

**“LISTEN, WITHOUT BLOOD THERE IS
NO LIFE”: AN ETHNOGRAPHY OF
ANEMIA DURING PREGNANCY IN
PEMBA, ZANZIBAR**

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Such research is never a solitary endeavor; I'm indebted to many. *So* many people have been involved, wittingly or not, willingly or not. And here I'm not talking about my informants in Pemba, who were *extraordinarily* accommodating and giving, but all my friends and family whom I have dragged into anemia and pregnancy and Pemba. Thanks to Rebecca Stoltzfus for suggesting I study iron supplements for pregnant women on Pemba in the first place. Thanks to Trudie and Nicolette for knowing what I wanted to say in my proposal better than I did myself. Thanks to everyone at PHL, especially Mzee, for saying "Hamna shida!" "No problem!" and meaning it. *Nashukurueni*, Hajji, Biubwa and Sabra, I really would not have been able to do this without you. Thanks especially to Sjaak for pushing me to analyze the ethnography, and then pushing me harder to analyze the ethnography, in order to help me to really understand what I have been studying better. Thanks to Maurits for wanting to be a *daktari* with me on Pemba and for being a cheerleader in Zaandam. Thanks to my Mom for being Mama Sera and imprinting me Africa by watching "Roots" during my 36 hour long birth. And thanks to Stacey, whose visit was "literally" the impetus to finish this project.

He had always been enthralled by the methods of natural science, but the ordinary subject matter of that science had seemed to him trivial and of no import. And so he had begun by vivisectioning himself, as he had ended by vivisectioning others. Human life—that appeared to him the one thing worth investigating. Compared to it there was nothing else of any value. It was true that as one watched life in its curious crucible of pain and pleasure, one could not wear over one's face a mask of glass, nor keep the sulfurous fumes from troubling the brain and making the imagination turbid with monstrous fancies and misshapen dreams. There were poisons so subtle that to know their properties one had to sicken of them. There were maladies so strange that one had to pass through them if one sought to understand their nature. And, yet, what a great reward one received! How wonderful the whole world became to one!

Oscar Wilde

The Picture of Dorian Gray

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	2
TABLE OF CONTENTS	4
SUMMARY.....	6
1. INTRODUCTION: THE STUFF LIFE IS MADE OF	7
Objectives.....	7
Formulation of the Problem	8
Framework: Critically Ecological.....	12
Outline.....	21
2. THE DENSITY AND THE SCARCITY: THE PHYSICAL AND MACROLEVEL SOCIAL ENVIRONMENTS.....	25
Topography.....	26
A Second Colonization: British takeover	28
Independence, and <i>then</i> Revolution.....	29
Zanzibar These Days.....	31
3. AT HOME: FAMILY AND RESEARCH.....	41
Family	41
Research	45
4. “WITHOUT BLOOD THERE IS NO LIFE”: PERCEPTIONS OF PREGNANCY AND ANEMIA IN PEMBA.....	54
“ <i>But I like the baby at the end</i> ”: Pregnancy in general.....	54
Blood problems.....	58
Spirits	67
5. THE FORCE OF MEDICINES: MEDICINES FOR BENEVOLENCE AND FOR PUNISHMENT.....	71
<i>Kivunge</i> : The sign of a deficient government	72
Control over Distribution.....	73
Shortages as Neglect and Malice.....	74
Governmental Medical Authority: Dr. Nyanga.....	77
Non-compliance as Politics	79
6. TREATMENT CHOICES: OF ANEMIA AND OF WOMEN	82
Biomedical Care on Pemba	83
Women’s Experiences with ANC.....	87
Non-biomedical Treatments	94
OTC’s	98

Summary of Treatments for Anemia	101
7. STRUGGLING IS LIFE.....	103
Objective One: Ethnography	103
Objective Two: Theoretical engagement.....	105
Objective Three: Application	109
APPENDIX A: INTERVIEW CHECKLIST FOR EVER-PREGNANT WOMEN.....	112
APPENDIX B: KARDI YA KLINIKI	114
GLOSSARY.....	116
ABBREVIATIONS	118
REFERENCES	119

SUMMARY

Anemia is a very serious health condition for pregnant women throughout sub-Saharan Africa. In an effort to reduce anemia in Zanzibar, UNICEF has recently made iron/folate supplements available to pregnant women. This study, which took place from late May to early July, 2002, began as an investigation of how these supplements are perceived and used by mothers and mothers-to-be, and broadened to encompass all of the other treatments for anemia that people in Pemba, the second biggest island in the archipelago of Zanzibar, use.

The study then expanded further, beyond the variety of treatments for anemia, to the understandings of the medical condition, anemia. Though the biomedical etiologies of what biomedicine calls anemia are clear, the emic, or insiders' explanations of anemia are not well understood in Pemba or in many of the cultures in which it is so prevalent. This expansion helped to construct an emic view of anemia during pregnancy on Pemba, as well as to identify the social and cultural context in which anti-anemia medicines are produced, exchanged, and consumed during pregnancy.

Finally, the recognition of the illness and its subsequent treatments are considered in light of women's identity as Pemban, as female, as rural or urban, as wives, and as pregnant. This section takes on a more etic perspective, in an attempt to explain *why* these understandings and treatment practices are as they are, and how they came to be so.

This research has been carried out with three principal objectives in mind. The first is to provide ethnographic information about perceptions of pregnancy and anemia on Pemba. The second is to contribute to theoretical discussions in which ecological medical anthropologists and critical medical anthropologists have been engaged, in which a call has been made to try to resolve the two. I will attempt to join the scholars who are trying to reconcile the perspectives. The third is to make suggestions about how health care can become more effective and liberating for pregnant women with anemia.

1. INTRODUCTION: THE STUFF LIFE IS MADE OF

Anemia is a very serious health condition for pregnant women throughout sub-Saharan Africa. In an effort to reduce anemia in Zanzibar, UNICEF has recently made iron/folate supplements available to pregnant women. This study, which took place from late May to early July, 2002, began as an investigation of how these supplements are perceived and used by mothers and mothers-to-be, and broadened to encompass all of the other treatments for anemia that people in Pemba, the second biggest island in the archipelago of Zanzibar, use.

The study then expanded further, beyond the variety of treatments for anemia, to the understandings of the illness anemia. Though the biomedical etiologies of what biomedicine calls anemia are clear, the emic, or insiders' explanations of anemia are not well understood in Pemba or in many of the cultures in which it is so prevalent. This expansion helped to construct an emic view of anemia during pregnancy on Pemba, as well as to identify the social and cultural context in which anti-anemia medicines are produced, exchanged, and consumed during pregnancy.

Finally, the recognition of the illness and its subsequent treatments are considered in light of women's identity as Pemban, as female, as rural or urban, as wives, and as pregnant. This section takes on a more etic perspective, in an attempt to explain *why* these understandings and treatment practices are as they are, and how they came to be so.

A friend told me that *damu*, the Swahili word for blood, is derived from *binadamu*, human being, which originates from the Arabic word for son (*bin*) of Adam (*Adamu*). Studying blood, a substance that is essential to life, I was led through all of the realms that are essential to Pemban women's identity: religion, politics, health, nutrition, symbolism, health care systems and economics. This study of a rather cut-and-dry micronutrient deficiency became an illuminating lens through which to look at the stuff life is made of.

OBJECTIVES

This research has been carried out with three principal objectives in mind. The first is to provide ethnographic information about perceptions of pregnancy and anemia on Pemba, thereby contributing to the small but growing body of literature about Pemba (Berg 1971a, Berg 1971b, Craster 1913, Herr 1999, Kielman 1998). Such data will assist

others to design and improve public health interventions, such as an upcoming study¹ about anemia and the prevention of unnecessary blood transfusions. The second is to contribute to theoretical discussions in which ecological medical anthropologists and critical medical anthropologists have been engaged, in which a call has been made to try to reconcile the two. I will attempt to join the scholars who are trying to mitigate the perspectives. The third is to make several suggestions about how health care can become more effective and liberating for pregnant women with anemia.

Each goal builds on the one prior. The ethnographic data is the clay from which two perspectives are molded together to acknowledge the natural (medical ecological perspective) and unnatural (critical medical anthropological perspective) causes of anemia. The clarity that this synthesis will offer will, in turn, help to elucidate what are and are not viable solutions. As Keesing writes, “commitment to improving the world is no substitute for understanding it, if we do not have the power to see beneath the surfaces of things, to see processes rather than symptoms, to see whole symptoms rather than separate parts, then our individual efforts and energies will be dissipated; our voices will add to the confusion that surrounds us” (Keesing in Morsy 1996: 39).

The third objective is the result of the analytical engagement with the ethnography and for me, the most compelling: to suggest some creative ways of reducing some of the burden that anemia places on the health of these women. Anemia is too pervasive in Pemba and throughout the world for it to be dealt with in only theoretical terms: Iron-deficiency anemia affects about 1.3 billion people worldwide, and is the most common form of malnutrition in the world (Stoltzfus 1997: 1764). In less-developed regions, approximately half of young children and pregnant women are anemic (Koblinsky 1993). The health burden of severe anemia is highest in sub-Saharan Africa, because the contribution of malaria exacerbates anemia in that region (Stoltzfus et al. 2001: 4). According to World Health Organization data from 2000, 39% of African women are anemic, and 73% are iron deficient (Allen and Casterline-Sabel 2001: 8).

FORMULATION OF THE PROBLEM

Several studies have begun to focus on how pregnant recipients perceive iron supplements (Callahan et al. 1989, Ekstrom et al. 1996, Galloway et al. 2002, Galloway

¹ The study is titled “Preventing unnecessary blood transfusions in young children and pregnant women in Africa through effective primary health care.” Investigators are Dr. Rebecca Stoltzfus, Dr. Jim Tielsch, both of The Johns Hopkins School of Public Health, Baltimore, Maryland, Dr. Mahdi Ramsan

and McGuire 1994, Massawe et al. 1995, Shulman et al. 1999). However, none have thoroughly examined women's perceptions of use of supplements or other anti-anemia drugs in an appropriately *contextualized* setting. The emic perspective of anemia and medicines for anemia is what makes this study unique. These supplements and medications should prove to be both cost-effective and effective primary health care interventions, but are they?

There are a number of motivations for women to embrace such medications. Prior research on Pemba has indicated that medicine to treat anemia would be appreciated and used by pregnant women (Herr 1999). The seriousness of anemia among pregnant women is one reason to use medicines to remedy it. "Lack of blood during pregnancy was mentioned as the most risky illness during pregnancy by some women, because "it affects whole body" (Herr 1999: 12). Hospital medicines can be very appealing for a variety of reasons: they can heal quickly; their tangibility helps to legitimize and objectify the illness; their novelty and exoticness indicate that they contain a powerful force (xenophilia); they are tokens in social exchange; they are convenient; and are a source of individual control during illness, which is often a time of social control and dependency (Van der Geest and Whyte in press, Whyte 1988).

The high socio-economic costs of anemia (Ramakrishnan and Lotfi 2001) may also persuade women to use supplements. If families realize their mother/wife/daughter would not be absent from chores like farming, cooking, and hauling water if anemia could be prevented, they may be encouraging of her use of supplements. The pregnant woman, may, however, appreciate the respite.

All the same, there is a range of potential reasons, conscious or unconscious, why women may not use them. Anemia is often asymptomatic until it is very severe (Shulman et al. 1999). As such, many anemic women may not realize they are suffering from a health problem, i.e. lacking essential micronutrients. In a study of anemia in adolescent girls in Ghana, none of the girls felt they were suffering because of a "shortage of blood," even when their hemoglobin levels were dangerously low (Agyepong et al. 1997: 136). During a research seminar, I broached this as a potential reason for not taking supplements. Jeanne-Marie, a Cameroonian medical doctor and fellow classmate dismissed it and said, "Oh no, all African women know they are anemic when they are pregnant, they know they don't have enough blood."

Mohammed, of the Public Health Laboratory "Ivo de Carneri," Lorenzo Savioli from the World Health Organization and Marco Albonico from the Ivo de Carneri Foundation.

Even if women experience symptoms as pathological, they still may feel that they do not really need the supplements, especially if the symptoms of anemia simply disappear after birth (cf. Christian et al. 1998). Bearing pregnancy stoically is highly valued in some Ungujan families (Rhiannon Stephens, pers. comm.) and may lead women to scoff the need for special care. In Liberia, for example, a de-emphasis by pregnant women of the inconvenient side effects of pregnancy and symptoms suggestive of anemia likely contribute to the delayed use of antenatal services and access to prophylactic medicine (Jackson and Jackson 1987: 594). Other researchers in Pemba believe that women consider these symptoms to be just a “normal” part of pregnancy (Clara Goldberg, pers. comm.) and not necessarily worthy of treatment. Many women, it seems, are resigned to the symptoms suggestive of anemia.

Lack of perceived need is only one possible reason not to use supplements. Iron tablets have bothersome side effects, such as constipation, nausea and flatulence; folate can cause nausea. Women in other countries have cited these as reasons to discontinue their use (Atkinson and Farias 1995, Krumeich 1994). These side effects, however, are not problematic for the majority of users, and may not be the reason why women do not comply with recommended iron supplements (Galloway and McGuire 1994).

There may also be structural reasons that prevent women from receiving or using iron supplements. Women may not have time to go to receive the supplements, or they may not have permission from their husbands to go to the clinic unaccompanied. They may feel unsure that the supplement supply will be regular throughout the duration of their pregnancy; as you will see, regular supply has been a big problem. There may be a preference for indigenous medicines over manufactured ones, or those distributed by a traditional midwife rather than a biomedical one.² Alternatively, they might not be told anything at all about the uses and purposes of the anti-anemia medicines. This is crucial: understanding of the rationale for pill taking has been correlated with a higher rate of supplement taking in pregnant mothers in the USA (Callahan et al. 1989: 141).

Even if women do use iron-folate supplements, they may not be satisfied with the rate of improvement of their health. Anemia is not a dramatic illness (though its consequences are), and the gratification most patients receive from adherence to treatment may be minimal (Galloway and McGuire 1994). Unrealistic expectations about the rapidity of recovery may dissuade women from continuing to use the supplements.

“Noticeable effects may be subtle and fail to meet women’s expectations, thereby reducing their incentive to continue taking supplements” (Galloway and McGuire 1994). Results from an unpublished study of supplement use in Tanzania indicated that some women expected the effects of the supplements to appear within hours, and most of them within 1 to 2 days (Ekstrom 1995). Then again, perhaps the supplements simply do not actually remedy anemia, either because the supplements are of poor quality or the anemia is not (only) caused by iron deficiency.

Furthermore, the perceived goals of the supplements may be unacceptable to women. In a study of perceptions of risk in pregnancy in Northeast Brazil, some informants stated that “some people cannot support the supplements because they are already too strong, and creating more blood would be harmful and might risk a cerebral hemorrhage” (Atkinson and Farias 1995: 1581). Other women fear these pills will cause their babies to be too large. Others may be concerned about the effects of the color of the pill; Pemban women prefer red pills to brown pills (Margaret Critchell, pers. comm.).

In general, little is known about what Pembans regard as appropriate care during pregnancy. What do Pembans feel to be appropriate in terms of food or medication during pregnancy? Are iron supplements even regarded as medicine, or are they considered to be more like food? Are there food or medicine taboos that such medicines are a transgression of? After all, pregnancy can be a time to refrain from medications, either “biomedical,” “traditional,” or both (Glik et al. 1989: 421). Women in some cultures feel biomedical medicines to be inappropriate during pregnancy because they are “too strong” see (Kafle et al. 1996, Van der Geest 1988) and could hurt the baby. Such attitudes could also be rationalization in the face of a very limited drug supply, i.e. because medicines are not available, they must be bad for the mother and/or child (Rhiannon Stephens, pers. comm.).

Even if medications *in general* are considered to be acceptable during pregnant, there are likely to be specific ones deemed unacceptable. Antimalarials, especially chloroquine, are used by many women in Zanzibar as abortifacients, to “kupata puncha” (O'Malley 2000: 200). Any anti-malarial medicine may therefore be considered detrimental to unborn children (Rebecca Stoltzfus, pers. comm.) and has been cited as such by Pemban women (Alison Norris, pers. comm.).

² A recent study of the effects of iron supplementation during pregnancy, when supplements were given by traditional birth attendants showed a very high rate of supplement use, but it is unclear if the fact that the TBA provided the drug was a significant factor in its usage (Menendez et al. 1994).

A recent ill-planned campaign against water-born parasites in Zanzibar has resulted in a very widely used antihelminthic, Albendazole, being associated with adverse events (Rebecca Stoltzfus, pers. comm.). Many Zanzibaris now perceive it as a covert attempt to control population growth. Mebendazole, in the same family of drugs, remains unproblematic. All the same, pregnant women do not use it, not because of fears of covert population control, but because hookworm in adulthood is not perceived to be a health risk. It is, however, still used to treat worms in school-age children (Rebecca Stoltzfus, pers. comm.).

Knowledge of how pregnant women perceive the problem of anemia, its symptoms-- and complications, is very limited (Massawe et al. 1995: 498). Information about what is perceived as appropriate treatment is also scarce. The medical anthropological point of view that informs every step of this study will help to finally provide a sense of understanding of the motivations and meanings of pregnant women's behavior in regards to anti-anemia medicines both from an emic perspective as well as in their broader cultural context.

FRAMEWORK: CRITICALLY ECOLOGICAL

It doesn't take an anthropologist to observe that understanding the underlying and overarching meanings of that which we observe and are told is not easy. The analysis of the fascinating things we see and hear is both the most nebulous and the most valuable part of research. Noticing particularities and juicy cultural tidbits is fun, but what can we say about culture or human nature from them? Before I report all of the lively details, I want to explain how I have envisioned them as part of a bigger picture. Despite my fears of boring the reader with theory at this point, (why explain how I will analyze before there is anything to analyze?) I have decided to lay out my theoretical perspective now. I want to do this to reassure the reader that I am not meandering purposelessly through biology, history, politics, economics, and religion, but that these are all important components of the picture of anemia during pregnancy. Presentation of my theoretical framework here and now is meant to explain the inclusion of all of these fields in my paper, and to help to build a mental picture of the Pemban environment in its entirety.

My experiences working in Mali with a biological anthropologist have made it impossible for me to ignore the importance of our biological selves in the worlds in which we act and interact. But being part of a research team that was testing evolutionary theories without any ameliorative action planned, and even expressly forbidden, made me

insist that consideration of politics and potential for action be a part of my own anthropological approach. For the former reason, I am drawn to medical ecological anthropology, for the latter, to critical medical anthropology. In a series of scathing critiques (e.g. Fabian 1982, Singer 1989b) proponents of each accuse each other of ignoring the power of culture to shape the body and its functions, or denying the relevance and variety of bodily phenomena to culture (Sperling and Beyene 1996: 137).

Yet I am convinced the two perspectives need not be irreconcilable, for they have two important points in common. Both perspectives are occupied with how individuals respond to threats to their well-being within the particular parameters of an environment; it is “only” the parameters each consider that are different. Secondly, though they consider the origins of disease as different, both are similar in that disease is embedded in networks of multiple causation (Wiley 1992: 223). This said, both perspectives could be utilized to examine how pregnant women on Pemba maintain their health within the many realms of their environment.

But which actions are considered health-motivated responses to the environment? Which spheres of the environment to consider? These questions touch on the important differences between the two theoretical frameworks. By discussing what I (with the help of many scholars’ critical insights) have come to see as the virtues and weaknesses of both, I will explain how I have picked and chosen from each to create a bricolage theory I affectionately call “critically ecological.”

The most straightforward reason I like ecological medical anthropology is because it offers simple (perhaps overly so) diagrammatic models that can help to chart almost any setting. These are an excellent heuristic tool for organizing important influences, and visualizing how they interact. Such diagrams can also facilitate comparison between environmental features of other settings. Below is one such example (McElroy and Townsend 1998: 104).

