrival of electricity in Islamic rural Zanzibar has empowered women. Commonly, a gender perspective in development thinking involves a twofold focus. On the one hand, it concerns women's and men's equal right to participate and be involved in decision-making during a project's implementation phase. On the other hand, men and women, who tend to have distinct roles, responsibilities and needs in a given community, are end-users of the outcomes of such projects. Correspondingly, a gender perspective also involves being attuned to a project's potentially different effects on women and men, and an equitable distribution of long-term benefits is seen as a central goal. There is naturally a link between the concerns for 'participation in the process' and for 'end-use benefits'. In the Zanzibari village of Uroa, which has been seen as a success story in terms of the high level of participation (Winther 2008), two important female institutions remain unconnected to the electricity grid: the village mill and the kindergarten. In comparison, male institutions such as mosques and the fish market are connected. This discrepancy in whose interests are represented is linked to women's exclusion from the planning process. Such exclusion has long-term effects when major infrastructures are involved. For the remainder of this article, I focus on electricity's uses in the aftermath of the intervention and highlight some of the ways in which these dynamics affect the situation of women. Electricity carries a potential for women's empowerment but, in Zanzibar, several barriers stand in the way of such potentials being fully realised.

The material reported here is based on 16 months of fieldwork and visits to rural Zanzibar covering a time span of 15 years (1991, 2000-01, 2004, 2005 and 2006). Methods include participant observation, interviews and a household survey, supplemented with technical data obtained through the electricity company. The main village studied, Uroa, is located on the east coast of Unguja Island, Zanzibar, and was electrified in 1990.

## Improved access to electricity and public services

The electricity supply in rural Zanzibar used to be very poor but dramatically improved after 1986 when Norad helped finance the construction of an electricity grid on Zanzibar's two islands, Unguja and Pemba. Today, 80% of the rural population have access to electricity. The project had an explicit focus on gender issues and, in an early phase, addressed the question of how to include women among its project staff. Subsequently, 12 women and 12 men were invited to attend a surveying course during the time of my first fieldwork (1991), and the exam results would determine who would get a position in the project. Based on this simple model of equal representation in the training phase, the outcome of the tests resulted in all 12 women (and only two men) being hired for the project. Fifteen years later, five of these women continue to be employed by the project/electricity company.

In rural Zanzibar, having access to electricity in a village means that the water pumps are likely to run steadily, that the schools and health centres are likely to be connected and, at least in the village of Uroa, there is street lighting at night time. Women have benefited tremendously from these improvements in public services. In addition to the



Map 1. Zanzibar (Pemba and Unguja Islands) - part of Tanzania.

positive effect on people's health, electricity leads to a reduction in transport costs (necessary medical treatment etc. can now be obtained in the village) and time savings. Households, in practice women and girls, save 25 hours per week on average on water collection when a village tap is introduced. As a result, girls attend school to the same extent as boys, and women have more time for productive activities and even some time to relax in the evenings. Through its use for public services, electricity has improved women's lives in significant ways.

## Barriers to female control of electrical appliances

Turning to private consumption, we enter a more complex analytical field when trying to explore electricity's impact. On Unguja, 20% of private rural households have become connected to the grid (Winther 2006). Just like men, women in Zanzibar express a desire for a range of appliances. Among the 131 electrified homes visited in Uroa in 2001, the following appliances were observed: incandescent lights (99%), radios (88%), fans (44%), television sets (33%), irons (20%), freezers (19%), fluorescent lights (19%), fridges (4%), water kettles (2.3%), blenders (1.5%) and a video (0.8%). With the exception of some radios, all the electrical appliances had been purchased by men and were owned by them. I will now try to explain why this is so, and touch on some of the implications of this male association with appliances.

In Zanzibar, Islamic law is said to prescribe that each person is free to buy whatever he or she chooses. In Zanzibari homes, when asked,

people would quickly and precisely respond to the question of to whom a given item belongs: the owner would be either the wife or the husband, never both. Given women's interest in appliances, their moral right to purchase and own what they want, and the fact that they have some access to money through seaweed farming, why is it then that they do not purchase and own appliances?

Here, other principles that guide people's finances and ownership of things become important. It is claimed that because of Islamic rules on inheritance women in rural Zanzibar seldom own houses. They further tend to move to the husband's place on getting married and they leave the house in the event of a divorce. Divorces are not uncommon in rural Zanzibar, and they are more easily obtained by men than by women. The likelihood of divorce influences a woman's choice as to what she invests in.

The rules of inheritance and divorce, and the settlement patterns, mean that men become owners of, and associated with, houses. Consequently, as a fixed extension of the house, electricity in Zanzibar becomes a male realm. Men install electricity and engage in the customer relationship with the utility company and pay the monthly bill. Here we touch on a vital characteristic of electricity's organisation in Zanzibar (centralised grid, conventional kWh meters) which also ultimately affects women's limited control of the technology. Since electrical appliances consume current, they represent a cost to the male customer each time they are used. This technical/economic feature is relevant when explaining the fact that women in rural Zanzibar never receive electrical appliances as wedding gifts (see Winther 2008). Similarly, the shape and organisation (or 'script' cf. Madeleine Akrich 1994) of the technological system acts as a hindrance for women when it comes to making decisions about what to buy.