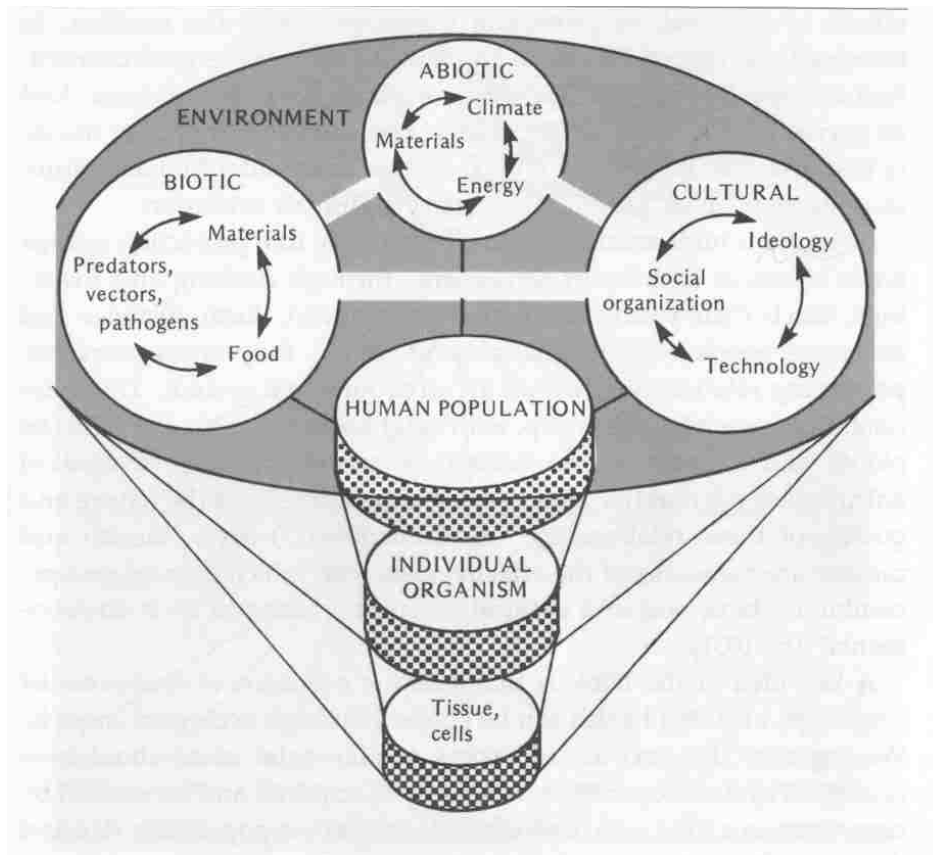


Figure 1. *The environment that affects human health*

More important than its nice schematics, I am drawn to medical ecology because through its consideration of the biotic, abiotic and social environments it implies a possibility of holism and “attempts to account for as many environmental variables as possible” (McElroy and Townsend 1998: 105). The strength of the ecological approach is that it makes it possible to relate biological and cultural factors on the same level of analysis (Kandel et al. 1980). Biology and culture have been disparate for too long; ecology can offer a framework in which both biological and cultural anthropologists can work within (Wellin 1998: 21). An example of the commitment to such an integration is the opening lines of *Nutritional Anthropology*, “Differential nutritional status, by making some people more fit than others, has wide-sweeping social, political, and economic implications” (Jerome et al. 1980: 1) That is, ecological medical anthropology can offer such a holistic framework, if, when considering the environment, it does more than just pay “lip service” to the importance of the political and economic effects upon it. The most important figures in ecological anthropology have been Materialists like Marvin Harris and Roy Rappaport, who believed that cultural systems are adaptive responses to ecological variables, and those ecological variables are generally those of the physical

ecosystem. This has often meant that non-physical environmental factors have been neglected. As such, traditional ecological medical anthropology has failed “to consider fully or accurately the role of social relations in origins on health and disease” (Singer 1989b: 223).

Generally, the integration of social and cultural factors in ecological medical anthropology has often been unsatisfactory (Wiley 1992, van der Geest: pers. comm). “Typically, writings that adopt this [ecological] perspective abstain from analysis of critical relational factors, such as ownership of the means of production, export of capital, extraction of profit, and racial and sexist oppression that underlie and ultimately determine human response to the physical environment” (Singer 1989a: 1194). Because they haven’t included the social aspects of the environment, particularly the political and economic ones, ecologists have even been accused of “stopping short of real analysis” (Wiley 1992: 218). The self-titled political ecologist, Meredith Turshen, is another critic of traditional ecological analysis. She writes, “Although environmentalism opens our eyes to factors such as diet, environmental exposure to toxic substances, the importance of workplace and occupational history, it is inadequate because it does not address the power relationships of race, class, and gender that dominate our everyday lives” (in Wiley 1992: 220). For Turshen, there is no wholly “natural” disease, as evident by the title of the opening chapter of her book about disease in Tanzania, “The Unnatural History of Disease,” (Turshen 1984).

The strength of critical medical anthropology is the weakness of ecological anthropology: the inclusion of political economy. Critical medical anthropology prefers to examine the social and historical forces of political economy as dominant determinants of health and disease, the very realm ecological anthropology is accused of having neglected. “Disease and health are products of the relationship between the producers of wealth and the owners of the means of production, as well as between producers and the distributors of goods and services, because the distribution of resources vital for health—such as housing, food, or leisure—is a function of the relative power of different groups.” (Turshen in Wiley 1992: 224). Political ecology emphasizes the need to consider the macro-level activities of society, i.e. the interaction and interdependence of political and economic factors, and their effects on cultural and social phenomenon. Singer writes, “Because the restructuring of social relationships can have a radical impact on the health status and health care system of a society, understanding the nature and determinants of social transformation should be issues of central concern to

medical anthropology (Singer 1989b: 230). The assumption that defines this perspective is one shared with Crandon-Malamud, in her study of medical systems in Bolivia, “that medical systems, medical practitioners, and the population served operate and coexist within a political and economic context (Crandon-Malamud 1993: 32). Because studying pharmaceuticals is a perfect opportunity to study the relationship between symbols and political economy (Van der Geest et al. 1996: 170), examining anti-anemia medicines in Pemba will be an appropriate lens for understanding the constitution of the cognitive and political economy there.

But critical anthropologists often feel they must part company with the political economy of health tradition (Singer 1989a: 1199). This is due to the latter’s tendency to “depersonalize the subject matter... by focusing on the analysis of social systems and things, and ... neglecting the particular, the existential, the subjective content of illness, suffering, and healing as lived events and experiences (Scheper-Hughes and Lock 1986: 137). Turshen faults her ecological anthropology colleagues for failing “to consider the relation of people to their environment in all its complexity” (in Baer 1990), but she and her political economy comrades forget to consider the individual person in the context of all of their complexity.

A weakness of critical medical anthropology is that sometimes the historical, political, and economic dimensions of disease have been emphasized to the exclusion of the biological. “Social scientists have not integrated relevant knowledge from the biological sciences into their explanations of human behavior” (Steklis and Walter 1990: 137). In critical medical anthropologists’ conception of the individual, as understood in the phenomenological sense of the lived experience of the body-self, “there is no biological organic body mentioned or allowed a reality or history” (Wiley 1992: 222). Critical anthropologists do not doubt that an individual’s mind can affect the state of the body, but there is no opportunity to consider the reverse as possible, that the body can affect the state of the mind (Wiley 1992: 222). While ecological medical anthropology embraces biological indices, critical medical anthropologists regard science skeptically. They often reject ecological medical anthropology as too closely allied with Western biomedical approaches to health and disease (Singer 1989b, Turshen 1984).

The end goal of ecological medical anthropology has tended to be scientific documentation, model building, and the revision of hypotheses. Ecological medical anthropology has “no manifest political agenda” (Wiley 1992: 217). They may observe that the environment was disrupted, but they don’t explore why the environment was

disrupted, by whom, or for what purposes. Instead they focus only on the process of responding to those changes³ (Wiley 1992: 223). Ecological anthropology ignores social ills like misdistribution of resources and power differentials, or couches them as “ills of modernization” without examining the motivation or sources (Singer 1989b). Ecological medical anthropology may verge on critical but it is not explicitly political.

This distinctly apolitical agenda stands in sharp contrast to the centrality of the political agenda in critical medical anthropology. Social transformation is implicit and explicit in the research (Wiley 1992: 217). Transformation of unjust social relations is often a primary objective. How can I stand by and only interpret the meanings of anemia and drug use when the prevalence and seriousness of anemia is affecting so many Pembans?

Resolution?

So how can one reconcile the two frameworks without lapsing into the reductionism for which ecological anthropology has fallen out of vogue, or forgetting the biological body, as critical anthropologists have been wont to do? In the last several years there have been attempts to resuscitate (medical) ecological anthropology with the discussion of the New Ecology (Lash et al. 1996, Scoones 1999) and even the “new ecologies” (Biersack 1999), while other scholars have simply added political dimensions to their ecological analyses. Ecology has been subdivided into ecologies: historical ecology (e.g. Goodman and et al. 1988, Headland 1997), political ecology (e.g. Leatherman and et al. 1986, Szurek 1997, Turshen 1984) and symbolic ecology (more a neologism than a new field, e.g. Descola 1994, Descola 1996). They “radically depart from the reductions and elisions of the ecological anthropology of the past, and override the nature/culture, idealism/materialism dichotomies that informed and enlivened the debates of the past” (Biersack 1999). Kottak (1999) writes that “the older ecologies have been remiss in the narrowness of their spatial and temporal horizons, their functionalist assumptions, and their apolitical character.” He insists on the need “to recognize the importance of culture mediation in ecological processes rather than treating culture as epiphenomenal and as a mere adaptive tool.” He even proposes a new methodology, a “linkages methodology” that study process, engage with history, consider the role of political and economic power, and systematically consider feedback among local, regional, and national institutions (Kottak 1999: 31).

³ Political change is not high on agenda, but change is central to the field as adaptation is central concept.

Yet I remain unsatisfied with the recent ecological anthropology metamorphosis for two reasons. Even the new ecological analyses focus on the way the ecology (in the sense of the physical ecosphere) *affects or has been affected by* social forces (e.g. Gezon 1999). I propose to elevate the place of politics a notch higher, and consider politics *as part of* the environment. These social forces in and of themselves contribute to our health or lack thereof. It is not necessary to consider the environment as a mediating factor through which politics works. Secondly, I don't wish to *only* focus on the symbolic, or the political, or the economic, the way the new ecologies have separated them. I want to consider all of these ideological components of our environment.

Adaptation as a tactic

In search of a resolution, I return to a contentious concept for the two perspectives: adaptation. This also brings the discussion to the final area in which the two perspectives challenge each other: the concept of adaptation. Ecological medical anthropology defines adaptation as “changes and modifications that enable a group or a person to survive in a given environment” (McElroy and Townsend 1998: 96). While McElroy and Townsend believe adaptation is a “core theoretical concept of the field [of medical anthropology],” Singer critiqued adaptation as a “useless concept because it could not incorporate the role of social relations in explaining health-related behavior” (Singer in Wiley 1992: 216). Though I disagree with him that it is “useless,” there are certain weaknesses that must be acknowledged. One of the founding fathers of medical ecology, Alexander Alland, has pointed out the potential for tautology in the notion of adaptation, “what is adapted is there, and that is there is adapted” unless there is an independent measure for adaptation. For medical ecological anthropologists, this measurement is health. They posit that we constantly strive for homeostasis in our environment; the achievement of balance with our environment is reflected in good health. Disease, therefore, becomes an indication of maladaptation. When we are ill, we are out of balance, or not at ease with the environment, hence, “dis-ease” (van der Geest: pers. comm.). A second weakness is ecological medical anthropology's reliance on health status as an appropriate measure of adaptation. It is a short step to blaming the victim (sick person) for failing to adapt, says Singer (1989b), and I agree. Have all the anemic pregnant women simply failed to adapt? Adaptation needs to be rescued from the rather outdated narrow individual moral basis (van der Geest: pers. comm.).

I propose to expand the definition of adaptation to that put forth by Wiley, as “the ability to respond to or seize opportunities, which in turn is circumscribed by the resources (material and biological) available to the individual or group” (Wiley 1992: 228). With such a definition, can examine *if* people are able to “adapt,” what the *limitations* to their responses are, and how they manipulate their total (biological, social, political, etc.) environment to maximize their interests. Thus, illness is no longer a failure to adapt, but a product of a certain environment of pathogens, ideas, history, and resources.

But I would also like to add another dimension to adaptation, that of “tactics,” as it is one that will help us to think of *how* individuals adapt. Is it conscious or unconscious? Is it planned? Does our behavior and phenotypes just morph? Will our environment just change us or is there an element of volition? From a biological point of view, adaptation is discussed as a strategy to change our physiological, morphological, and cultural characteristics that enhance survival in given habitats as “adaptive strategies” (McElroy 1990: 249). As a functional concept, adaptive strategy here does not necessarily imply that human behavior and customs are the result of conscious planning or trial and error to reduce disease or increase well-being.

Social scientists have written of strategies as well. I quote Scheper-Hughes (1992: 471-2).

“Although I have occasionally used the word “strategy” with reference to the daily practices of the women and men of the Alto, perhaps the time has now come to disown the term with all its biologic and militaristic overtones. For the people of the Alto do not really strategize.”

She then turns to the treatment of the strategic metaphor by Michel de Certeau,

“[It] implies that people are consciously organized or prepared for action. It suggests they have a clear-sighted vision of the lay of the land and a certain knowledge of their “enemy” that they can look (optimistically) toward the future, and that they can plan toward an upset victory. But this is not the reality in which the *moradores* (residents) find themselves. Their daily lives are circumscribed by an immensely powerful state and by local economic and political interests that are openly hostile to them. A strategy implies a base, a starting point, a specific location, one that is also a locus of power”.

None of these is available to the women of the Alto, nor to Pembran women.

Following Michel de Certeau, Scheper-Hughes substitutes “tactics” for “strategies” as a better description of the everyday, oppositional survival practices of the poor. “Tactics are defensive and individual, not aggressive and collective, practices. They should not be confused or conflated with the domain of “resistance” that James Scott (1985) and his colleagues have done” (Scheper-Hughes 1992).

Borrowing heavily from the idea of tactics in this passage, I have found a middle ground for the use of adaptation. I can preserve the concept of “adaptation,” but will speak of tactical ones, actions and reactions to an environment in which and through which people seek the best life that they can. Tactic implies volition, even if it is a circumscribed one, where adaptation often entails passivity or unconscious motivations. Pregnancy, with all its incumbent changes, risks, and demands on the body, is therefore an excellent area in which to examine adaptation.

A second feature of such a tactical adaptation is that it must no longer be solely a physical one. Culture has long been considered our most powerful tool for adaptation; to speak of culture helping us to adapt to our environment is nothing new. As anthropologists, we have long ceased to marvel at mankind’s consummate adaptability, evidenced in the well-worn example of houses culture has permitted us to learn, to protect us from the harsh environment. But the potential for cognitive adaptability has only begun to be considered (van der Geest: pers. comm.). “Emotions do not precede or stand outside of culture; they are part of culture and of *strategic* importance to our understanding of the ways in which people shape and are shaped by their world” (Scheper-Hughes 1992: 431, my emphasis). We can change the way we think about things in order to put our selves at ease. The consideration of babies’ deaths in the *favela* as blessings could be considered one such example, albeit an extreme one, of cognitive adaptation (Scheper-Hughes 1992: 429-445). Medicine is one such domain in which cognition plays an important role, “it [medicine] is a domain in which meaning is created and negotiated and reformed” (Crandon-Malamud 1993: 205).

In light of what I have determined as merits and shortcomings of critical medical anthropology and medical ecological anthropology, the most salient characteristics of my critically ecological framework are: 1. a broader definition of the environment to include historical, political, economic, biological and symbolic forces, 2. an expanded definition of adaptation to include the idea of tactics, and 3. an eye on political change.

This means that a satisfactory ethnography of anemia during pregnancy should include the history of Omani and British colonialism, discussion of natural resources and ecological hazards like malaria and parasites, political manipulation and economic strife, and beliefs about appropriate foods and inappropriate symptoms of pregnancy. Discussion of adaptation will entail consideration of which adaptations are possible and which factors are too large to struggle against and would only defeat health, and which of these possible adaptations are most worth struggling for.

Political awareness during theoretical analysis brings us only a few short steps away from my stated third objective, that of how people can best improve their health. If we can better understand how a Peman woman perceives her health, constructs her health, and seeks health, and the tangible and intangible environment of ideas in which she does this, then we can better understand how to make tools better available to her, or to help her to realize what tools are at hand, to help her maneuver through the vulnerable time of pregnancy as an already marginalized citizen.

OUTLINE

In the opening lines of their book, *Nutritional Anthropology*, Jerome Kandel, and Pelto write, “Food, by virtue of its pivotal place in human experience is, at once, a bundle of energy and nutrients within the biological sphere, a commodity within the economic sphere, and a symbol within the social and religious spheres...” (1980: 1). A few pages later, they include a diagram, “An Ecological Model for Nutritional Anthropology” to illustrate food’s place in any given society (1980: 14).

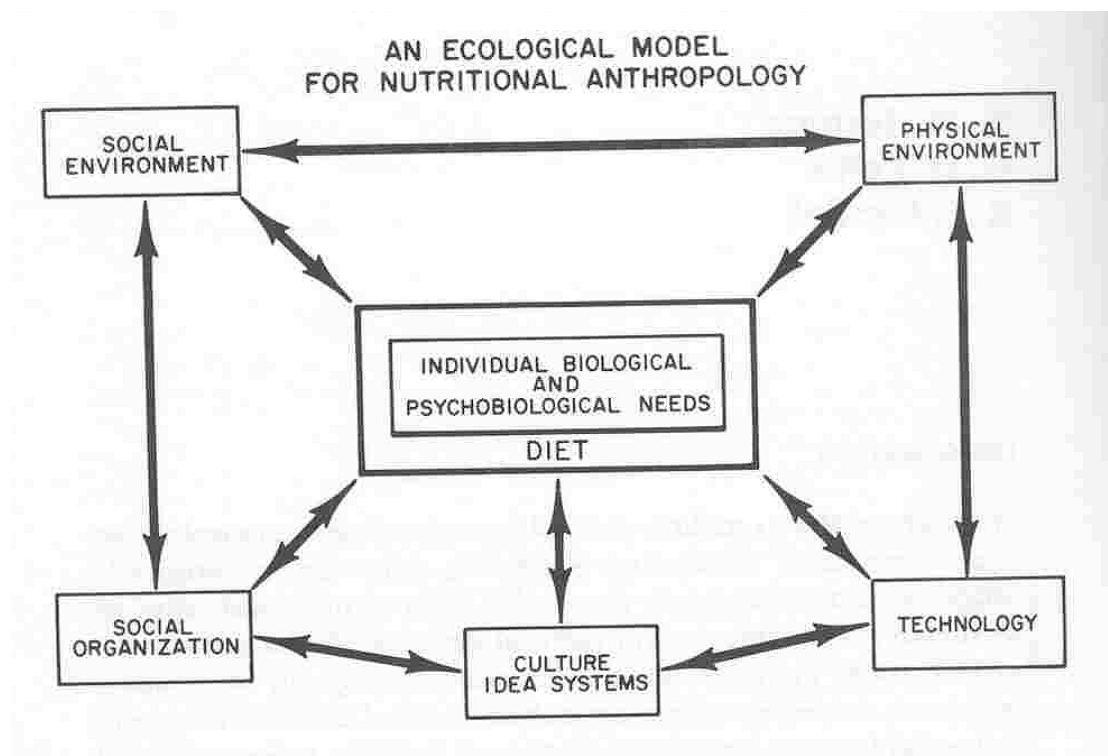


Figure 2. *An Ecological Model for Nutritional Anthropology*

The outline of this research leans heavily on the structure presented in this passage, albeit with some adjustments. By reworking their opening lines, I can summarize my research: Anti-anemia medicines are at once a bundle of nutrients within the

biological sphere, a commodity within the economic sphere, and a symbol within the historical and political sphere.

I too have made a diagram to illustrate the environment in which pregnant women make choices.

A CRITICALLY ECOLOGICAL MODEL FOR ANEMIA DURING PREGNANCY

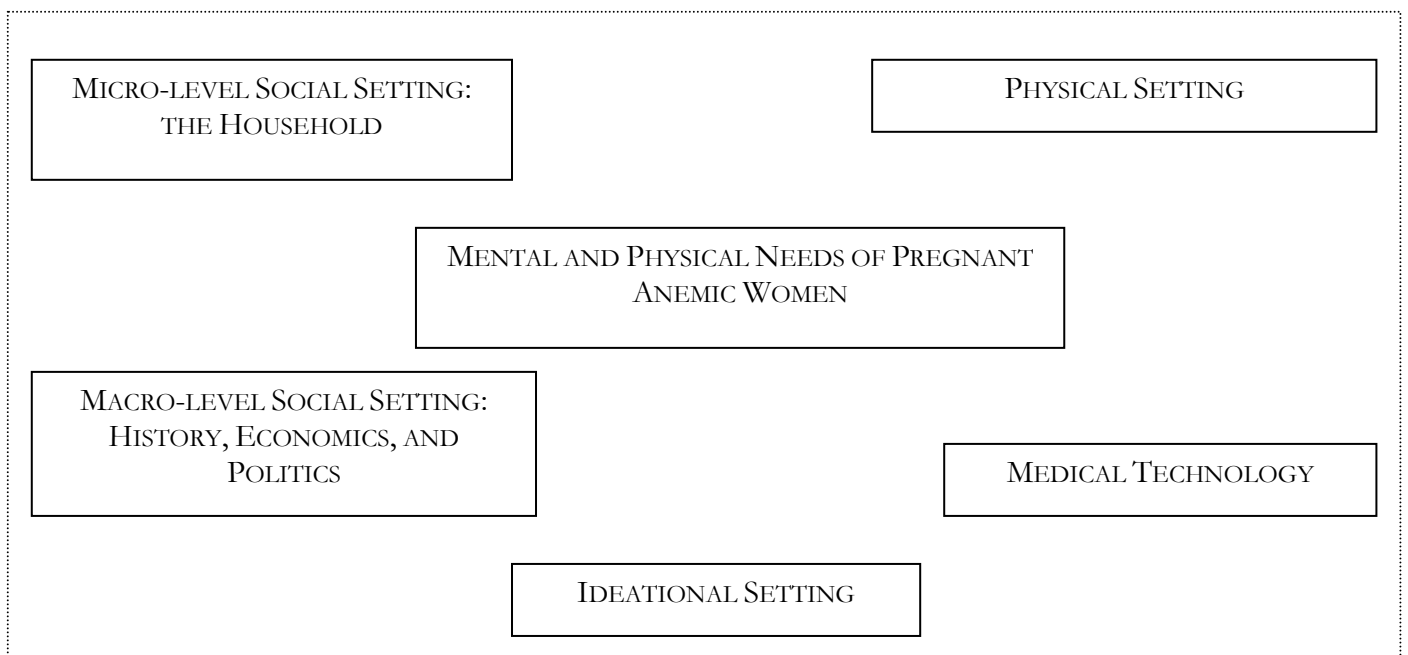


Figure 3. *A Critically Ecological Model for Anemia During Pregnancy*

Food is not at the center of my diagram, as it is in Jerome, Kandel, and Pelto’s diagram, nor are anti-anemia medicines, which may surprise the reader, as they were the starting point for this research. The individual is. As such, the center box is the mental and physical needs of pregnant anemic women. Anti-anemia medicines are one of a handful of options a pregnant woman can choose from to satisfy her mental and physical needs, as such, they represent only one possible medical technology in her entire environment and belong in one of the peripheral boxes. In the *Nutritional Anthropology* diagram, social organization refers to the economic and political structures, and micro-level features of household structure. Social environment is the effects of other societies’ food production. I have redefined what these are comprised of. In my diagram, “social

environment” is the macro-level social setting, such as politics, economics and history (which was absent from their diagram). “Social organization” in the *Nutritional Anthropology* diagram refers to the micro-level social setting; I have clarified this with my heading, but have not changed that which it refers to: household organization. What was, “culture and idea systems” has been re-titled “ideational setting.” “Culture” is no longer compartmentalized into one box; it is found throughout the whole diagram. Each little box is an integral part of the entire environment a pregnant woman faces when anemic, and each constantly acts with and reacts to all of the other little boxes, a response to Frankenberg’s entreaty to “demonstrate clearly what effects are produced at the local level, by national and international social processes; and what is coming from the local level in return” (in Singer 1987: 1200). To draw this accurately, arrows would have to fly between each and every single box. I have drawn no arrows, but have represented the space in which these small boxes interact by drawing a large box that surrounds the entire diagram. Thus, all components are open to change and to be changed by the other factors in the environment. Note that this too is a difference with the *Nutritional Anthropology* diagram, in which each peripheral box interacts only with certain other ones.

Each of the chapters loosely corresponds to one (or more) of the settings. Chapter Two, *The Density and the Scarcity*, delineates the macro-level setting in which anemia occurs: the physical and social (historical, political, ecological) settings. Chapter Three, *At Home*, gives more micro-level details about the environment. It describes family life more intimately, and explains how the data was collected within the context of such households.

Chapter Four, *Without Blood There Is No Life*, focuses on the perceptions of pregnancy and anemia, or what is termed ideational setting in the diagram. Chapter Five, *The Force of Medicine*, discusses hospital medicines and their symbolic and political nature, and is a more explicit nod to the importance of political economic analysis of health. It falls somewhere between perceptions and the macro-level social environment (historical, economic, and political) on the diagram. It provides important information that effects the condition of the choices that women face for treatment, the subject of Chapter 6.

Chapter 6, *Treatment Choices: Of Anemia and of Women*, discusses what the treatment choices of women actually are. It discusses the range of treatment possibilities, which approximately matches the “medical technology” section of the diagram, and begins to consider the health seeking tactics of women. It also examines the constraints they face, hence the inclusion of treatment of women in the title.

All of these chapters lay the groundwork for Chapter Seven, *Struggling is Life*, which examines the value of including all of these components of the environment. The adaptive tactics women can best use are considered, and some recommendations are put forth.

2. THE DENSITY AND THE SCARCITY: THE PHYSICAL AND MACROLEVEL SOCIAL ENVIRONMENTS

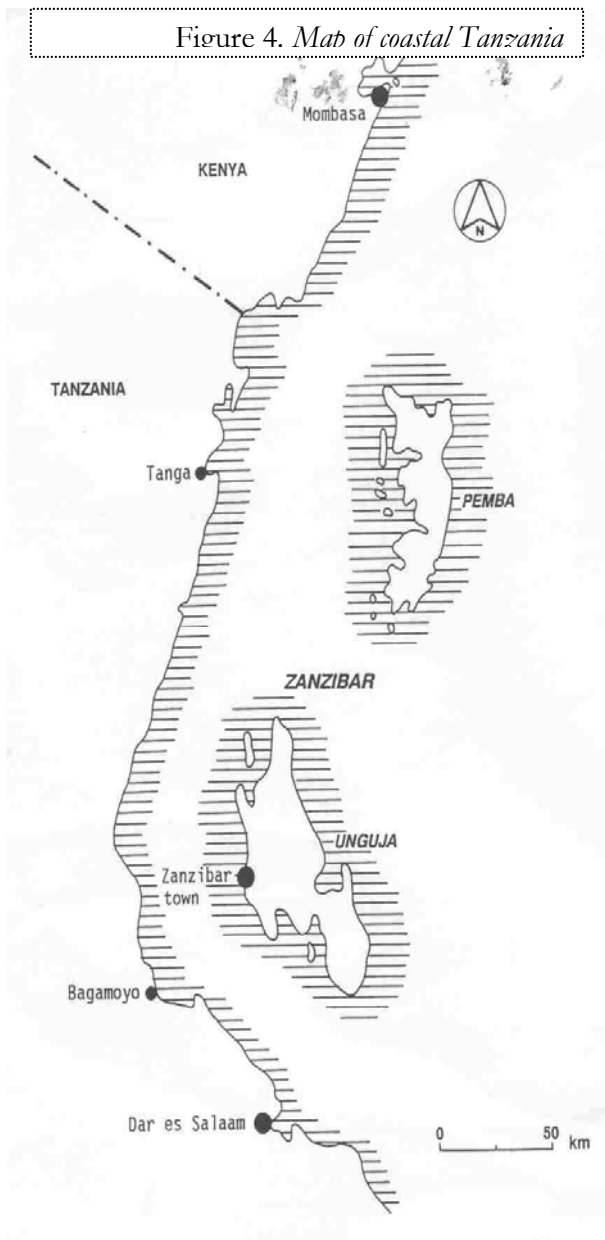
Zanzibar is dense. With an average population of 300 people/km², it is one of the most densely populated places in all of Africa (and Pemba is even denser than Unguja). It's dense in smells: of drying cloves, animal and people sweat, diesel fumes, open sewers, and women's sweet incense, *udi*. The language, Swahili, is thick with once-foreign words that the sailors and slaves and merchants who passed through left behind. History is crowded together here, with a Catholic cathedral built on top of a slave market, and enormous East German cement block flats (symbols of modernity in the 1960's) hulking kitty-corner from crumbling but still elegant turn-of-the-century colonial mansions that perch daintily just blocks from the Sultan's palace. Zanzibar is rich in beginnings; it was a gateway to mainland Africa for missionaries intent on bringing the light of Christianity to the "dark continent" and is the birthplace of Freddy Mercury, lead singer of *Queen*, whose Zoroastrian parents were traders there. Zanzibar is rich in influence; although the islands of Zanzibar represent no more than one twelve-thousandth of the land mass of Africa, during much of its history, it has played a role in the politics and economics of Tanzania⁴ and even Africa incommensurate with its size (Garssen 1993a: 1).

In this chapter I will try to describe the thick, rich, history and culture of Zanzibar both to explain and as a contrast with the marginalization and shortages on Pemba. I will briefly describe the physical characteristics of the islands and then move on to a snapshot description of the politics, economic features, and health care during three periods in Zanzibar's history: as a Sultanate, as a British Protectorate, and as an independent nation. Because the history of Pemba is inextricable from that of Unguja, I will discuss both, but the emphasis is on Pemba. Much of this chapter draws heavily from Joop Garssen's excellent study, *Policies and practices in pre- and post-independence health care: The case of Zanzibar*. I thought it too tedious for the reader to see his name after nearly every sentence, so have mentioned him only in the direct quotes in the text. The bulk of this chapter is credited to his studies.

⁴ Zanzibar comprises only 0.25% of the total landmass of Tanzania, and only 2.5% of Tanzanian citizens live there (Garssen 1993a)

TOPOGRAPHY

If its existence is to be believed at all, and it isn't dismissed as a fairytale place where sultans sleep away their Arabian Nights while eunuchs protect their harem, people think that Zanzibar is a single island. It isn't. Zanzibar is the name of an entire archipelago anchored down in the glimmering turquoise Indian Ocean in East Africa with about 880,000 residents (Zanzibar and UNICEF 2001). Unguja is the biggest island, 1464 km², and the one most often (mistakenly) called Zanzibar, on which about 550,000 residents live. Pemba is the second biggest island, with 864 km² and about 330,000 inhabitants. Pemba is greener (Arabs called it *El Jazirah*, the green island), more fertile (74% of the land in Pemba is cultivated while only 46% of Unguja is), and hillier than Unguja. The two islands are about 50 km apart, separated by the 700-meter deep Pemba channel. In addition to these two islands, there are a slew of other islands and islets, some inhabited, most not, which also comprise Zanzibar. The entire archipelago is



situated about 50 kilometers off the coast of mainland Tanzania, five degrees south of the equator, as evident on the map (Garssen 1993a).

Because of its strategic location off the coast of East Africa, Zanzibar has had contact with traders from as far away as India, China, and Greece for hundreds, even thousands of years. After periods of Persian and Portuguese influences in the 1500's and 1600's, it became part of the Sultanate of Oman and Muscat in 1784.

After a dream about his own assassination Sultan Seyyid Said decided to move the headquarters of the sultanate to Zanzibar. During his rule, he made two important contributions to the conditions in present-day Zanzibar. He introduced clove production to the island, and facilitated their large-scale

cultivation in plantations. Cloves were an important economic boon that helped to offset imminent losses from the diminishing trade in ivory and slaves, both of which were important sources of revenue for Zanzibar.⁵ By the mid-19th century, Zanzibar had become the world's largest producer of cloves; cloves continue to be a mainstay of the economy to this day, albeit a less valuable one. Secondly, Seyyid Said laid the roots for the later racial miscegenation between Arabs and Africans by insuring the plantations were owned by Arabs and worked by the Africans.

Stinkibar: Public Health during the Sultanate

The Sultanate did little in the way of health care for its people. One traveler reported that one was “liable to be attacked by packs of dogs whose function it was to dispose of the corpses of slaves which were dumped on the beaches” (Lee in Garssen 1993a: 9). While Livingstone was in Zanzibar in 1865 preparing for his final expedition, he proposed the name “Stinkibar” as a more apt name than Zanzibar (Livingstone in Garssen 1993a: 9).

Following a virulent cholera outbreak in 1859, the Sultan ordered the construction of a piped water supply to the town. Although it was hailed as one of the first public health actions on the island, the benefits to the average citizen were small: two cast-iron pipes were laid, one to supply the Sultan's gardens, the other to supply the harem.

Inspired by Livingstone's writings of the appalling health and social conditions,⁶ late 19th century missionaries tried to exploit the powers of hospital medicine in order to gain influence over the indigenous populations. “Curative care in the first hospital on Zanzibar, *Nôtre dame des Anges*, was a distant second concern to the mission's true objective: to baptize children and old people prior to their deaths” (Garssen 1993a). Few natives attended; the Mission attributed this to fear, “The Blacks are somewhat afraid of the Whites, whose superiority often inspires them with as much fear as admiration” (de Courmont in Garssen 1993a: 13).

⁵ As many as 50,000 slaves passed through the slave market each year until slaving was banned in 1873 under pressure from the British government.

⁶ Of his time in Zanzibar, David Livingstone wrote, “The sights I have seen on this journey made my blood run cold. And I am not a sentimental man.” (Zuckerman 2001)

A SECOND COLONIZATION: BRITISH TAKEOVER

By the late 1800's several European countries had competing interests in the region. In their rush to keep the Germans out of East Africa, the British forced the Sultan to formally separate from Oman and declare Zanzibar a protectorate of Great Britain in 1862. Though the Sultan remained a figurehead, the British took over financial control of the government, including the Sultan's accounts, and appointed British ministers to all key positions. Arabs remained part of the elite class, with Indians below them, and Africans, who comprised two-thirds of the population (half of whom were of slave origins) were the lowest ranking citizens (Nisula 1999: 34). Trade continued to flourish under the British colonial government, who declared Zanzibar a free port in 1892.

Health Care during the Protectorate

The British played a more active role in public health than the Sultanate had, but it was not a necessarily welcome one. It is noteworthy that one (if not *the* prime) motivation for the improvement of living conditions and disease prevention was concern about the decline of the native population. In colonial Zanzibar, the health policy was a major contribution towards racialism and segregation (Nisula 1999: 240). The British colonial government opened a hospital for colonized subjects in Zanzibar Town, known as The Native and Subordinate Hospital of Government. "Native" referred to Africans and "Subordinate" to Asians: Arabs, Indians, and Comoran. Health services were arranged according to the alleged needs of diverse races and offered care according to the medical standards thought appropriate for each group. Thus racial differences were naturalized through curative medicine (Nisula 1999: 235).

Preventative public health measures, coordinated by the newly established Health Department, began only when the island was faced with a major plague epidemic, which lasted from 1899 until 1905. Health officials often resembled the paternalistic, autocratic and outdated "Medical Police" who had once been important authorities in Western Europe. "Mosquito brigades," one such example of these Medical Police. They made weekly visits to inspect potential mosquito breeding sites. When larvae were found, notices were served to householders and legal action was taken against repeat offenders.

The Protectorate also worked to expand and improve vaccinations, general sanitation⁷, health education in schools, collection of vital statistics, and dispensary facilities. Mother and Child Health services on the island were first offered around this time. The care that was offered was of such low quality that many of the posts were closed soon after opening.

The depression of the 1930's caused the government to curb public health expenditure, but the Rockefeller Foundation stepped in to fund the construction of thousands of latrines and boreholes. The population remained suspicious of receiving something for nothing, and rumors that the government would levy some sort of hut tax as soon as a building was erected caused most of the new latrines to remain unused. Village Health Boards were started in the hope that villagers would accept from their own leaders what they refused to accept from the government, but to no avail.

INDEPENDENCE, AND *THEN* REVOLUTION

In 1957, the British allowed the first political elections in Zanzibar. During these elections considerable social tensions, especially racial tensions, surfaced. Three political parties emerged: the primarily African Afro-Shirazi Party (ASP); the Zanzibar and Pemba People's Party (ZPPP) another, more conservative, predominantly African party; and the Arab-dominated Zanzibar Nationalist Party (ZNP) who wanted Zanzibar to preserve its independence from the mainland. The Arab-dominated ZNP, the largest single political party, and heavily favored by the British, came to power when Zanzibar became independent from Britain in 1963. Political dissatisfaction among the other two parties led to the overthrow of the freshly independent, mostly Arab, government just 33 days after independence, on April 12, 1964. At least 5,000 Arabs were killed during this uprising, and large numbers of Indians and all Europeans were expelled from the country.

Three months after the Revolution, the governments of mainland Tanzania, or Tanganyika, and Zanzibar merged to form the United Republic of Tanzania. No popular referendum was held. This union was motivated in great part by the protection the mainland could offer in case of a second uprising. Zanzibar, with its revenues from cloves and shipping, represented an economic boon for the mainland. It was resented by many Zanzibaris from the outset.

⁷ One example is a sewer system that was constructed in one of the quarters of Zanzibar town, but it proved insufficient to manage sewage as rainwater also drained into it.



Figure 5. *The letterhead on my research permit*

The Revolution continues to figure importantly in the government today. Every ministry, every public school, even governmental license plates have the letters SMZ in a predominant position. SMZ stands for *Serikali ya Mapinduzi ya Zanzibar*, the Revolutionary Government of Zanzibar.

Governance under the ASP

Abeid Karume, a semi-literate revolutionary ASP party member became the post independence leader of Zanzibar. He declared the ASP to be the only lawful political party, and forbade elections for the next sixty years. Africans were appointed to positions of responsibility which had previously been held by Indians, Arabs, and Europeans who had been forced to leave the country. For Karume, revolutionary zeal was a more important qualifier for these jobs than formal training was; he distrusted intellectuals and took pride in the fact that none of his ministers had been educated beyond the elementary level. With such an attitude, educational institutions were not given priority and suffered greatly. Even the legal system was abolished in 1970, replaced by a system of People's Courts, staffed by loyal ASP party members. In the eight years of Karume's increasingly despotic rule, approximately 35,000 educated and skilled people fled the country, and Zanzibar became virtually closed to Western visitors.

Under the ASP, all land was nationalized; land from 743 plantations (557 in Pemba and 181 in Unguja) was redistributed in three-acre sized plots. While it was intended to improve the plot of the poor landless, many argue that the fragmentation of land holding ultimately led to lower productivity. When land redistribution stopped in 1974 a significant proportion of the land on Pemba had not been redistributed, and there

were still people in rural areas who had not received any. About 5.4% of rural households remain landless today (Zanzibar and UNICEF 2001).

Pemba has suffered under the ASP/CCM government.⁸ Arnold and McKim write, “Pemba has been the object of state repression and systematic underdevelopment ever since the CCM government took power” (2001). Because Pembans did not much participate in, nor generally support, the Revolution, they have since been regarded by the Zanzibari and Tanzanian governments as dangerous, disloyal citizens, and have been treated as such. They continue, “Since the 1960’s, military forces in Pemba have engaged in public beatings, humiliation, torture, rapes and the looting of property with full state support, as part of a campaign aimed at cowing the population and suppressing any potential opposition.” Recent elections have further crystallized this marginalization.

ZANZIBAR THESE DAYS

*Politics*⁹

Zanzibar returned to a multi-party democracy in 1992. At least, they did so on paper, but the last two elections have been scandalously undemocratic. The Zanzibar elections on October 22, 1995, the territory's first multi-party elections since the 1964 Revolution, are widely believed to have been manipulated by the ruling party. The candidate of CCM, the ruling party, Dr. Salmin Amour, claimed to have won the election with a total of 50.2% of the votes. Lack of transparency was a dominant theme, for example, the Zanzibar Electoral Commission, which was responsible for the vote tallying, was under the ruling party's authority. CUF, the opposition party, refused to recognize the outcome as legitimate and International Observers were unconvinced of the fairness. Because of the circumstances of the election, the international donor community cancelled most aid to Zanzibar.

Since the 1995 election, friction between CCM and CUF has been rife. Ethnic cleansing carried out in the wake of the elections removed most Pembans from Unguja and further exacerbated Pemba’s marginalization. Residents of Pemba, from where CUF primarily draws its support, were particularly targeted. Hundreds of Pembans were fired from the civil service and others lost their homes as the Revolutionary government razed

⁸ In 1977, ASP merged with the mainland’s sole political party, TANU, to form the *Chama cha Mapinduzi* (the Revolutionary Party, or CCM). By this time ZPPP and ZNP had united to become Civic United Front, or CUF.

several of Unguja's Pemban-populated neighborhoods with neither notice nor compensation. A dozen CUF leaders were imprisoned on spurious accusations of treason.

The second multiparty election was held on October 29th, 2000.¹⁰ This election was filled with yet more manipulation and dishonesty, e.g. army and police were deployed across both islands to seize all ballot boxes, counted and uncounted, and beat opposition party agents who had been present in the polling stations to monitor the votes. In protest, a broad-based movement in Tanzania prepared to hold a nation-wide, peaceful demonstration on January 27th, to call for a re-run of the Zanzibar elections and constitutional reform of the Union between Tanganyika and Zanzibar. Police and military, acting under orders from the Tanzanian government, reacted with an extraordinary show of force. In mainland towns, demonstrators were harassed and beaten, and many were arrested. But the reactions of security forces to the mainland demonstrations were mild in comparison to the state-sanctioned campaign of reprisals that has been carried out in Zanzibar.

I was driving from South Africa up to Tanzania in the days preceding the demonstration, and saw the violence developing, courtesy of CNN broadcasts we caught along the way in Zambia and Zimbabwe. Hundreds of police from the mainland were deployed in the islands, where they committed acts of intimidation prior to the start of the demonstrations, including beating worshippers at a mosque and killing two men. Demonstrations in the three main towns of Pemba were met by unrestrained violence on the part of the security forces, which, far from ensuring the security of citizens (the stated purpose of their presence), in fact placed it in jeopardy. Police detachments in Wete fired tear gas pellets and live ammunition into the crowd both from the street and from the top of nearby apartment buildings. A police helicopter, reportedly carrying the Tanzanian Chief of Police Mahita swooped in over the crowd, dropping tear gas canisters and, some say, bullets. As protesters fled, police gave chase, arrested at least fifty people, and began to undertake violent house-to-house searches.