There is also some degree of ambiguity as to whether the norm of individual ownership of objects applies in practice. A new, integrated cupboard had been installed in Hija and Zawadi's home. On being asked who it belonged to, Zawadi said in Swahili 'It's his. It doesn't leave.' (Ya yeye. Haitoki.) Women leave the house in the event of a divorce, physically-integrated objects stay. However, not only fixed objects may remain. One of my male friends elaborated in English: 'If there is a divorce, big things must stay in the house.' He gave the hypothetical example of a large, electrical stove. According to this understanding, it is irrelevant who first provided, or owned, the item: its physical quality largely determines whether it will stay. These glimpses illustrate that certain grey zones exist, and that uncertainty itself may keep women from investing in appliances.

Furthermore, over time, objects may increasingly be regarded as a part of the house and thereby become irremovable. Most people contest such ideas, and say that a woman has the right to take with her every item she has acquired. However, many would add that regretfully this is not always the case. If there is a conflict, and the man is angry, he might just 'throw her out' (anamtupa nje). Implicitly, she is forced to leave her 'big things' behind under such circumstances. The inherent uncertainty in what a woman can take with her - probably a locus of conflict in real cases - could also be a reason why they do not become owners of major electrical appliances.

Indirectly, however, women contribute substantially to the purchase of such devices. Women's income from seaweed farming constitutes at least one-third in monetary value of what men make from selling fish at the market, the most important source of income in the village (Winther 2008). To an increasing extent, women use their income to support their families in everyday life, something that traditionally was seen as the man's duty. Thus, while men increasingly tend to tie up their resources in long-lasting items (houses and appliances), women are supporting the family's everyday expenses to a greater extent than before. The concern with this pattern is that women face significant long-term financial insecurity.

When it comes to using appliances, their male ownership has limited implications. Women spend more time at home than men, and they frequently and readily administer the use of freezers, lights, televisions and the like. In so doing, they try to keep consumption to a minimum. If new objects are introduced, the household and all of its members gain prestige vis-à-vis the extended family and neighbours.

## Foodways: keeping electricity at a distance?

Rural Zanzibaris keep their food at a distance from electricity, and women continue to cook with firewood on the three-stone hearth. As discussed above, there are structural reasons as to why women do not own electrical appliances, and electricity's organisation and costs also play a role. Nevertheless, other factors are relevant in understanding the apparent rigidity in cooking practices, such as people's fear of electric shocks. Figure 1 provides a summary of relevant factors.



Figure 1. Relevant factors in exploring cooking practices and how they change

In 2001, only two electric cookers were to be found in Uroan homes, and they were not in regular use. I agreed with one of the women that I could come for a period and observe her cook while paying their electricity bill for the same period. During our conversations, she listed all the precautions that had to be taken to reduce the risks involved. The cook should wear gloves and rubber sandals, use wooden spoons for stirring, keep the device on a table inside the house instead of working on the earth floor in the semi-open kitchen, and especially keep children away due to the hazards associated with the appliance. When I arrived to watch her cook, I found that she had arranged for her younger sister to come, she was too afraid to use the stove herself.

Electricity determines the kind of vessels that can be used. The common clay pot has a curved bottom and so aluminium vessels (dishi) have to be used. Electricity also limits the types of meals that can be made. Dishes that need heating from above and below, or dishes that need extensive beating - difficult on an unstable stove which is dangerous to hold on to - cannot be prepared on the available electric cookers.

Given these socio-technical constraints and the feeling of fear involved, I find it interesting that women still tended to evaluate the potential for cooking with electricity quite positively. This was in con-



Women do not own freezers in rural Zanzibar, but they do administer their use, which is mainly for producing ice sweets for sale. (Photo: T. Winther)

trast to men, who would tend to stress the superior taste of food cooked with firewood. The cooks had rather different and more pragmatic concerns: they highlighted the time one could save by using electricity, not only in the cooking itself but also in not needing to make so many trips to the bush to collect firewood. Many women also complained about the smoke from the wood fire and highlighted electricity's advantage in improving health conditions.

Despite their positive evaluations of electric stoves, cooks face a range of barriers to modifying the way they prepare food. The male ownership of houses and appliances has already been noted. Cooking by electricity is expensive, and paid for by men, in comparison with firewood which is available for 'free'. The aforementioned 'lock in' to existing cooking technologies, vessels and utensils also appears as a conservative force.

Nevertheless, women in electrified villages on the east coast of Unguja have changed their cooking habits in a striking way. Instead of cooking three meals per day as they used to before electrification, they now only cook twice a day (still over firewood) and serve leftovers for the family's third meal. The combination of electric light and the ability to watch television programmes in the evening, together with women's access to income-generating activities (seaweed production), has resulted in women cooking fewer meals per day. Thus, cooking practices are already changing in some respects, as they probably always have. A further example is that women today are increasingly using aluminium pots rather than clay ones because the latter tend to break more easily.

The perspective adopted to grasp these changes recognises that transformations tend to involve negotiations between parties with different interests and concerns. Such processes take place when new technologies are introduced, on the village level as well as on the micro-level in every household. When I revisited Uroa in 2004, twelve women had taken out loans and had purchased electric stoves with either one or two rings. One of the women said that she had agreed to share the electricity bill with her husband, but that he would still be the one to go and pay the monthly bill in a public space. The women stressed the time-saving argument when explaining why they had decided to

change their cooking practices. Here, we see how barriers produced by electricity's organisation can be overcome in creative ways and, at the same time, how the ideal of the male family provider is maintained.

### Sustainable energy solutions: putting gender first

The availability of new technologies produces a new realm of possibilities. The shaping of the content and form of this is partly determined by the material objects and the way these are linked in chains, but also by the gender ideologies incorporated through existing practices, cultural values, social relations and agencies of the people involved. Energy is involved in virtually all human activities and closely linked to power relations of various sorts. A gender-sensitive perspective should be the starting point for any study or intervention in this field. ■

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