The police and army prevented ambulances and private cars from carrying the injured to the hospital by beating the drivers. At least one doctor was arrested for simply attending to a patient. Relatives coming to the hospital to claim bodies or to inquire

⁹ This section is drawn almost entirely from Natalie Arnold and Bruce McKim's report, "Zanzibaris Besieged by Tanzanian Security Forces" (Arnold and McKim 2001).

about the wounded were subjected to harassment and beatings, and in one instance, death. When patients were discharged from the hospital they were not sent home but taken immediately into police custody, and charged with participation in an illegal gathering - though many of the dead and wounded were not involved in the demonstration at all.

The Zanzibari president Amani Karume congratulated the police forces and the army for the "fine job they have done of preventing violence on Zanzibar" when in fact they were responsible for shooting of unarmed civilians with live ammunition, beatings, denial of medical treatment to wounded, hundreds of detentions, lootings, and rapes, which together brought the estimated death toll on Pemba alone to well over fifty people.

January 27th looms large in the consciousness of Pembans. Few discussed it with me outright, though there were daily allusions to the violence committed against Pembans by the government. Only one man spoke openly with me about it. His mother was shot in the leg, and her neighbor, with whom she had been talking, was shot fatally. Police had thought the man shot fatally was her husband, a prominent CUF member.

Economy today

Zanzibar is no longer the rich, prosperous island it once was. Because of ASP policies like the government's right to confiscate any property at any time, the ban on mortgage charges, and its virtual closure to the West, little external investment was made in Zanzibar until recently. And, because of international support for Nyerere's Socialist experiments, little reform in spending was encouraged. A severe drop in the price of cloves has also contributed to economic hardship. In 1982 one ton of cloves was worth 9000 USD, in 1998 one ton of cloves fetched only 1000 USD. Zanzibar presently economic mess can also be attributed to gross mismanagement of funds, failed attempts at industrialization, inflation, and too much borrowing. Of late, it has become heavily dependent on foreign aid (Zanzibar and UNICEF 2001). As a result, Zanzibar has a very unstable economy.

In an effort to reign in the budget that was spiraling out of control, a policy of economic liberalization was finally initiated in the 1980's. This was disastrous for the

¹⁰ Oddly enough, this election paralleled the US presidential election held three days later in many ways; both election featured complaints of missing ballot boxes, too-thin margins of victory, and harassment of voters en route to vote.

living standards of 33,000 government employees (who then comprised 95% of all employed persons on the islands). Consequently, absenteeism, lack of motivation, and the augmentation of income through dubious means have all become wide spread practices. Wages are not the only things that have suffered, the entire infrastructure of Tanzania has been compromised as well.

Infrastructure

The faltering economy has impacted all of the government-provided services; the quality of utilities like electricity and water, roads, and health care are all deteriorating, and seemingly more quickly on Pemba than in Zanzibar (Zanzibar and UNICEF 2001). The supply of water is a good case in point. Public access to clean water has deteriorated during the past decades, and like the drought in Nancy Scheper-Hughes' Bom Jesus, its origins lie in history and political economy and not cruel geography (1992: 69). Ironically, the ground water supply is plentiful, but leaking pipes cause so much water to be lost in the process of pumping it that it cannot satisfy the demands. The water system dates back to the Protectorate; it has not been significantly improved since before the Revolution. In 1978, 41% of Pemba used piped water, while today only about 16% of Pemba gets piped water (Zanzibar and UNICEF 2001). The supply of water on Unguja is better than on Pemba; on Unguja, 45% of homes have piped water. The situation is actually worse than these statistics convey, for they do not reflect the fact that piped water is often only available at irregular intervals. Though as promised by the revolutionary government, the water is free.

The roads are another good example of public services that are deteriorating asymmetrically on the islands. Pemba has only one major road, which runs from the north to the south of the island, and connects the three major population centers. The condition of long sections of the road is atrocious. I estimate the beating that a body takes in the course of the three hour ride from the north to the south of the island is equal to about one moderate car crash. The appalling state is in part attributable to the doubling of the number of cars in Zanzibar in the last five years (Zanzibar and UNICEF 2001). Heavy rainfall also erodes and damages the road, a problem particularly noticeable on Pemba (Zanzibar and UNICEF 2001). However, the primary reason for the bad conditions is that the government has done little to rebuild or repair any of the roads in Pemba. I was told that in the last five years, five new roads have been built in Unguja, and in that time, none have been built or significantly repaired in Pemba.

The house in which I lived during my stay appeared to be situated in a very modern place. There was a divided highway right outside the front door, and street lights every few hundred meters. What only became apparent after several days is that the street lights never came on, not even the ones that weren't smashed, not even once. The "modern" roads were actually ruining the cars that were driving on it; every so often you could hear the undercarriage of cars and trucks grate against the rim of a pothole. At night, you could even see sparks fly.

The situation with water and roads is bad, but health care is probably the gravest part of the crumbling infrastructure. Equity in health care has been espoused as an explicit principle of Zanzibar's health policy since the overthrow of the Sultanate in 1964. Equitable healthcare for all stood in welcome contrast to the miscegenation so prominent in the British health care system. Socialist principles motivated the government to find methods to improve access to health services and concerned both affordability and availability, (though improving acceptability was never given much attention) (Garssen 1993b: 50). Yet the quality of services suffered greatly under the Socialist government because of their neglect of education in favor of revolutionaries, and the exodus of skilled personnel.

Affordability was improved by declaring all treatment free,¹¹ and accessibility was improved by the construction of health facilities called primary health care units (PHCU's). Charges for health services were abolished after the revolution, and visits to the hospitals and clinics remain free to this day. Yet a free consultation is not to be confused with totally cost-free health care; though some medicines are sometimes available free of charge, patients must usually purchase all of the necessary medical equipment and medicines required for their treatment.¹² For example, it is free for women to deliver in the hospital, but they must spend at least 10,000 TSH (about 11 USD) to buy gloves, plastic sheets, needles, syringes and intravenous infusions needed (Lees-Mlenga 1998: 59).

Clinics are more numerous than they ever were; today there are three types of health care facilities: hospitals (3 in Unguja, 3 in Pemba), cottage hospitals (2 in Pemba),

¹¹ To my knowledge, the Bamako initiatives have not been introduced in Zanzibar.

¹² In urban Zanzibar today, the status of biomedical institutions and the favor of public health care are identified with the supply of pharmaceuticals, and are to be understood within the framework of the foundation of curative services during the colonial period, and that in colonial Zanzibar, the health policy was a major contribution towards racialism and segregation (Nisula 1999: 240). The revolutionary government has continued to emphasize curative medicine, only now people fear that which is offered, because of the perceived inadequacies and maliciousness of the health services (see Chapter 5).

and primary health care units (59 in Unguja, 44 in Pemba) (Zanzibar 2002). Now, approximately 89% of Zanzibar's population lives within 5 kilometers of a health facility, and nowhere does the distance of a primary health care unit exceed 10 kilometers (Garssen 1993b).

Quantity cannot compensate for quality. While it is indisputable that Pembans have access to health care, the care that is available is often not worth the visit. The PHCU's are often under-equipped, undersupplied, and understaffed (Zanzibar 2002). Wete Hospital hasn't even been able to pay their postal fees, so they can no longer receive their mail. The workers at the PHCU's are usually health aides, which means they have had only two years of training, which is insufficient to evaluate the substantial range of patients. At one of the cottage hospitals I visited, the "doctor" who was responsible for running the entire hospital had had only four years of training. In addition to, or perhaps because of, their insufficient training, many health care workers are unmotivated and spend their shifts chatting and snoozing instead of working.

The health care situation continues to worsen. Spending in the health sector has declined from 10% of the total recurrent budget in 1995/6 fiscal year to 5% in 1999/2000 (Zanzibar and UNICEF 2001: 53 of 62). Because of the economic failure, the government can no longer sustain the formidable institutional structures it had created. Compounding the economic strain is the growing population it must serve. The total fertility rate for the whole of the archipelago is 8.2, though for rural areas, it is thought to be higher (Garssen 1993b: 13). People younger than 15 years constitute half of the population. Intercensal growth in the last few decades has shown population to be increasing by more than 30% (Zanzibar and UNICEF 2001). In 1988, life expectancy at birth was only 48 years.

Public health control measures have suffered not only because of governmental economic strife, but also because of shortsighted management of these programs by NGO's. Malaria control is one such example. In 1967, six years into a WHO campaign, the rate of malaria had dropped from a prevalence of 75% to only 7.8% in Unguja and 1.7% in Pemba (Schwartz et al. 1997: 37). Malaria was no longer considered a health problem, and so the program was discontinued. The prevalence then skyrocketed, and USAID interventions in the 1980's were of no avail. At every clinic I visited during my research period, I was told that malaria was the biggest infectious problem which confirms the findings by any number of health researchers (cf. Matteelli et al. 1994, Nisula 1999: 208, Schwartz et al. 1997, Stoltzfus et al. 2001).

Ideational Environment

There is so much to say about how Pembans think, and are thought of. Here, I will include just two features of the ideational environment. The first is that of spirits.¹³ For centuries, Pemba has had a reputation as a center of powerful traditional medicine, magic, and spirits. At the beginning of this century, Evelyn Waugh wrote that novices would come from as far as the Great Lakes and even Haiti to study “the witchcraft and voodoo” of Pemba (Waugh 2002). Even today, Pemba is known throughout East Africa as the heart of powerful cults of spirit worship. Many Ungujans think that *everyone* from Pemba is some sort of sorcerer. I have even heard it said that Ungujans and mainlanders avoid visiting there, for fear of becoming possessed. Spirits are not unique to Pemba, (informants told O’Malley during her research that anywhere from 50-90% of women in Unguja have been possessed (2000: 192)), only they are thought to be more powerful there. Not only are they important as supernatural ideational landscape, they are important to that of health, “While the *shetani* can be read as many things by a visiting anthropologist, for their hosts, *shetani* are primarily understood as health problems (Nisula in O’Malley 2000: 192).

The second is the connotations of physical appearance. The miscegenation that was so rampant during both colonial periods has been discussed, as has the ethnic composition of the political parties, but the effects thereof haven’t. The skin color and other physical features of Zanzibaris fall along a continuum, from very dark skinned, so-called “African” features, to very light skinned, “Arab” features. “Arab-looking” people are assumed to be CUF members, and are usually harassed by CCM officials, the more “African” party. More “Arab-looking” people live on Pemba than anywhere else in Tanzania. The family with whom I lived on Unguja several years ago were more “Arab” looking than “African.” I was with them on several occasions when they were extra carefully scrutinized, simply because of their physical features.

Nutritional Environment

Many think of Zanzibar as a lush Spice Island. A Peace Corps worker-cum-journalist exemplifies this thinking when she writes:

Walking around the Zanzibari countryside brings to mind a visit to Willy Wonka’s chocolate factory: Everywhere you turn there are things you can eat.

¹³ For more extensive discussions of spirits in Zanzibar, see (Larsen 1998, McGruder 1998, Nisula 1999).

Tree bark smells of fresh cinnamon and small bushes are festooned like Christmas trees with tiny chilies and okra. A fleshy yellow fruit opens to reveal shiny red mace cradling a nutmeg seed and slices of soil-encrusted roots growing in the shade of a banana tree reveal fresh, young ginger and turmeric the color of mango flesh. Bunches of cloves hand from tall, skinny tress; their red stems and buds, drying in the afternoon sun, clog the air with a sweet, funky perfume. Elongated clusters of green and red peppercorns framed by tiny heart-shaped leaves climb up a mango tree, and vanilla, carambola (star fruit), and passion fruit cling to other trunks. Down around knee level, individual pineapples sit daintily in their lovely sprays of leaves (Zuckerman 2001).

Despite such rich observations, Pembans do not even produce enough food for their own needs. In spite of a warm and humid climate and reasonably fertile soil, the production of essential food has fallen far behind local demand (Zanzibar and UNICEF 2001). Even though over 90% of arable land is cultivated, much of the staple food, e.g. rice wheat, flour and sugar, must be imported from the mainland. This is because much of the cultivation done is for cash crops, namely cloves. Secondly, as you will recall, not all of the land repossessed during the revolution has been redistributed, and is therefore left fallow. This brings an increase in the cost of food and a measure of dependency on the mainland.

Diet is limited not only by the production and cost of purchasing food; it is also dictated by social norms. Ideally severe nutrient deficiencies would be prevented through a diet adequate in quantity, quality, and diversity. Dietary change is, however, often constrained by limited access to food, either because of cultural beliefs about the appropriateness of certain foods (which become particularly predominant during pregnancy) (Jackson and Jackson 1987: 588) or because of economic limitations. In addition, women may not be independent enough to implement the nutritional changes that would benefit their health. Yet even with the most optimal diet, daily iron requirements cannot be met from dietary absorption alone in the latter part of pregnancy (Bothwell 2000: 261).

These nutritional limitations put pregnant women (along with small children) at the highest risk for iron deficiency anemia¹⁴ in sub-Saharan Africa. Both groups are prone because while they intake very little iron, they also have a very high physiological demand for it. Typically, women's and children's meals are the lowest in animal products

¹⁴ It is important to understand that insufficient iron is not the only cause of anemia. Deficiencies in other micronutrients may also limit red blood cell production. Folic acid, vitamin C, riboflavin, vitamin A and vitamin E all play essential roles in iron metabolism red blood cell production, and are also limited in the diets of pregnant women in rural Africa.

and high in foods that inhibit iron absorption.¹⁵ Women need it for tissue synthesis in their own bodies, of the placenta, and of the fetus. Women also lose large amounts of iron completing a normal pregnancy due to blood loss during delivery.

Environment for Anemia

The physical environment of Pemba is conducive to anemia. In Zanzibar (and throughout sub-Saharan Africa) nutritional causes of severe anemia are compounded by infectious causes such as HIV, malaria, and geohelminths, or worms. On Pemba, two parasitic infections are most important: hookworms and malaria (Stoltzfus et al. 2001: 7). Hookworms are endemic along the entire east coast of Africa (Stoltzfus et al. 1997). Adult hookworms live in the intestine of infected individuals and cause chronic intestinal bleeding by feeding on the intestinal mucosa; they are the most common infectious cause of anemia worldwide (Eddleston and Peirini 1999). In Pemba, transmission of hookworms and other geohelminths is intense (Stoltzfus et al. 2001: 5). As such, presumptive treatment of hookworms is recommended according to the World Health Organization's Standard of Care in order to prevent anemia during pregnancy (Stoltzfus and Dreyfuss 1998). The crumbling infrastructure means that more and more water is drawn from unclean sources, sources that are often infected with these very parasites.

The incidence of malaria on Pemba is also very high. *Plasmodium falciparum* is the species of malaria endemic to east Africa and the species most pathogenic in terms of anemia (Verhoef 2001). Malaria causes anemia through a variety of mechanisms that include decreased iron absorption, suppression of erythropoiesis (production of red blood cells) and hemolysis of infected red cells (Brabin 1992). Women in their first pregnancy experience compromised immunity to malaria and are therefore particularly vulnerable to malaria-related anemia (Desowitz 1991). Chronic malaria often worsens during pregnancy, even for multigravidae, and this is often complicated by folate deficiency (Reuben 1993). For these reasons, presumptive antimalarial treatment is also recommended for primiparous women in *P. falciparum*-endemic areas (Shulman et al. 1999).

¹⁵ Animal products are the best sources of iron as they are both relatively high in iron and the iron they contain has high bioavailability, such that about 20% is absorbed. The bioavailability of iron in plant sources is only about 2 to 5%. Phytates, found in unprocessed grains are strong inhibitors of iron

This section has presented some of the historical, political, and economic dimensions of the ecology that affect anemia. The final heading presented some of the ecological (in the sense of the natural world) reasons why women suffer from anemia, which are more immediate causes than the social setting. None of these paint the complete picture.

absorption, as are polyphenols in legumes, tea, nuts and coffee, and oxalate in green leafy vegetables (Allen and Casterline-Sabel 2001: 12).

3. AT HOME: FAMILY AND RESEARCH

FAMILY

The Heart of the Household: Mzee Hattor, Omar, and the OTC

Mzee Hattor, the owner and normally lone resident of the house in which I stayed in Pemba, loves to sweep. He has at least six hand brooms of varying lengths, thickness, and bristle softness, from which he selects the most suitable for each area he sweeps. He sweeps the *baraza*, the stone bench built into the front of our house, and then the thin sandy footpath in front of our house. He then steps over the elevated but worn threshold of the carved wooden doors with their elaborate iron latches, switches brooms, and goes to work on the dark hallway. He sweeps past the locked door of Omar's pharmacy that is at the front of the house, past each of our sleeping rooms and the room where the drugs that are not supposed to be sold in the pharmacy are stored, and ends at the *uwani*, the small open courtyard around which the house is built. This is considered to be an Arab style of building. Typically, the *uwani* is the center of all household activity, but it was not in our household. We used it for none of the life-affirming purposes for which it was built. We did not cook there, nor did we eat there. There were rarely children in the house to play there. So we had nothing to wash there, except for the few pieces of laundry we each had. Mzee Hattor had his meals with a different grown son or daughter each day, and I crossed the street to eat with a family whose *uwani* was the heart of the household.

Omar, the owner of the pharmacy, is the best friend of Hajji, who is the man who invited me to stay in Wete. Omar is in his mid-thirties and is a teacher at a local primary school. He is married to Amine, a nurse; they have three children. He began the pharmacy about two years ago when laws were passed that more strictly regulated the sale of pharmaceuticals. Prior to this new legislation, any person could sell any medicines in any store. Tetracycline sat in the sun next to the rice and flour, and band-aids were on the shelf next to the kerosene. Now, stores that once sold very strong pharmaceuticals are not even permitted to sell band-aids or aspirin. Any medical paraphernalia must be sold from a *duka la dawa*, or pharmacy, (literally store of medicine) of which there are two kinds in Pemba. The more common type of pharmacy is known as an OTC, short for "over the counter." OTC is an apt description of the types of medicines that can legally

be sold there—medicines that are available without a prescription in Europe and North America. Medicines like Coflyn, Hedex, vitamin B12, fish oil tablets, aspirin, Panadol and Chloroquine are all legally sold there. The sale of these medicines is quite lucrative. For example, a bag of 1000 Panadol costs 3000 TSH. It is sold out after about three days, at 10 TSH per pill, for a profit of 7000 TSH.

The other type of pharmacy is called a dispensary, at which they are permitted to sell all the medicines that an OTC is allowed to sell, as well as more powerful ones.¹⁶ In addition, they often have a microscope and other laboratory equipment with which they can perform various analytical tests on blood, urine, and stool. Omar hopes to upgrade to a dispensary in the near future, and has made small forays into offering dispensary-like services. For example, Amine has “borrowed” the blood pressure machine from the hospital from time to time, and brought it to the OTC to test the customers’ blood pressure. She has also palpated pregnant women’s abdomens right in our *umani*.

The Ladies

Omar decided that it would be best if I ate my meals at a house just across the street from Mzee Hattor’s. Bibi Raya is the owner and matriarch of the house at which I ate breakfast and dinner. Three of her daughters and five of her grandchildren presently live with her, making her household slightly bigger than the average on Pemba, which is six members. Fatuma, her oldest daughter, a school teacher in her early thirties is married, but her husband, is in the fruit export business and is almost always away on business on the mainland. They have two children, Hafsa, a precocious two year-old girl, and Moktar, still a tiny baby boy. Twenty three year-old Aweina is also currently living there. Normally, she lives with her husband in Dar es Salaam, but has returned home to her mother’s house for the duration of her pregnancy, as many Pemban women do. She has brought her two children, five year-old Khadija, and two year-old Anwar. Raya is the third daughter who lives there. At 25, she is older than her sister Aweina who already has two children, but is, as yet, unmarried. Given that most Pemban girls are married by before they turn nineteen, I got the impression that this is a painful matter. There is a

¹⁶ Tetracycline, Valium (tablets and injections), Phenagan, Aminophiliene, Ampicillin, Lasix, Aldoment, Flagyl, Agometrine, Pitocine, Piroxicam, Prednisolone, Ephedrine, Postant, Amoxacillin, Gloxacillin, Ampiclox, Albendazole, Quinine, Fansidar, Diclofan and Metacalfin are only available legally from a dispensary, although many Over the Counter pharmacies have an “Under the Counter” selection of medicines. Health inspectors regularly check on the legality of the medicines being sold. Chasasa OTC was examined twice during my stay, and had medicines confiscated both times.

second Aweina, the daughter of Bibi Raya's son. She is eighteen years old, left school after Form 3 and is planning on beginning computer lessons soon. Occasionally, little Aweina's younger brother would come to eat there, but it was very much a house full of women.

In contrast with our *uwani*, animated only by the occasional lonely flapping of our laundry, theirs was in constant commotion. The acrid smoke of the kerosene stove colored the walls black, neighbors call out *bodi* (the Swahili equivalent of knocking) through the door, coconut flesh (a staple of Zanzibari cooking) is shredded on an apparatus that shares its name with that of a goat (*mbuzi*), children are washed (usually crying and twisting their wet little bodies as their mother clamped onto their wrist and poured cold water on them), dishes are washed, unripe bananas are peeled, the smallest children are potty trained, babies are nursed, tea is poured, clothes are scrubbed, spices are pounded, and often someone was praying, face to Mecca. Last year, one of the sisters even died there, of a heart attack, right in the middle of the cement floor, most certainly the center of the household.

Women in Pemban Society

In the first week, I was seated inside to eat, on a plastic woven mat on the floor in the front sitting room area. I soon convinced them to let me eat in the *uwani*, despite their protests of it being too dirty, too crowded, or just better on the inside. I told them that I was lonely inside, and that I wanted to be with them. They clucked disapprovingly, but eventually, they relented, and finally approved, for later, I overheard them bragging to the neighbors how much I loved to sit in the *uwani* to eat. However, whenever there was a man around, Omar, Fatuma's husband, or even my boyfriend, I had to eat inside with them.¹⁷

The visit from my "husband" provided much fodder for our discussions about the role of men and women in general, and our own personal hopes and expectations from our relationships. Because men were in the house infrequently, I could not do much observing there, but what the women told me concurred with literature I had read

¹⁷ In some ways I was treated like, and acted like, a woman, and other times, like a man. Eating indoors, away from the hustle and bustle of the *uwani*, was typically male. So was walking around alone at night, and straddling a motorcycle (instead of riding sidesaddle). With other matters, I was strongly encouraged to me more female, especially to wear longer skirts and to cover all of my hair with a *kanga*.

and observations I had made elsewhere, that Zanzibar is a very male-dominated place, and Pemba even more so than Unguja.

“Culturally, women still occupy an inferior position in society to men” (Zanzibar and UNICEF 2001). Amine was not invited to our beach outing until I personally invited her, yet Omar’s school-age girlfriend was. I was chided several times for not serving my husband first—women are expected to hold back when eating, to insure men eat their fill. Women should offer men the biggest and best pieces of meat, (when there is any), and insist repeatedly that the others keep eating. When I asked Fatuma if she was excited that her husband was coming back from his business trip, she shook her head no and smiled demurely. “I’m scared.” “Scared?” I said. “Why?” “Because I don’t want to get pregnant again.” “Can’t you tell him you don’t want to?” “Oh, Sera,” she said, like I could never understand.

Zanzibar’s traditional patriarchal society dictates the subordinate position of women which, historically, has been one of marginalization (Zanzibar and UNICEF 2001). Women rarely leave the house, and almost never without permission. When they do go out, they dress very modestly, with long dresses and head coverings. “The woman’s ideal behavior is kind, agreeable, quiet and helpful to her family and friends. She is supposed to demonstrate self-respect through her modest dress, in her quiet calm comportment, and in her respectful interactions with others” (O’Malley 2000: 202). Marriages are still polygynous, and residence is patrilocal. Men—fathers, older brothers, and husbands, have the last word in all matters. “Men are perceived to be more rational than women, who are said to be saturated with emotional dispositions, and the contrasting codes of conduct—self-control and respectability are often referred to as principles of male demeanor, unlike chastity, shyness, and virginity which are commonly attributed to women” (Nisula 1999: 31). Obedience is one of the most important qualities for a female. Women remain within the privacy of their own home or their neighbors; men usually perform tasks in the public arena, such as going to the market.

Rarely are women employed outside of the home; when they are it is as nurses, teachers, and performing menial tasks within the tourist industry. In rural families, men are responsible for clearing the land and preparing it for planting. Women are responsible for planting, weeding, and harvesting, and all the household activities, as well as the care of the children. (Zanzibar and UNICEF 2001) In return for the women’s subservience, the men are supposed to bear responsibility for household maintenance and leadership (Zanzibar and UNICEF 1995).

RESEARCH

Access: PHL, Sabra, Biubwa

The Public Health Laboratory Ivo de Carneri (PHL-IdC) is an umbrella organization for all health-related research that is conducted in Pemba. PHL-IdC is affiliated with both the Zanzibari Ministry of Health and a non-profit scientific organization, the Ivo de Carneri Foundation (cf. www.fondazaionedecarneri.it). The resources they can offer to researchers are extensive, and include office and laboratory facilities, a team of Pemban researchers well-trained in health research skills, and a motivated and smart board of directors. They can also help to facilitate bureaucratic tasks, such as obtaining research permits from the Minister of Health of Zanzibar. I benefited from their assistance in two important ways. They helped to expedite my research permit and introduced me to one of their employees, Sabra.

Sabra is a Pemban woman who speaks excellent English, as compared to my moderate skills at Swahili. She is also one of the most gentle, patient, and gracious women I have ever met. She works at PHL-IdC as the co-primary investigator in a long-term study about the effects of zinc supplementation on child development. She is also considering returning to university to pursue a medical degree, if she can find the funding. Though she was very busy with her work at the laboratory, the tiring daily commute to the PHL, caring for her two children and making plans for the future, she still managed to find time to get me started with my research. Fortunately, we both lived in the same town, Wete, situated about an hour away from the laboratory, and were able to meet often.

I met her at the laboratory on Thursday, gave her my questionnaires, and she invited me to her home for lunch on Saturday, her first day off. After lunch, we talked about my research a bit and she began planning. That very same afternoon, she introduced me to several of her most talkative friends and neighbors who were mothers. Sunday, the next day, she helped me to conduct my first interviews with the mothers. She had already assisted other social scientists, so she understood anthropological interviewing. I was pleased with such an auspicious beginning, but disappointed that Sabra had to return to her work on Monday. Though I have a working knowledge of Swahili, I was very worried about how I would be able to continue interviewing without someone to help both translate and explain the interviewee's responses.

I visited Sabra again on Monday afternoon, after she had returned from work, and she had excellent news for me. Her workers had been given the week off, and that though she was not available to help me much more, she knew someone who could, Biubwa. Sabra ushered me and her two children into their truck and her husband, Suleiman, drove us to Biubwa's house. Suleiman waited in the truck, fending off the mosquitoes, while we spoke briefly with Biubwa about helping me with my research as a translator. She agreed, and as we began hurrying back to Suleiman's truck, I remembered to ask Sabra if Biubwa had ever done this kind of work. She hadn't. We dashed back, and Sabra gave Biubwa a three-minute introduction about how social science research should be done.

Biubwa and I had agreed to meet the next morning, and begin with an interview with Suleiman's niece. Biubwa was a natural when it came to interviewing. She knew how to contextualize and rephrase the questions I was trying to ask. She was patient and hard-working. She had lots of natural curiosity, such that she pursued topics that came up during interviews of her own initiative. I interviewed approximately 20 mothers and health care workers with her. She was also an important sounding board for some of the ideas I had begun to form about anemia, pregnancy, health, and blood. She also helped with translations, though I take responsibility for any mistakes.

Key Informants: The Moms

The first women we interviewed were ones I had been introduced to by Sabra. Later, we interviewed women that I had met at the Antenatal Clinic (ANC) at Wete Hospital and at ANC's in smaller villages, women who had come to the pharmacy to buy medicine, and women who had been admitted to the maternity ward at Wete Hospital. Though this study was about perceptions of anemia and anti-anemia treatments during pregnancy, I did not feel it necessary to limit my informants to women who were pregnant at the time of the interview (though some were pregnant, and five of my informants gave birth while I was there). I felt that any woman who had *ever* been pregnant was an appropriate informant. This made the group of appropriate potential informants big enough that I was able to be more selective about who I interviewed, i.e. I could choose more talkative, well-spoken women. I think that I made the right decision, for it seemed that the most informative women were older, many too old to get pregnant again. Not only had they had a lot of experience with pregnancy from which they could draw, they no longer felt shy about speaking forthrightly about potentially awkward

things like birth and blood. Younger women were much more reserved, sometimes excruciatingly shy. I suspect the information I gathered would have been rather incomplete if I had limited interviewees to only pregnant-at-the-time-of-the-interview women, as a similar study had. In addition to learning about these women's personal experiences, I was able to draw on shadowed data, or the experiences that other women have shared with them.

It was not difficult to schedule interviews. Very few women work outside the home; most are home all day, busy with cooking, cleaning and taking care of the children. Biubwa and I would arrange a time with the informant, and she was almost always home waiting for us. Occasionally she would be cooking or entertaining one of her smaller children while we spoke, but most of the time we had her undivided attention. The interviews lasted between one and two and a half hours, with an average interview lasting about one hour and forty five minutes.

Every single interviewee was hospitable and generous enough to permit us to talk with her in the comfort and relative privacy of his or her own home (unless they were employed at or admitted into the hospital, in which case we spoke there). Though pregnancy is not a taboo subject, it is a woman's matter, and therefore considered better not spoken of openly. Even though we were indoors, the interviews were often not wholly private; other household members sometimes sat in on our conversation. Usually, these people were either small children or older female relatives. I do not believe that these mothers, mothers-in-law, and aunts were a hindrance to the interviews, for they often contributed helpful information based on either their own health and illness experiences or those of the woman being interviewed, e.g. reminding her of medicine she had taken, food she did not like, symptoms of her illnesses. Occasionally, especially when interviewing older (and often deafer) health care workers, younger relatives interjected to explain and/or retranslate Biubwa's or my questions, often in louder voices. During one interview with a young pregnant woman, her husband sat with us the whole time. I could not ask him to leave his own house, but I fumed silently, for the woman spoke very timidly which I attributed to her husband's presence. As the interview turned to talk of spirit-caused illnesses, her husband shared such a quantity of information that I was able to add an entirely new line of questioning to my interviews. To thank him, I returned to take pictures of him, his friend, and his children.

With this new information, I then returned to already-interviewed informants to pursue the topic of spirit-caused illnesses. During our first interviews, I had asked

something like, “Have you ever heard of spirits causing illnesses in people?” They usually answered with a abrupt “No,” and so I moved on to another topic. When I returned to them for the second time, I asked the same question again, “Have you ever heard of spirits making people sick?” They faithfully repeated their first answer, but I pressed on. “Ahhh. Well that’s funny, because *I* heard that spirits really like blood and sometimes they feed on the blood and that makes people sick. But maybe I misunderstood when I thought that I heard that.” At this point, the communication floodgates usually opened. “Well, some spirits do, some don’t. Some of them love blood and others don’t like it at all.”

I did not conduct follow-up interviews with many informants because after the first six or seven interviews, I was able to make a checklist of the most important topics to be covered, thus insuring a complete interview (see Appendix B). Those that I did return to were the primarily the first interviews, when I had not fully determined the list of appropriate topics, and the *mganga* who was an absolute fountain of information.

By the end of my time in Pemba, I had formally interviewed 25 mothers, 17 of which had been or were presently anemic. Five of these women gave birth while I was on Pemba; of these, two of their babies died. All of the mothers were Muslim, had been born on Pemba, and, with one exception, had been married. They ranged in age from 17 to 60, with 0 to 10 years of education, and had borne up to 9 surviving children. After several interviews, I noticed differences in perceptions of anemia and use of medicines for it. These differences seemed related to either rural/urban setting or education, or both, as the two factors are often interrelated. To be able to further explore potential differences, I drew approximately half of my informants from rural areas of northern Pemba, and the other half from Wete, the town in which I lived.

Core Informants: Government Officials and Health Care Workers

The study focused on anemia-related behavior at the micro-level, i.e. the individual and household level, as I had anticipated it would in the proposal. To contextualize these behaviors, I spoke with health care workers who serve the community (meso-level) and government and NGO officials involved in health-related work (macro-level). Interviews with health care workers and government officials at the meso- and macro-level proved to be both more relevant and more time consuming than I had expected. They added important depth and scope to the setting.

The first several officials with whom I met were based in Unguja, the main island. I spoke with Mr. Harold Randall, the head of the United Nations office in Zanzibar, Dr. Hanouni Sogora, the Program Manager for the Safe Motherhood Program for the whole of Zanzibar, and Dr. Chwaya, head of the Nutritional Unit at the Ministry of Health. On Pemba, I met several times with Dr. Nyanga, the highest ranking government official based in Pemba, Bibi Sharifa Hamoudi, the head of the Mother Child Health Program in Pemba, and Bibi Mine Khatib, the northern zonal coordinator of the MCH program. Other officials included the manager of the medical supply store for the whole of Pemba, the nursing officer motivator, and the head of the dispensary at Wete Hospital.

I use the term “health care worker” to refer to almost any person who works to help ailing people get better. As such, the term “health care worker” includes biomedically-trained doctors, nurses, aides, and pharmacists, but it also includes *wakunga wa kinyegi*, traditional birth attendants, *waganga*, diviners/healers, traditional medicine makers, and OTC employees. I formally interviewed at least one practitioner from each category, and often several such workers, for a total of 12 formal interviews and countless mini-interviews and informal conversations.

I paid particular attention to the OTC employees. I visited a number of them on both islands, in order to ascertain which medicines are available at which price, and determine how big the disparity was between the medicine supply on each island. I went to Pemba expecting there to be no medicines; that is the impression that everyone had given me. Sometimes when I visited OTC’s I pretended to be in search of medicine for my weak and pale pregnant friend. Other times, I simply asked what medicine was available at their store to treat anemia.

Surrogate Customer

To better understand the limitations and possibilities that an OTC represented for pregnant anemic women, I borrowed heavily from the methodology discussed in Kafle et al’s article and elsewhere (cf. Van der Geest and Hardon 1988) and used a surrogate customer to evaluate whether OTC’s are an appropriate place for pregnant women to get treatment for anemia, or not by determining what kinds of medicines and what kinds of advice are being dispensed at these places.

Ali Hamisi, a *daktari* in his mid-thirties at Chasasa OTC and an employee of the PHL, was my surrogate customer. He was an appropriate surrogate because most times women do not visit pharmacies themselves, but send their husband or younger children to fetch prescriptions written in their book or to buy simple medicines like Panadol. He

visited six OTC's. At each one, he told the person working that his older sister was pregnant, had no strength, and was pale. He then asked what medicine he should buy for her. If the worker asked, he could tell them this was her first pregnancy, she was in her seventh month of pregnancy, she did not have any swelling, she did not have high blood pressure, and she did not throw up. He had 500 TSH (about 0.50 USD) to spend. After he had completed the transaction, he returned to his motorbike and personally answered seven questions.¹⁸ When that was completed, he returned to the store with a list of eight questions to ask to the worker.¹⁹

Participant Observation

Formal interviews and undercover visits to OTCs were far from the sole source of information about anemia during pregnancy. Living in the same building as a pharmacy afforded many opportunities to observe and discuss some of the ways in which people talk about and use medicines. When the store re-opened in the evening, after the sunset prayer, I sometimes sat on the bench behind the counter and helped whoever was working. Usually Omar or Ali Hamisi worked in the evenings. I chatted with them and the customers, wrote the name of the medicine on tiny freshly glued paper envelopes, spooned the number of pills I was told to into the envelope, stapled it closed, and gave the appropriate change. I did not make any diagnoses or recommend any medicines. Curious passers-by and genuine customers alike would stop by the store to talk with me, to ask me about myself. Most assumed I was a doctor, and called me as such. "No, no, no," I was quick to correct them, fearful of purporting to be something I wasn't. "I'm not a doctor. I don't know anything about these medicines. I'm a student of culture, and am studying anemia during pregnancy." They would then turn to Omar and either explain their condition or request the medicine they felt they needed. "Thank you,

¹⁸ 1. Did they ask you any other questions about the health of your sister? 2. Which questions? 3. Which medicine did you buy? 4. How much was it? 5. Did you have to substitute any medicines because you only had 500 TSH? 6. Did they explain the dosage and how you should take the medicine? 7. Did they give you any other advice, e.g. to go to the hospital, to eat nutritious food, to get her blood measured?

¹⁹ 1. Normally, pregnant women buy which medicines? 2. When they buy medicine, is it medicine that has been written in their book (i.e. by a health care professional), or do you tell them yourself which to buy, or do they just know it in their head? 3. Do you take time to explain to people about how they should use the medicine they buy? 4. For which symptoms do people buy ferrous? 5. When people buy ferrous, is it written in their book, do you recommend it personally, or do they just know that they want it? 6. How do you know which medicines to give them? (This is a question to probe at their training, without being too nosy and seeming like government inspectors.) 7. Are you ever afraid that a doctor would not agree with the advice that you give? 8. Do you have confidence when you sell people medicine, even if it is for serious illnesses like cerebral malaria

daktari.” I was incredulous that they called Omar a doctor. I later realized that anyone who works at the OTC is considered a *daktari*, just as mostly everyone who works in the hospital is a *daktari*, and I gave up explaining that I was not a *daktari*.

When visitors to the store were through with their questions for me, it was my turn to ask. Why are you buying this? Did the doctor (little did I realize how my meaning of doctor was different than theirs) tell you to buy it, or do you just know that is what you need? These questions often spawned others, and soon we were discussing the merits of fish oil tablets, the advantages of sugarcoated chloroquine over non-sugarcoated chloroquine, and Chinese-manufactured drugs versus Indian-manufactured drugs.

I was especially pleased when someone came to buy ferrous sulphate. I immediately scheduled an interview with them, even if they were not yet mothers, and in one case, even if they weren’t female. I wanted to learn what kind of people were willing to buy the ferrous sulphate, and for what reasons. For the times when I was not at the OTC, I kept a piece of paper on the counter on which the *daktari* could write the name, age, and quantity purchased of anyone who bought ferrous. I arranged for several interviews in this way.

In addition to the observing I could do at the OTC, every meal was an opportunity to notice a range of behaviors, e.g. how children were taken care of, how pregnant women ate and worked, how heat was used as medicine for babies. It was also a time for me to be observed and even critiqued. One day, I was wearing a dress with a slit at the side that reached my knees. The younger Aweina said to me, “Sera, the tailor forgot something.” I looked at her blankly. “Look, he forgot,” she repeated. I looked down to where she was pointing. “He forgot to sew your dress closed!” she laughed. I didn’t, but I also didn’t wear that dress again.

FGD’s?

In my proposal, I anticipated conducting four focus group discussions. By the time I left Pemba, I had conducted only one formal focus group discussion (FGD), moderated by Sabra. Even that began as a discussion with her female relatives who happened to be assembled; we had intended to speak with just one woman. But I do not regret not having conducted more formal discussions, for there were so many spontaneous group discussions, at the pharmacy, at Bibi Raya’s house, in *dala dalas* (public transportation trucks), during tea breaks with nurses at the hospital. Everyone in

Wete knew I was Mama Safura (*safura* is the clinical term for anemia) and so conversations would often circle back to my research interests, without needing to pose any questions officially.

In addition to the artificiality that some such contrived meetings can have, I found other drawbacks to FGD's. Women were eager to speak, and had their own stories to tell without needing to be being prompted by what the other women present said. I felt that FGD's did not allow each woman enough time to speak. Focus group discussions are useful when time is limited, but I felt I had enough time to talk with women individually, and so preferred a more intimate conversation.

FGD's also became very expensive. Normally, after each interview, I gave the interviewee a package of soap. After the FGD, I felt also compelled to give each woman a small gift for helping me. But as I had more time than money, I preferred to talk with only one woman at a time.

Ethics: Informed consent

I began each interview by reading the following in Swahili:

I am a university student, and I am doing research about health during pregnancy. Also I am planning to have children myself, in a year or two. I would like to talk with you because you have already been pregnant (or if HCW, because you have experience working with people who are pregnant). I would like to know your experiences and about how you feel about being pregnant. This is not a test, there is no right or wrong answer. It is just about how you see pregnancy. Would you like to help me?

Thank you. I am going to write down and record everything that you say, so that I can remember it very well when we are done talking. It is only for me to listen to and not for anyone else. Do you have any questions about this research?

Okay, I am going to ask you some questions now, and probably you will laugh because my questions are a bit crazy.

This little speech, which could have come off as quite stiff, usually made everyone really laugh, especially the last line. I found it important to say something a bit more formal to insure informed consent, and to ask for permission to record. Only one woman objected to me recording our interview; she thought I was making a radio program. Her daughter interrupted us to explain that I was only recording for my own purposes, because my Swahili was bad, and then she consented. I did not record any of the government officials; I was afraid it would change the rather friendly dynamics of our

conversations. They were often speaking to me as confidantes, and I thought they would be too nervous or suspicious. Instead with them, I just scribbled hand-written notes.

I used a mini-disc recorder to record our conversations. As we were speaking, I would note the time of conversations about certain topics, or sections where I felt I had not properly understood, in order to return to them later. On the whole, I feel that I have taken adequate notes during the interviews and have decided not to transcribe them (Jackson 1990). I have returned to the recordings to insure accuracy of quotations and to clarify passages of my own notes that I did not understand.

I had originally planned to pay each informant about 1USD after I spoke with him or her, but at Sabra's urging, I gave them laundry soap instead. Outright payment was not really acceptable, mostly because women did not want our interview to be seen as working for me, they wanted to be helping me. Non-cash "contributions" are more easily considered as presents than outright cash is. I felt it was important to show informants that I appreciated the time they spent talking with me. Soap was an acceptable compromise, except that the soap was much heavier to haul around in my backpack than the cash was.

Feedback

Regrettably, I was not able to obtain much feedback on any large scale. I was able to discuss my ideas with Biubwa, Sabra, Omar and Hajji, but I did not discuss my findings with any of the informants. I did not know how to convene the group together, plus I wasn't sure what I had found. To rectify this, I have arranged with Biubwa that she will translate a synopsis of this thesis into Swahili and distribute it at various clinics, hospitals, OTC's and governmental offices.

4. “WITHOUT BLOOD THERE IS NO LIFE”: PERCEPTIONS OF PREGNANCY AND ANEMIA IN PEMBA

I have been fascinated by pregnancy ever since I realized that I too could be, will be, round with babies and milk one day. I looked forward to pregnancy as a time to enjoy myself, beaming my natural maternal glow while loved ones rush to indulge my cravings for pickles and ice cream and strangers jump up to offer me their seat. These notions had begun to be dispelled by frank conversations with and observations of my pregnant sister-in-law (who was considerate enough to give birth to a baby boy the day before my flight to Zanzibar). I began to see that being pregnant and giving birth can be rewarding, but it is hard and sometimes lonely work, which can involve a lot of physical discomfort and emotional anguish. My own perceptions of what pregnancy will be continued to change through the duration of my fieldwork in Pemba. This chapter contains the bulk of ethnographic material about perceptions of pregnancy and sickness during pregnancy, with a particular focus on anemia. This is also the material that most changed my reproductive imaginings.

“BUT I LIKE THE BABY AT THE END”: PREGNANCY IN GENERAL

The first woman I asked if she liked being pregnant was a mother of eight. At first, she looked at me blankly and then doubled at the waist in laughter. Wiping her eyes with the edge of her *kanga*, she finally said, “I never thought about it.” I moved on to other topics, feeling a fool. In retrospect, what I think she meant is, she had never thought about it as something to be enjoyed, in the way that I had. Nor did any of the other mothers. “No, I don’t like being pregnant.” “It’s like living with a problem.” “I like being pregnant because I know it will finish.”

Although the condition of being pregnant is not cherished, it is valued for the end result. One woman said she didn’t like being pregnant, “but I like the baby at the end.” Another woman, who had given birth three times, and each time her baby had died within a day or two of birth, answered, “No. If there was some place I could go to buy one [a baby]...”

The conversations then moved to what it was that pregnant women suffered from. Mothers and health care workers discussed similar problems as prevalent during

pregnancy, (though the hospital workers sometimes used the biomedical term while mothers used the lay term, e.g. malaria vs. fever, edema vs. swollen feet, cystitis vs. stomach pain when urinating). Headache, fever, dizziness, tiredness, temporary blindness (during the day, not indicative of night blindness), loss of appetite, nausea, vomiting, abdominal pain, pain in lower back, vaginal bleeding, pain during urination, and swollen feet were all mentioned by three or more women.

In an attempt to determine out if pregnancy was seen as pathological or not, I asked, “*Mjamzito ni mgonjwa au mzima?*” “Is a pregnant woman a sick person or a healthy person?” Answers often reflected the women’s own personal experiences. The few women in my sample who had been healthy during their pregnancies said women were healthy during pregnancy. Even some who were sick agreed that a pregnant woman is not a sick one. “Pregnancy isn’t an illness because in the ninth month you feel better.”

However the majority of the women thought that a pregnant woman was sick. This may reflect the fact that the larger part of my sample included women who had experienced anemia, and often during their pregnancy, but these women did not consider themselves to be more sick than other women. Responses included, “If it’s [pregnancy] normal, why can’t you carry even a bucket of water?” “She’s bearing a heavy load, without any help from anywhere. No one can help you carry the load.” I posed this question to a woman admitted to the maternity ward for a range of problems, including pre-eclampsia, hypertension and anemia. Her neighbor, also pregnant, could no longer resist keeping quiet during our interview and interjected, “She’s sick! She’s normally very sick.” Just then a tiny baby goat galloped into the maternity ward and bayed its piercing little baby goat calls, as if to concur.

Ujumbe: A sign, but of what?

During an interview with an *mkunga*, a traditional birth attendant, we were discussing the cures that she could give to pregnant women suffering from the most recurrent discomforts women have during pregnancy. She had cures for a number of ills (see Chapter 6) but when I asked her about swollen feet she said, “Oh I don’t have a cure for that, that is just an *ujumbe*.” An *ujumbe*?

Ujumbe can mean a sign or message, and here, it refers to the signs of being pregnant. *Uyeye* is used similarly, to refer to signs of being pregnant, and is used mostly by people from the countryside and elders in town. In this paper I use *ujumbe*, but *uyeye* could be substituted. *Ujumbe* are not considered a sickness, but a *hali*, simply a condition, without any pathological connotations. (For example the expression for weather, is *hali ya*

bewa, the condition of the atmosphere.) *Kutapika* (vomiting), *kizunguzungu* (dizziness), *kuchefuchefu* (tiredness), *kuchangaa* (paleness), *kuvimba* (swelling e.g. of limbs, face), and *bupati siku zako* (not menstruating), or any combination thereof, can fall under the heading *ujumbe*.

Neighbors, family, and even most biomedical health care workers generally encourage women to see *ujumbe* as a normal part of pregnancy. Nurses told me that they often had to explain to mothers, especially first-time mothers, that “it is just normal to have such problems during pregnancy.” One woman told me that the doctor told her to “just be tolerant of them.” The one dissenting voice was the health aide from Konde. “*Ujumbe* is an illness during pregnancy by hospital standards, but *ujumbe* in society is just a sign [of being pregnant].”

In addition to these physical ills, partiality to *kali* things is another *ujumbe*. If women crave foods that are *kali*, either very sour or very spicy, such as unripened mangoes and hot peppers, people can tell she is pregnant. The same is true if she behaves in a hostile, or *kali*, manner. Several women reported acting aggressively to everyone, “I was mad at everyone, especially my husband.” Not every woman craved spicy foods or became aggressive (one woman thought that spicy food would hurt the baby), though these characteristics were frequently mentioned as common during pregnancy and as indications of being pregnant.

Eating during pregnancy: unsuitable and suitable substances

Though only referred to once explicitly as an *ujumbe*, a sign of pregnancy, pica was widespread among pregnant women. Pica, which takes its name from the Latin term for magpie, a bird with an indiscriminant appetite, is “the persistent ingestion of substances commonly considered unfit for food” (Gutelius et al. in Lackey n.d.: 121).²⁰ The three most commonly ingested non-food items were, *mcheli* (husked but uncooked rice), earth, and ice. Less commonly mentioned were ashes, dust, charcoal, and soil soaked with cow’s urine.

When I asked women why they liked to eat it, I was told that everyone eats it when they are pregnant, that it is “just a habit.” “They just like it too much.” There is an

²⁰ There is a very interesting debate about the causes and effects of pica, particularly that of geophagia, or the consumption of earth (Lackey n.d., Reid 1992, Vermeer and Prate 1979, Wiley and Katz 1998). While long considered pathological, and even sometimes thought to be a cause of anemia, some researchers are

element of shame to it; most informants switched to the third person, “They like it because they are pregnant, they don’t do it again after giving birth.” When I asked why it was a habit, they could only tell me that is a *kileo*, a craving, “they just want to eat it sooo much.”

Some women found *mcheli* to be too bitter (although when I tried eating it, I found it tasteless), but many told me that they loved to chew it. The purported effects of eating *mcheli* are various. One traditional healer told me that her daughter became very anemic from eating it, so she herself swore off eating *mcheli* ever again, and her daughter recovered. Other women thought regularly consuming *mcheli* causes swollenness, such that people will “tell you that you have *safura* (anemia).”

There are several types of earth women like to ingest. Collectively, they are known as *udongo*, which simply means soil, clay, or dirt. *Ufue* is powdery yellow sand that comes from a deep hole; *kitango pepeta* is similar to *pepeta mlima*, both come in small whitish chunks of clay; *udongo ya kawaida*, literally normal clay, is found near the foundations of mud houses after a heavy rain and is very pungent when wet; and *nchwa* is the earth that termites have used to make their nests. You can eat *udongo* in different ways. You can roast *kitango pepeta* and *pepeta mlima* and it becomes quite sour. You can mix *ufue* with water, “like you would sugar.” One biomedically-trained midwife explained that when she was pregnant, she ate *vitango mlima* every day, “just like you do folic.”

Most saw eating earth as a harmless habit of pregnant women, “If you’re eating this because of pregnancy it won’t hurt you” but as with *mcheli*, few thought it could cause problems. The nurse motivator told me that he knew his mother ate *udongo*, but “it is against the health aspect.” One mother said, “Maybe if you don’t tell them at the hospital that you eat *udongo* and you are treated for *safura* with pills, you will get it again.” The wife of the *mganga* told me, “If you aren’t pregnant and eat it [*udongo*], you become too tired, with a swollen stomach and die. Or you can become sick from *safura* if you eat clay or raw rice.” Other women thought eating clay would lead to infections such as *minyoo*, or worms. One *mkunga* said, “Sometimes women hide that they have been eating rice or clay, but when they go into labor, everyone will know because she needs to eat more in order to finish the birth.”

Ice was the other non-food substance frequently consumed. Women who were nauseated during pregnancy often ate it. When I asked why, they told me it was because

proposing that it can be beneficial, by acting as an antidiarrheal medication, as a detoxifier, or as a source of minerals such as calcium

they were unable to eat or drink anything else. Others liked it because they felt hot during pregnancy, though the ice did not really cool them down. One *mkunga ya kinyeji* cautioned me that eating ice while pregnant can make the new baby have shakes when born.

All informants agreed that there were foods that pregnant women did not eat, but these varied from woman to woman. These food restrictions stemmed from the woman herself, because she either did not like the food or was unable to afford it; there is no food specifically prohibited to pregnant women. “Women decide for themselves what to eat and what not to eat.” Many women told me they lost their appetite because of nausea or restricted salt diets, especially in the first few months. To avoid exacerbating their nausea, these women would avoid certain foods, especially greasy foods and cooked rice. Some foods were just *wathuru*, they didn’t work for them.

Although all women denied eating less during their pregnancy because of fears of large fat babies, almost everyone had heard that *other* women do so. They *heard* that other women avoided filling foods like *uji*, millet porridge, *viazji*, sweet potatoes, and boiled unripe bananas. Several women told me that they heard other women thought that eating hard-boiled eggs would cause babies to be bald. I cannot help but think that some of these women ate less during pregnancy as well, though they knew such behavior was frowned upon by hospital workers.

Other particular habits during pregnancy included aversions to certain smells, like that of soap, of their husband, and of their own self. Wearing loose clothing and napping frequently were also considered important.

BLOOD PROBLEMS

Let us return to the “symptoms” from which women can suffer during pregnancy. Of all that were mentioned *kifafa cha mimba* (pre-eclampsia), a malpositioned baby, and anemia were cited as the most serious for a pregnant woman. When I probed further about anemia, I was told, “There is no more serious of a problem.” “It’s a big problem for pregnant women.” Because most people knew I was studying anemia, I was skeptical. I often chided them, “You can’t say that because you know I’m studying anemia!” Because they had specific explanations for why anemia is so dangerous, I don’t feel I was being misled. “It can lead to death in a pregnant woman.” “You can’t give birth if you don’t have blood. You can’t push.” “You need enough blood for the baby and for yourself.” “Everything in your body needs blood, and so does the baby, so you

need twice as much blood in order to push.” “Because anemia causes breathlessness and then you can’t do anything.” “Listen, Sera, without blood there is no life.”

Some women did not mention anemia as a serious problem for pregnant women. If they were women who had indicated that they knew what anemia was, I asked them why they thought anemia was not a serious problem during pregnancy. Their answers pointed to perceptions of anemia as uncommon. One woman amended her original negative answer, “It’s not a very big problem because not many women have it. But if you do have anemia, it is very serious.”

From a biomedical point of view, the consequences of anemia can be dire. Mild anemia can increase a person’s susceptibility to other infections, and cause a range of non-specific complaints such as fatigue, headache, faintness, anorexia, and bowel disturbance (Eddleston and Peirini 1999: 510). By preventing severe anemia, hemoglobin (Hb) < 70 g/L, in pregnant women, impaired immune function, reproductive failure (miscarriage, still birth, prematurity, low birth weight, perinatal mortality) and maternal death during childbirth could all be reduced (Levin et al. 1993 in Galloway and McGuire 1994).

Terminology for anemia

In English, there is just one word for anemia. In Swahili, there are several terms that refer to anemia. In my experiences, *safura* is best translated as the clinical term for anemia, and most commonly used in biomedical settings, although I have seen dictionary definitions for *safura* that include hookworm, ankylostomiasis,²¹ paleness, and jaundice. Some people distinguished between *safura* and *safura ya webe* or *safura ya ubuyu* (*webe*, I was told, is “just a name,” without meaning; *ubuyu* means baobab, a tree known for its considerable size). One informant said, “with this *safura*, you swell right up to the face.” These latter types of *safura* have all the symptoms of *safura*, with the addition of swelling. *Upungufu wa damu* is the term I most commonly heard for anemia, although *ukosefu wa damu* can be used interchangeably: both mean deficiency or shortage of blood. (*Upungufu* and *ukosefu* can also be used in contexts other than anemia, for example, a drought is an *ukosefu wa mvua* (rain)). Originally, I thought that all three could be used interchangeably

²¹ As indicated by other names bestowed on the ankylostomiasis, brickmaker’s anemia, miner’s cachexia, and tunnel anemia, it occurs especially among those who come in close contact with dirt and soil (n.a. 2001).

to mean the same thing, that *safura* was for the experts and *upungufu* was the term used by the lay people.

When I still thought the terms were interchangeable, I made mistakes when asking questions. Looking back, I can see that when I was inquiring about spirits causing blood-related illnesses, and I asked if spirits cause *safura*, and I was told that they did not, spirits were not necessarily being hidden from me, I was probably asking in the wrong terminology. (Although I would wager they knew what I wanted to know.) I should have asked if they cause *upungufu wa damu*.

A fourth term related to anemia is *baridi yabisi*. It is the most perplexing of the terms, and one I only realized was germane to anemia halfway through the research. I began to hear people making references to *baridi yabisi* as a type of anemia, and (with much reluctance-- everything had been so neat up until then) I probed further. I first looked in my thickest Swahili dictionary, where *baridi yabisi* is defined as rheumatism. The Pembans I spoke to who had university degrees told me that *baridi yabisi* was indeed rheumatism. But as I spoke to more and more people, the vignette of symptoms that *baridi yabisi* could refer to increased. An informant of Karina Kielman told her that *baridi yabisi* was a state characterized by depression, apathy, and irritation (1998: 154). Others mentioned symptoms as divergent as scabies, paralysis, feeling cold, and paleness. Some told me it was the same thing as *safura*. Taken separately, *baridi* means cold, damp, or soft, and *yabisi* can mean dry, difficult, hard, or rigid. These adjectives are useful in imagining what *baridi yabisi* can mean, but as far as I can tell, there is no one to one translation into an illness known in English.

I was reminded of Pool's study of the biomedically defined syndrome kwashiorkor, in which it soon became clear that the two Limbum (the local language) terms into which kwashiorkor had been translated, "ngang" and "bfaa" only partially overlapped with the meaning of the term "kwashiorkor" (Pool 1994: 246). Because the terms are indeterminate, their translations are sometimes difficult. One word cannot easily replace another. To further confuse matters, one can have all of these problems simultaneously or only one or two of the problems. Because pregnant women do not suffer from *baridi yabisi*, I did not pursue this condition to its fullest extent, but hope to do so during a more extensive period of fieldwork.

The last linguistic complication was that some women didn't recognize blood problems during pregnancy as *upungufu wa damu*, or *safura*, or even *baridi yabisi*. Three times it happened that when I asked women if they had heard of anemia, and no matter

which term I used, they had not, or did not connect it to blood problems during pregnancy. This seemed somehow inconsistent, or even contradictory, because they knew about problems associated with not having enough blood during pregnancy. The following conversation, between me, Biubwa my translator, and a mother who was identified as anemic by a nurse at an ANC clinic, (but not prescribed ferrous) illustrates the trickiness of the terminology.

Me: Did you ever hear of *upungufu wa damu* before yesterday's talk?

Mom: Uh-huh. [No.]

Me: You've never heard of it?

Biubwa: You've never heard of *upungufu wa damu* during pregnancy? Did you ever hear anything about blood being different during pregnancy? Is its condition different in any way? If there is a pregnant woman and a not pregnant woman, is there any difference?

Mom: During pregnancy, the blood is reduced (*imepungua*).

Me: Did you hear that yesterday or did you just know it?

Mom: I heard it before yesterday.

Me: How?

Mom: Just from my neighbor.

Biubwa: Did your neighbor have a problem with it?

Mom: She's pregnant now. She was told she was suffering from not enough blood.

Biubwa: What did she do when she had *upungufu wa damu*?

Mom: What?

Biubwa: What did she do when she didn't have enough blood?

Mom: She used medicine from the hospital, and she was recommended to use nutritious food like vegetables milk etc.

Me: Did she eat the medicine?

Mom: Yes.

Biubwa: Do you think that maybe you would like to have the pills too? Do you like them for yourself?

Mom: Yes.

Me, to Biubwa: Does she know that she can get them for free from the hospital?

Biubwa: She can't get them unless they've written it in her book

Table 1 below summarizes the differences between the types of anemias, although it does so more neatly than most people do in their daily speech.

Table 1. *Anemias of Pemba*

NAME	MEANING	SYMPTOMS	CAUSE
SAFURA	CLOSEST THING TO THE CLINICAL TERM FOR ANEMIA	PALE, DIZZINESS, BREATHLESSNESS, QUICKLY BEATING HEART, TIREDNESS, NAUSEA, FEELING COLD	WORMS, MALARIA, TOO CLOSE OF BIRTHS, NOT ENOUGH FOOD, MALNUTRITION, PICA
<i>SAFURA MBUYU</i> OR <i>SAFURA YA WEBE</i>	<i>SAFURA</i> "OF THE BAOBAB TREE," REFERRING TO THE SWELLING. WHICH MAKES THIS A MORE SERIOUS CONDITION THAN <i>SAFURA</i>	LIKE THOSE OF THE <i>SAFURA</i> , ONLY WITH SWELLING	THOSE OF <i>SAFURA</i>
<i>UPUNGUFU WA DAMU</i> OR <i>UKOSEFU WA DAMU</i>	LACK OF BLOOD	PALE, DIZZINESS, BREATHLESSNESS, QUICKLY BEATING HEART, TIREDNESS, NAUSEA, FEELING COLD, SPIRITS TALKING TO YOU	THOSE OF <i>SAFURA</i> , WITH THE ADDITION OF SPIRITS
BARIDI YABISI	LITERALLY RHEUMATISM, BUT BARIDI MEANS COLD, AND YABISI MEANS DRY. LESS SERIOUS THAN <i>SAFURA</i> OR <i>UPUNGUFU WA DAMU</i>	DRY SKIN, SCALY SKIN LIKE FISH, SKIN NEEDS OIL, CONSTIPATION, NO SWELLING, FEEL COLD, SCABIES, SAME AS <i>SAFURA</i> , A KIND OF <i>SAFURA</i> , PAIN IN MUSCLES, BONES, ESP. FEET	LOSS OF BLOOD, <i>SAFURA</i> , DEFICIENCY OF VITAMIN B OR VITAMIN C, LACK OF OIL, SPIRITS
NO PRECISE NAME, BUT REFERRED TO WITH PHRASES, E.G. <i>DAMU IMEPUNGUA</i> , <i>MATATIZO YA DAMU</i>	BLOOD HAS GONE DOWN, OR PROBLEMS WITH BLOOD	PALE, BREATHLESSNESS, QUICKLY BEATING HEART, TIREDNESS, NAUSEA, FEELING COLD, YELLOW HANDS,	PICA, NOT EATING GOOD FOOD, NOT EATING ENOUGH FOOD IN GENERAL

Awareness of anemia

Even if mothers knew about problems with blood, many mothers did not know of any women who were anemic; in more than a couple cases, women did not even know that they themselves had been diagnosed as anemic. I tried to find other informants via anemic women I had already spoken to, but rarely was this possible because no one knew of anyone else who had anemia. Four mothers told me that they did not know anyone who had ever had anemia. One mother knew of only one other woman with anemia. The traditional healers said they saw anemia very infrequently. Even the *daktari* in charge of

the cottage hospital at Micheweni told me that anemia during pregnancy was not a problem, only anemia in young children was.

This is in striking contrast with the perceptions of the prevalence of anemia of the two biomedically-trained doctors around Wete. Dr. Ali and Dr. Nyanga, (more on them in Chapters 5 and 6), felt very strongly that anemia during pregnancy was a real problem. Dr. Ali estimated that 70-75% of pregnant women have anemia. Dr. Nyanga thought that 6 or 7 out of 10 have anemia. These figures approach the prevalence of anemia that epidemiologists and nutritionists have found for Zanzibar. The prevalence of severe anemia (Hb < 70g/L) in pregnant women on Pemba was established at 20.2% (Stoltzfus et al. 2001: 7). Mild anemia (110g/L < Hb < 70 g/L) was established at 69.7% in pregnant women in urban Unguja (Matteelli et al. 1994: 475) and is thought to be as high as 72% in pregnant Pemban women (Stoltzfus in Herr 1999: 5).

Symptoms of anemias

As discussed in the introduction, one of the deceptive things about anemia is that someone who suffers from it remains asymptomatic until the anemia is very severe. So how did women know if they had it? As I mentioned above, many didn't, even when they had been diagnosed as such in their medical books. Many considered their "symptoms" as *ujumbe*, signs of pregnancy. Of the women who knew they had had anemia, most knew because the doctor had told them. They were not able to diagnose it themselves the first time they experienced the symptoms, but several said that they were able to recognize anemia when it reoccurred, especially if they felt cold. Others told me that they "just know it."

The women who were able to discuss the symptoms of anemia usually listed two or three of the following: dizziness, difficulty breathing, swelling of legs, easily tired, pale, yellow hands, white conjunctivae, feeling cold, and not having any strength. The extent to which anemia and pregnancy are linked is reflected in the comment one mother made that a sign of anemia is craving *kali* foods, because it indicates that someone is pregnant! Two women attributed their swollen faces to toothaches, and not as a possible signs of anemia, though they were both anemic.

Causes of anemia

Many women said that they did not know what caused anemia. Of those who did, the cause most frequently mentioned by mothers was insufficient food, "*ukosefu wa chakula*". Lack of food was by far the most important cause of anemia, especially

inadequate intake of what are considered “blood-giving foods,” like chicken, meat, milk, beans, spinach, and fish. Inadequate food was attributed to either *ujumbe* like nausea, vomiting, and breathlessness that caused the woman to not be able to eat, or, less frequently, by the inability to afford nutritious food. Another perceived cause is the consumption of *udongo* or *mcheli* which can in turn cause worm infestation or swelling. Other causes mentioned were too-short periods of time between births, and fever, but these were mentioned infrequently. The last commonly mentioned cause of anemias is *masbatani*, or spirits. They can cause anemia either directly by feeding on women’s blood or by secondary symptoms they cause in the woman, such as lack of appetite or increased menstrual flow. To understand how and why spirits cause anemia, it is first important to explain the state of a woman’s blood during pregnancy.

Table 2. *Explanatory Model of Anemia During Pregnancy*

Ujusi: *Blood during pregnancy*

Ujusi is a term that can refer to the blood of a pregnant woman, either the blood inside of a pregnant woman's body or her postpartum flow. *Ujusi* can also refer to the period of time, approximately forty days, after birth during which a woman must stay at home and follow certain customs. Not all women strictly adhere to the customs of *ujusi*, but the majority certainly did, and all mothers know about it. An old Swahili-English dictionary lists "the strong natural unpleasant smell of wild animals" as the second entry for *ujusi* (Johnson 1997: 492). Although no informants ever mentioned this second definition, I think this helps to understand *ujusi* for the smell of *ujusi* is an important component. The smells of *ujusi* can repel and attract spirits, depending on their type, and sometimes husbands cannot bear to be near the smell of their wives' *ujusi* in the eighth and ninth months of pregnancy.

Humoral beliefs about temperature of the kind so prevalent in India and Central and South America are not so predominant in Pemba, but actual heat is important during *ujusi* for several reasons, both physical and symbolic. After the heat from the exertion of labor had subsided, most women reported being cold after birth. (You will remember that women also felt cold during anemia. I suspect that the coldness felt during anemia is somehow related to the coldness felt after the loss of blood at birth.) "*Moto ni dawa ya wazazi*," one *mkunga* told me. "Heat is medicine for those who have given birth." After birth, women spend much of their time lying on a bed frame crisscrossed with copra rope. Underneath the bed there is often a charcoal fire burning. The heat from this fire is said to increase the flow of the blood. "Too powerful of fire is not good," I was told, because it can stimulate too much blood loss, which in turn causes anemia. When women lie face down on the bed, the heat draws the dirty blood out of her body, *inatoa damu*. She should stay in this position for about fourteen days. For the remainder of *ujusi*, she should sit over the heat, *kukausha damu*, to dry up the blood in the vaginal area.

The second action of the fire is the smells that it helps to cover/release.²² When women lie on or sit over the fire, blood sometimes can drip onto it. This is very

²² One of the things I found interesting was how recurrent the smells and tastes of things were, and how often they appeared differently to Pemban women than they did to me. *Udongo* didn't taste sour to me; I couldn't smell the alleged stench of *ujusi*. I began to worry; have I eliminated the sensual from my scholarship? "[M]ost anthropologists have followed Hegel's lead in separating the intelligible from the sensible... Like most writers, ethnographers tacitly conform to a set of conventions that colleagues use to judge a work" (Stoller 1989: 25). Pemba is a feast for the senses, and Swahili makes rich use of them. You can "see" shame, *kuona aibu*, you can "hear" thirst, *kusikia kiu*, and you can feel heat, *kujibisi joto*. By not further pursuing these perceptions, I have not engaged in "a fully sensuous scholarship" (Stoller 1997: 91).

malodorous, and the smell can travel a very long way. If sugar, *udi*, fragrant leaves like *mafusho*, or perfumed oils are added, the odor of *ujusi* is covered. “It cannot climb up,” I was told. “Sipandi ya juu.” It is important to conceal the smell of blood not only from the neighbors, but from spirits as well (see next section).

Whether they give birth at home or in the hospital, unless they have had a caesarean section or exceptionally heavy postpartum bleeding, most women have abdominal massages during the first seven days after birth by an *mkunga*. Typically, the massage is done with hot water and coconut oil. This too is done to help get rid of blood. If women aren’t massaged, the blood “that cannot be released turns to pus.”

Hot ginger tea is an important part of the *ujusi* diet. In addition to the warmth of the fire, the heat from the hot water and the spice from the ginger are additional warming agents. Vinegar is also important, and is liberally added to the woman’s portion of food. It helps to “clean dirt on the inside of stomach.” It also helps to heal the wound, *kidonda*, left where the placenta left when it detached. The *mganga*’s wife touched my calf and explained the wound to me, “It’s like if you cut your leg, the blood comes pouring from there.” During this time women also consume a lot of honey, which is seen as beneficial for the protein and energy it can provide.

During *ujusi*, women refrain from “blood-giving foods,” like octopus, chicken, beans, vegetables, spinach, cassava, and fish. They explained that because of their blood-generating properties, these foods could cause a dangerous overflowing of blood. Later on, after *ujusi*, women may try to eat extra octopus and squid, which are said to help to increase their production of milk.

I had anticipated that women might prefer a longer *ujusi*, to give them time to rest and relax before returning to their normal duties. However, everyone agreed that that it is better to have a short *ujusi*. “A long *ujusi* leads to dizziness and headaches.” “No one enjoys not being able to travel freely.”

“When the blood stops, *ujusi* stops.” The woman decides for herself when her period of *ujusi* is finished. The end of *ujusi* is marked by *kukoga arobaini*. Literally this means “to wash forty,” and refers to the ritual bathing that a woman does after approximately forty days, but it could be as short as 25, or as long as 45 days.

I regret this, but feel my writing is not austere. Looking over my writing, I see descriptions involving other senses, and feel that I have at least tried to write an ethnography “that describes with literary vividness the smells, tastes, and textures of the land, the people and the food” which is what Stoller calls engaging in “tasteful fieldwork” (Stoller 1989: 29).

SPIRITS

As I mentioned in the methodology section, people were reluctant to talk with me about spirits and the ailments they can cause (“Spirits? Never heard of them”). This can partially be explained by the fact that spirits are often considered outside of the dominant Islamic discourse (cf. Caplan 1997, Larsen 1998, Nisula 1999, O'Malley 2000). The *mganga* told me that divination like he does is *haramu*, forbidden, but “Everybody does it, even the *shebe*, (religious leaders). Especially the *shebel*!” Another reason for the reticence is that people think talk of spirits is unsophisticated or provincial. Hajji told me that in their effort to be modern, young people would not want discuss such things to me. Urban dwellers also made many a disparaging remark about the *washamba* who still believed in such nonsense. But once they did deign to talk about it, it was clear that everyone was quite familiar with spirits, at least what *others* believed about them.

Description of spirits

There are many general terms for spirits in in Swahili. The most common terms I heard used for spirits were *shatani*, *pepo*, *mdudu mbaya*, *jini*, and *ibilissi*. These terms seemed to be used interchangeably around Wete, though I believe the connotations change by geographic region and these names refer to different types of spirits elsewhere. When I asked Sabra to explain spirits to me, she told me about their origins.

We believe that God created *malaika*, angels, first. They worshipped God because he knew more than they did. Then god created the earth, and told the *malaika* that he would create a leader of the earth, whom they should bow down to. He created Adam out of soil. *Ibilissi* refused to bow down. When god asked him why they wouldn't, he said, 'Because I'm made of light, and you've created him from soil. I'm better.' God told him that if he didn't obey he would have to leave his house. So the *ibilissi* left, and promised that he would mislead all of Adam's children so that they would be with him in hell. Now, *ibilissi* enter into your brain and tell you to do bad things.

The *mganga* described their physical features by the glow of a smoking kerosene candle on one of my last nights in Pemba. They look like humans, he said, so they pass amongst us easily, but they have hooves for feet and long pointy teeth. Their fingers are fused together; only their thumb and pinky can be separated. Spirits are not a homogenous bunch; the *mganga* told me “*Kila shatani ana nimbo yake.*” “Each spirit has its own personality (lit. song)”. They have ethnic identities; they come from places like India, Somalia, Tanga, Maasai country, America, and Britain. You know if you have a

spirit because they climb into your head and tell you. When a spirit possesses you (*wanapandisha kichwani* or *kuchagawa*) you are able to speak their language.

Spirits *kunonya*, or suck, a person's blood, until that person is totally dry. This is how they become anemic. *Kunonya* is same action that babies do when they breastfeed. "Damu ni chakula chao," I was told again and again. "Blood is their food." I was told that because spirit possession is often a private illness, no one really knows who has it *upungufu wa damu* caused by spirits. One mganga who I spoke to indicated that he had already treated eight sufferers of spirit-caused *upungufu wa damu* this month. In addition to their common love of blood, all spirits share the capacity to ruin pregnancies, *kuharibu mimba*. They may also be responsible for *ujumbe mwizi*, which is an illness in which the mother loses consciousness during delivery. "It's caused by spirits," one mother said. A nurse who was present during the interview said, "Actually, it's caused by severe anemia." "The spirits' thirst for blood is an antithesis of good Muslims, for whom blood is forbidden (*baramu*)" (Caplan 1997: 183) .

In the discussion of the vulnerability of pregnant women, I came across something of an inconsistency. Everyone agreed that there are some spirits who like *ujusi* more than regular blood. Given their predilection for *ujusi*, and the general liminality of pregnancy, I would have thought that pregnant women were more vulnerable to *shatani*. Some agreed and said pregnant women *are* more vulnerable because spirits can notice the swelling of a pregnant woman's belly and smell their *ujusi*. Others said that pregnant women are not any more vulnerable to *masbatani* than the average person. I have a hunch that the people who told me pregnant women were not more vulnerable to spirits were trying to make clear that you need not be pregnant to get spirit-caused *upungufu wa damu*.

Types of spirits

Although there are some inheritable, benevolent spirits, generally, there is an antagonistic relationship between spirits and humans. The two most frequently mentioned types of spirits in our conversations about blood were *rubamba* and *rubani*. *Rubani* are Arab spirits, also known as *kiarabu*. One man explained, "When the Arabs came, they brought their spirits as guards, and when they left, the spirits stayed behind" (Zuckerman 2001). Usually they visit people at night, and cause one to dream about special things to wear, like jewelry or clothes. Those dreams may also reveal where you can find the things themselves or find money to buy the things they want you to wear. Other times they do "sexy things" at night. If they are male, they are jealous of other men, so they may cause a woman to not want to get married or they may cause

prolonged menstruation, “like a reminder to the woman of them.” This ensures that the woman will not be having sex with their husband. They may also stop a woman’s period altogether (so that she cannot become pregnant) or cause strong pains during menstruation. In men, they may cause impotence. They cannot be cast on someone by someone else. Most agreed that *rubani* like clean and beautiful things, and that they run away from the dirty smell of pregnancy blood, and leave the fetus and the mother alone. Others say they harm the baby, that “they make the baby leave in order to prevent the woman from getting *ujusi* at birth.” One of the women I spoke to, who I had included in my study because she had bought medicine for anemia at the OTC, had miscarried 12 times. “During the night I felt something miraculous. Someone came towards me and rubbed my stomach. Several days later, I get a miscarriage. It is the same thing every time.” She attributed this to *rubani*.

Rubamba are bad spirits who do much harm to people. They are Pemban by ethnicity, and are considered to be the most malevolent. They like dirtiness; they love to feast on *ujusi* and fetuses. They even eat dead bodies. They can smell the *ujusi* on a woman even before she gives birth. Witches, *uchawi*, can cast these upon someone.

In this chapter we have seen that women’s expectations of health and behavior are significantly different during pregnancy. Symptoms and sensations for which they would otherwise seek help are often ignored, and usually considered “normal” when pregnant. Why would this be? Do they simply not know that an unproblematic pregnancy is a possibility? I doubt this very much; there are women who have painless, healthy pregnancies and they are the envy of women who suffer through their own pregnancies. If men suffered from anemia during pregnancy, would it have different cultural meanings? Would it be emphasized as a “normal” part of their masculinity, or would it be a more clear health aberration, and medicine to treat it would be more available? Does the liminality of pregnancy explain their acceptance of precarious health? Their predisposition to spirits, their polluting blood, their unpleasant smells may remove them to a category where ill health is inevitable. Or have *ujumbe* symptoms been construed by health care workers, family, and neighbors, as “normal” to minimize the mother-to-be’s “dis-ease”? If people feel that there is no physical remedy to improve their health, adjusting the definition of health, i.e. reducing one’s expectations, can certainly ease a person and help them to regain a sense of homeostasis. Perceptions of health during pregnancy and beliefs about anemia are important determinants of care

women seek, and if they seek it, but so are political beliefs. Could political issues even shape the perceptions of health and illness? Would women look at their bodies differently if they had other (better) health care options or were in a different (less marginalized) political setting? These questions cannot be properly contemplated without further information about the political environment, which brings us to Chapter 5, *The Force of Medicines*.

5. THE FORCE OF MEDICINES: MEDICINES FOR BENEVOLENCE AND FOR PUNISHMENT

When I first met Dr. Ali, he was threatening to leave the island if the electrical blackouts continued. It was my third day on Pemba and Dr. Nyanga, the Minister of Health for Pemba was taking Sabra and I on a tour of the hospital when we bumped into him. They began commiserating about the electrical cuts. “It is impossible for me to work under these conditions,” he said, and I thought of the row of smudged kerosene lanterns I had seen in the operating theater of the maternity ward. “If things don’t change I will be forced to leave and go back to Zanzibar.” Conversation then turned to the last batch of expired medicine the hospital had received from Unguja. The situation here is so dire, I thought to myself.

Later that evening, after a series of social calls with Omar, we ran into Kibabu. He is the 35-year-old son of Mzee, the old man with whom I lived, and the husband of the first mother I interviewed. He was frantic; sweat beaded on his forehead despite the evening coolness. I asked him if his wife had gone into labor. She hadn’t. He began to explain to Omar in rapid-fire Swahili that he was desperate for a generator, and did Omar know anyone who had one? Her doctor was threatening to leave the island because electrical cuts kept interrupting the World Cup matches, and he was not going to miss Nigeria’s game. I was stunned. I was absolutely mistaken in surmising that the doctor was leaving because the electrical outages affected his patient care.

This chapter is not about the healing properties of medicine, but its’ political properties. On Pemba, they are perceived as symbols of the governments (dis)regard, and used as political weapons, both offensively and defensively. In this chapter, I begin by explaining the importance of shortages as a generative theme in Pemban life. I then discuss how the delivery of medicines is controlled and how shortages (whether real or perceived) of medical supplies (both medicines and staff), have come to symbolize the government’s manipulation and neglect of Pemba. I will then introduce Dr. Nyanga, the highest-ranking health bureaucrat on the island, as a microcosm of the government who is convinced the people of Pemba don’t want help. Finally, I will discuss some of the ways in which Pembans feel threatened by medicines and how they respond to these threats.

***KIVUNGE*: THE SIGN OF A DEFICIENT GOVERNMENT**

Shortages are a generative theme in Pemba; they affect everyone, not just those who want to watch cable TV. One of the first “Pemban” words I learned was *kivunge*, and I was always congratulated on my proficient Swahili when I used it. Literally, *kivunge* means small bunches, (*ki-* is a diminutive and *vunge* means bunch) and is used, for example, when someone buys small amounts of sugar or tea at the market. There is no good translation into English, but in French it translates easily, as *en detaille*. The second use of *kivunge* refers to shortages in supplies; electricity and water are most commonly referred to with this word, but petrol and medicines are as well.

Conversations usually include inquiries or predictions about *kivunge*, such as when the water will come back on, or if the electricity will be working that night. Shortages are numerous in type and frequency, and they surprise you in their far-reaching effects. They affect evening get-togethers; social calls are generally only made on nights when there is electricity. Sometimes there isn’t enough petrol, so *dala dalas*, local buses, can’t travel as expected. Sometimes there is no water to bathe the children. The scene with Kibabu is another such example; his wife had already borne three children and all of them had died within a week of birth. The night that I saw him, he was petrified that she would go into labor when Dr. Ali was in Unguja to watch the World Cup and they would lose yet another child. (Dr. Ali was in Pemba when the child was born, and it too died after four days.)

In one of the first conversations I had with Mzee after I had settled in, I was telling him how beautiful I thought Pemba was and how nice everyone was. He said, “No, Pemba is bad.” I was shocked. I didn’t understand if he was fishing for compliments, being humble, or truly believed it wasn’t good. I stood there for a while, then told him not to say such things, that Pemba was fantastic. Then I asked him why he said it. His grandson, who was putting eye drops in his eyes answered for him. “Here there is no electricity. What is life without electricity? Only Pemba has such problems.” I couldn’t really disagree with the latter; the only electrical shortage I experienced in Unguja was once, when the electricity hadn’t been paid for. I said, “That doesn’t mean that Pemba is bad.” And then in a whisper, “These *kivunge* just mean that the government isn’t working properly.” They giggled conspiratorially, appreciative of these sentiments, and both shook my hand.

CONTROL OVER DISTRIBUTION

Even as the government provides fewer medicines in the hospital, they have been sure to maintain a measure of control over the increasing amount of medicines circulating in the private sector.²³ Regular inspections of OTCs are one of the ways they do this. Another is the prevention of midwives from dispensing medicines. The government vetoed the UNDP proposal for traditional healers to distribute iron supplements, Mabendazole, condoms, and antimalarials.

The Tanzanian government remains in complete control of what the storage centers on each island receive. Typically, the Tanzanian government sends all of the medicines for Zanzibar to the main island. This is not always done in a timely or regular manner, and there are never enough.²⁴ I asked Dr. Nyanga when drugs were delivered he said he wasn't "exactly positive." I then asked if there was a regular supply. "Regular!" He exclaimed. "That word doesn't exist in our vocabulary." He went on, "If there is a project (such as the filariasis eradication sponsored by an NGO, or a study, such as the zinc project, conducted with the PHL) there are drugs, but if there is no research, there aren't any." I posed this same question again and again to all sorts of people regarding when a new supply of medicines could be expected. No one, not the manager of the storage area, not the head of the pharmacy, not the head of the Mother Child Health Unit in Zanzibar, knew what will come or when it will come. Everyone²⁵ is just grateful for whatever shows up (so long as they are not expired).

Once medicines do arrive on Unguja, they are shipped over to the storage center in Wete, and from there, distributed to the hospitals and the District Health Management Team who see that each of the PHCUs receive their fair share. To further complicate things, there are also smaller storage areas at the hospital in Chake Chake and Mkoani. The health care workers seem very concerned about the equal distribution of medicines to the different institutions once the medicines actually arrive on Pemba.²⁶ This concern for equality was the reason given for why the remaining 26 tins of ferrous had not been distributed: there was not enough for each PHCU to have one. I took it upon myself to

²³ Contrast this governmental control of medicines with Turshen's assertion that the government has given up a measure of independence for the health care system because of its external financing and management (Turshen 1984: 204).

²⁴ In 1981, a pharmaceutical plant began operation near the main hospital. Because of technical, financial, and administrative problems, it is no longer operational. But even when it was, the shortage of medicines was still severe (Nisula 1999: 200).

²⁵ It should be noted that one group that doesn't mind so much when the government has no medicines are the owners of the OTCs. Their business thrives on shortages.

facilitate the process. I split up the remaining tablets into equal portions, put them into baggies labeled with the name of the PHCU they were destined for, and sent them with friends to deliver.

There seemed to be a general confusion about how much ferrous was available and where. Dr. Sogora told me that there hadn't been any ferrous on Pemba for a month, but I saw that there were supplies. Bi. Sharifa told me, "Sure there is still plenty of ferrous at each PHCU on Pemba," when there wasn't. Even the dates of delivery are contested. After Bi. Mine was able to rouse her assistant from yet another mid-morning nap on top of the UNDP typewriter, she was able to tell me that the last ferrous delivery was on April 17, 2001. The records from the medical supply store at Wete say that there was some delivered as recently as May and June, 2002. It seems we can add bureaucratic organization to the list of shortages on Pemba.

SHORTAGES AS NEGLECT AND MALICE

During lunch of green bananas boiled in coconut milk at her house, Sabra said to me, "Sera, do you want to know why Pembans don't like the government? Because of what Nyanga and Dr. Ali were saying yesterday. They don't give us medicines or other medical equipment."²⁷ She went on, "Medicines are only supplied during the honeymoon period of the presidency, when the government needs some credit from the people, or when DANIDA or UNICEF remember us." She went on to discuss the state of the roads, the electricity, and the water.

I was given many examples of party politics spilling over into the world of health care. During an outbreak of cholera two years ago, Pembans from abroad, in Canada, Great Britain and Gulf countries, sent cholera medicine to CUF members in Pemba. The government confiscated some of the medicine, and refused to issue a permit for the medicine to be distributed legally. So CCM members distributed it secretly.

After the violence and murders on January 27th 2001, two 40-foot containers of aid were packed up and ready to be delivered to Pemba, pending the signature of the Director of Red Cross Tanzania. As he was also a CCM member running for Minister of Parliament, he refused, and the supplies languished. This is widely cited as proof that CCM punishes CUF (and by extension, the whole of Pemba) by blocking the passage of

²⁶ I'm not sure if was because of the stated importance of equal treatment for everyone, or simply my untrained eye, but I never saw any bribing while in the hospital or selling of government medicine.

medicines to Pemba. CCM hospital employees are also accused of refusing to treat the wounded from the January 27th incident.

In return, CUF has asked donor organizations to stop all non-humanitarian aid to Tanzania. Hajji explained to me that giving money to CCM is the same thing as squeezing CUF. “We are just a political party, CCM is the government. So CUF doesn’t get aid from outside, only CCM does.” For CCM members, CUF attempts to stop aid to Tanzania are proof that CUF “wants people here to die.”

The allegations that I had heard that the government held up medical supplies between the mainland and Unguja, and Unguja and Pemba were made more real by the UNFP cardboard boxes in the medical storage room stacked as tall as I am, brimming with tins of ferrous tablets. I estimated that there were at least 1200 tins, each containing 1000 tablets. Only they were of no use; they had all expired because they arrived on Pemba too late.

These charges were also confirmed by Dr. Nyanga’s complaints to Dr. Ali. In a subsequent meeting, I asked Dr. Nyanga about the expired drugs that they had recently received in Pemba. His answer made me realize why he had been given a political appointment when the hospital was so in need of well-trained medical staff: he skirted the issue *brilliantly*. After a lecture about the need to discuss matters carefully, not jumping to any conclusions, and being patient, he finished by saying, “that is an issue that we must sit down and talk about again and again.” And still I had no answer. Whether such delays are an intended slight, or a bureaucratic glitch, the perceptions that medicines are being purposely delayed or not delivered at all are very real.

In addition to a shortage of medicines, there is not enough competent staff. To Pemba, staffing shortages seem to have been exacerbated by CCM.²⁸ During the last campaign, CCM promised jobs to its party members. To fulfill the promise, room had to be made; many CUF affiliated hospital workers were fired, and replaced by CCM members. One of my informant’s sisters was a midwife at a PHCU, but was fired last year “for political reasons.” A very talented woman who had been a nurse coordinator, a midwife trainer, and worked closely with the German NGO, GTZ, had been demoted to a dispenser of medicines at one of the PHCU’s near my house. “Political issues caused me to drop,” she said.

²⁷ Note the title Sabra used before Dr. Ali, but none before Nyanga, who has the same qualifications. No one, except for me, referred to him as Dr. Nyanga when speaking about him; the title of respect was only used to his face.

People are wary of going to the hospital because of shortages and incompetence but also because of the alleged malice of the employees.²⁹ Hajji had spoken to three women on Pemba who had recently delivered, and whose babies died very soon after birth. Their deaths are attributed to mishandling during birth. He explained to me what happened with one woman.

I talked to her because she gave birth to a baby who died. She said she thought the doctor pulled the baby really hard. Before that, when she was in process [labor], the doctors, they are CCM's, and they didn't like her before. So they used that... It's amazing. They used that chance. She was trying to tell them she was hurt. That you do this and it's not good to me. And she was hurt and they didn't care of that, and the baby died. I talked to her and she is positive her baby died because of the way they tugged on the baby with such force. She said the reason why is because the *daktari* who were there were CCM and didn't like her.

These days, Hajji continued, "If you are going to give birth in Wete hospital, you have to talk to your relatives who work there or get in well with the doctors to avoid getting your child killed... Anything can happen." There are other frightening stories. Omar told me that he saw a dog carrying a human placenta in its mouth last year, "just thrown out for anything or anybody." Though I cannot vouch for their truth, the fact that these are oft-repeated anecdotes has made them an important part of the way both medicines, and political parties are perceived.

I asked several officials if there was a disparity between what was available on Unguja and what was available on Pemba, and was consistently told that everything was the same. Dr. Sogora, the head of the Mother Child Health Unit of the Ministry of Health was very specific, "Whatever is available on Unguja is available on Pemba." In my observations, this was not true. A very nice brochure explaining maternal anemia was available on Unguja, but no one in the hospital or MCH unit had seen it on Pemba. Bi Sharifa shrugged and said, "Maybe it is special for Unguja." I didn't know what to make of such a statement, so against the government's stated pledge of fairness, by a government official.

Yet Pemba was not always the one slighted. Ferrous folate was not available at Mnazi Mmoja, the main hospital in Unguja, when it still was available on Pemba (perhaps because it was prescribed so infrequently). Anecdotal stories such as those mentioned

²⁸ Even Dr. Nyanga's position as a bureaucrat and not as a doctor can be seen as a misappropriation of resources.

²⁹ Malicious nurses are not unique to Pemba. A popular song during my fieldwork was "*Wanguzi*," or "Nurses." During the song, they offer hilarious advice about how to avoid cruel nurses. One verse

above are not the only indication of different treatment on the islands. Health statistics also speak to disparity. For example, the maternal mortality rate is higher on Pemba than on Unguja. The current value is 367/100,000 for Unguja, and 406/100,000 for Pemba (Zanzibar 2002: 90). Of the 49 maternal deaths between June 1, 1998 and September 30, 1998, all but two died from inadequate care in the hospital (Lees-Mlangu 1998: 9).

GOVERNMENTAL MEDICAL AUTHORITY: DR. NYANGA

Dr. Nyanga is Napoleonic in stature and persona. He was born in Pemba, but is living there now only because of a presidential appointment to the position of Minister of Health on the island. “In recognition of my many achievements” he explained. He had been trained as a medical doctor in Europe, and practiced in both Germany and the United States. He is African, imperceptibly Muslim, extremely Europhilic and, of course, a CCM member. He can be a likeable, funny, charming man, and he was very generous with his time and took many hours to explain what he called “the situation” in Pemba to me.

In our first meeting he assured me that all medicines in the hospital were free, treatment was free, that food there was free, and that “all that people had to do was show up at the hospital. We take care of them from there.” I began to worry there would be no anemia for me to research. What he didn’t tell me was that medicines are free as long as they are in stock, that “food” consists of a hunk of dry white bread and sweet tea, that it is often very expensive to get to the main hospital in the first place, and that once you are there, the care you received is incompetent. Later, he confided in me that working at a hospital in Pemba was very difficult and very frustrating, compared to working at a hospital in the USA or Europe. “To be quite honest, there is never enough of anything here to do your work properly,” he said. There was no mention of how the shortages of supplies impacted the patients and their cared.

One day he took me to visit one of the cottage hospitals so we could observe how anemic women there were faring. The journey taught me more about medicine than the visit to the hospital itself did, for that is when he let loose with his opinions about the causes of “the conditions” here. He characterized Pembans as perpetrators of those circumstances, “lazy, resigned to their miserable lives.”

recommends that if you have a tooth that needs removed, it is better to get into a fight than it is to go to a nurse to have it removed; the man with whom you fight will be gentler than the nurse.

As we were driving, he explained the Pemban work ethic. “They don’t work hard here! Look!” He pointed to the fields. “Do you see anyone there?” I pointed out that it was 2 PM, the hottest part of the day. “Then they should get up at 4AM to work, then rest in the afternoon. But here at 4AM they are still making love in bed, not working.” I didn’t feel I could point out that it was pitch dark at 4 AM. “But no, they simply don’t get up! Why? Making love, that’s their hobby.” (I had to think of Nancy Scheper-Hughes writing about the joys of sex in the *favela*.)

He turned his attentions to pregnancy. “They don’t know anything about pregnancy, they can’t even tell you when they were last pregnant.” I thought of the rounds I had made with him in the maternity ward, and all the answers he asked women about their reproductive history that they couldn’t or didn’t want to answer as he jerked on their cheeks to inspect their conjunctivae. “Frequent pregnancies, it’s suicide, actually.”

He returned to the work ethic. “They really should be cultivating. We have fish, we have beans, but it is such a job to convince our people to work, that poverty is not the will of god. I mean, to be perfectly honest, I love gardening, but I simply don’t have the time. I’m not happy about the attitude of my people.” He thrust his finger out of the Land Cruiser, and pointed to a mud brick hut with a thatched roof, a typical home on Pemba. “Look at this house, it’s not fit for a car, let alone a human being!” He shook his head. “But they simply say that it [their conditions of existence] is the will of god. So stupid, must be very stupid.” Regretfully, he added, “Sometimes we Zanzibaris need to work harder.”

Dr. Nyanga is a microcosm of the government. He poses as a hard-working and benevolent civil servant, concerned about his people, in the same way the government often masquerades as generous, offering “free” health care and education, and subscribing to socialist ideals. Yet at the same time, they both perpetuate animosity and protect their own interests. Any culpability he takes or puts on the government is insincere; throwing around buzzwords like “transparency” and “shareholders” was more a habit to impress donors than an indication of his commitment to improve health.

For example, he says he would like to help the “underknwledged and undernourished” people of Pemba, but I don’t believe he is sincere. Reduction of anemia in women and children is one of the ten priorities on the five-year plan of the Ministry of Health (Stoltzfus et al. 2001: 9), but I do not seem him applying himself to solving this or any of the myriad of problems around him. He also fails to question problematic

government policy about such things like the supply of medicine. Instead he works only in the mornings and flies to Unguja every third day. Because medicine is so powerful therapeutically and symbolically, he could use his position to revive the shreds of amity that still remain. Instead he lets medicines remain a source of animosity, vaguely commiserates with the staff and hops back into his chauffeured UN vehicle. After some time, it became clear that he holds “his people” fully responsible for their “appalling conditions” and doesn’t intend to do much to rectify it.

NON-COMPLIANCE AS POLITICS

During another visit with Dr. Nyanga, the conversation turned to the political climate of medicine use. The following quotations are a synopsis of the discussion about why people aren’t using the drugs that are provided for them; he feels “his people” need help, but accuses them of not accepting any.

After the political changes, [an allusion to the elections] people were nervous about using certain drugs. There have been some misbeliefs in medicine provided by the hospital. There are particular Pemban particularities, misleading campaigns carried out by malicious political leader to disrupt the policies of the Ministry of Health. It isn’t politics in the right sense of the word. The opposition is strong here. It’s supposed to be constructive, but it isn’t. Some completely refuse to accept them. The failure of compliance with taking the drugs that are distributed to combat X,Y, and Z is their [the opposition party’s] fault. These [messages] are engineered by ill-willed population, while the government is trying to marshal support. The political climate was heavily polluted.

He then turned the issue into a racial one:

The poor Arabs here on the island still believe an Arab sultan will one day come back and rule the islands. Relations with Arab communities in Oman and Saudia have influenced them to sow seeds of hostility here in our community. A number of people are not clever enough to see it. They [CUF] were saying that the cholera and polio vaccines were not pure, not holy, that Muslims are not supposed to take them.

He concluded by shaking his head sadly and yet knowingly, standing up and saying, “We need continuing education to raise awareness of our people.” The meeting was over.

Near the end of my stay, Omar shared with me his skepticism about the drugs that were being distributed for free. He saw merit in CUF’s message, “If they really are medicines that are good for us, they must be expensive. Why is something of value suddenly being given away for free?” What Nyanga saw as a lack of gratitude and

unwillingness to be helped, (“They simply think that anything that is free is worthless”) Omar saw as a healthy dose of skepticism in the light of a whole lot of animosity.³⁰

The Tanzanian government is not the only provider of medicines that Pembans are skeptical of. Some villagers felt that filariasis tablets distributed last year had many side effects, including reducing the sexual ability of men (Khalfan 2002). They believe that the supplements were intended to reduce their fertility rate because donor countries “are always complaining about overpopulation.” They reasoned that the countries’ solution to this burden was the reduction of their fertility.

In his study of health care in Zanzibar Town, Tapio Nisula writes, “The everyday distrust of suffering Zanzibaris is in striking contrast to the government objective to bring biomedical health services within reach of the entire population... It seems that it is the question of medicines, and especially shortage of pharmaceuticals in the government institutions, that is the central one in order to grasp the present state of health care and the sufferers’ expectations for care in Zanzibar” (1999: 208). If possible, this is even more true in Pemba.

In this chapter, I have addressed some of the questions posed by Baer, Singer and Johnson in their powerful introductory article to critical medical anthropology. They ask: Who has the power over the agencies of biomedicine? How and in what form is this power delegated? How is power expressed in the social relations within the health care delivery system? (Baer et al. 1986). The government, and by extension, the ruling party, CCM, has the power over biomedicine. They exercise this power through the distribution (or not) of drugs and other medical supplies. This power is also delegated to other party members, in the form of jobs and political appointments, and taken away from opposition members also through the loss of jobs and health care resources. Social relations within the health care system are marked by feigned deference and concealed disgust for officials like Nyanga, and anxiety over treatment by lower-ranking health care workers in the hospitals.

Answering such questions helps to clarify the metaphorical role that medicine plays in the daily life of Pembans: medicine is a metonym for government, and a rather oppressive, manipulative one at that. The symbolic nature of government-sponsored medicines must be considered as we move to the treatment choices women face when anemic.

³⁰ For an interesting discussion of non-compliant patients as deviant, see (Lerner 1997).

6. TREATMENT CHOICES: OF ANEMIA AND OF WOMEN

Pemba is thick with choices for care of anemia during pregnancy, but how do women recognize they are anemic in the first place? A health care worker at a hospital could diagnose the mother based on either a hemoglobin test that they ordered or her physical appearance and reported symptoms. Wete hospital has a laboratory in which blood and other samples can be analyzed (if there are reagents in stock), but all of the patients that I met were sent to the one private dispensary in Wete, where blotter paper tests cost between 200 and 500 TSH, or 0.20 to 0.50 USD. Even if their conjunctivae were as white as the *kanzu* men wore to the mosque on Fridays, the nurses would still sometimes send them for tests at the dispensary. I wondered if these weren't an unnecessary expense, diagnosing the obvious, but perhaps they were tests to determine the underlying cause of the anemia, such as malaria or intestinal worms. Alternatively, women can decide for themselves to get the hemoglobin levels of their blood tested. They could visit a traditional healer, either a *chomme* maker or an *mganga*. They can self-diagnose, without getting any tests, and buy the medicine themselves. Though I met only one woman who had done this, (she came to Chasasa OTC to purchase ferrous sulphate tablets), I would posit that there are other such cases. A final way of being diagnosed is going to an OTC and the *daktari* there could diagnose them as anemic by looking at them, especially the tissue around the conjunctivae, the tongue, and the palms of the hands. If these areas are very white, it is a very good indication of anemia.

Those are the possibilities; the manners of being diagnosed have structured this chapter. I first discuss care in a biomedical setting, then care with "traditional" medicines, and lastly, treatment of anemia at OTC's. This chapter also describes what each specific care entails, where it falls short, how women are treated when seeking treatment, and how sometimes it isn't sufficient from an etic point of view. Women's motivations for treatment are discussed, as are their impressions of care choices, an emic description. This is the chapter that best fits with under the heading "medical technology" on my opening diagram.

BIOMEDICAL CARE ON PEMBA

General information about iron supplementation

When anemia cannot be prevented by eating more food with greater amounts of bioavailable iron and by controlling infections that contribute to iron losses from the body, then supplementation becomes the most reasonable way of treating anemia. It has been shown in countless studies that iron supplements can be of use to help meet the particularly high demands for iron that pregnancy makes on a woman's body, especially a body that is already struggling against malaria, geohelminths, and low-grade anemia (Beard 2000, Bothwell 2000, Lapidó 2000).

These days, when Pembran women receive iron supplements, they get them in tablet form. These pills, usually referred to simply as "ferrous" actually contain ferrous sulphate and folate. Ferrous is the active ingredient, iron, and sulphate is the binder or the carrier for the ferrous. Folate is a nutrient important for the production of DNA and for the prevention of non-iron deficient anemia. Another name for ferrous tablets is *tonic ya vidonge*, tonic pills, or simply *tonic*. When ferrous was first available in Pemba, it came only in syrup form, and was called *tonic*. The term *tonic* used today is a vestige of that time. A third name for ferrous pills is *babamia*, which, I'm told, comes from Arabic. Ferrous syrup, *tonic ya maji*, is still available on Pemba, but it is much more expensive than tablets are. The benefit is that it is considered faster acting.

If none of these supplementary tactics are successful, the most extreme treatment is a blood transfusion. In addition to the risks involved of contagious blood-borne diseases, it is also just very difficult to find donors who are not anemic themselves. I was told that for every one person who is able to donate blood on Pemba, three or four come to the hospital to have their blood tested, and are turned away because of too low of hemoglobin.

Wete Hospital

At Wete Hospital, ANC days are held twice a week. On the other days, a gynecological clinic is held. The roughly 30 women who attend are typically given a worn cardboard number and are told to wait on one of the four or five wooden benches in the waiting room until it is their turn to be interviewed by one of the nurses. Each woman comes with either a *buku*, a thin stack of newsprint-quality stapled together, or a *kardi ya*

kliniki,³¹ or clinic card, an antenatal checkup card (see Appendix A). The *buku* is 50 TSH, or about .05 USD, while the *kardi ya kliniki* is .50 USD. Though ten times as expensive as the *buku*, the *kardi ya kliniki* is of high quality card, preprinted with spaces to fill out all of the important information about a woman and her unborn baby's health. I believe it insures a more thorough examination than an interview with only the blank pages of the *buku* for guidance. An additional disadvantage to the *bukus* is that nurses and patients have a tendency to tear pages from the book to send a message, to wrap medicine in, to wipe up spilled tea, and so forth. The fact that most women had either a *buku* or a *kardi ya kliniki* with them when they came to the hospital was a side benefit. It meant that Biubwa and I were often privy to much of their medical history.

Generally, two nurses sit at a table in a room just off the waiting room, each interviewing a patient. Anyone can sit on a bench just behind the desk, in earshot of the interviews. On top of the desk is often *udi*, incense, or small fried cassava chips that the nurses sell on the side. The nurses are responsible for getting the woman's medical history, determining the woman's reason for coming to the clinic, and deciding if she needs any diagnostic tests prior to seeing the doctor or if she even needs to see the doctor at all.

When I sat at the desk with the nurses, this interview typically began with an unenthusiastic, "Shida yako?" "Your problem?" The nurses did not make eye contact with the patients; they were either busy writing notes (in English) about the patient or staring apathetically out the window. The patients also avoided eye contact, but for reasons other than boredom. I attribute it to self-consciousness and embarrassment while discussing their intimate matters. For the most part, they answered the nurses' questions briefly, in low voices, all the while staring at the dirty cement floor or toying with a handkerchief. I asked the nurses if the women were afraid to explain their problems when they came to the clinic. She said that they weren't. Then, after a particularly taciturn mother-to-be, I asked again. The nurse said, "Ni tabia zetu." "It's just our habit. (That's just the way we speak.)" Our habit, meaning Pemban women's? Or the nurses? Is that how she would behave in an interview? Did this mean she could understand the woman's problems without them being made explicit? Did she no longer have expectations of a well-communicated interview? Did she not see this as a problem?

³¹ Interestingly enough, the space for the mother's profession, *kazi ya mama*, must always be filled in as housewife, even if she is employed outside of the house. No one could tell me why; that was "just how the government said to do it."

Health Education

At the beginning of each weekday morning, there is a 15-minute Health Education talk at Wete Hospital. The women who are at the clinic sit on long benches and listen to a talk by a man who introduced himself to me as “Comrade Abraham Omar Ali, Nursing Officer and Motivator of Reproductive Health for the District Task Force.” Talks are given on subjects like family planning, pregnancy, nutrition, vaccination, diarrhea, AIDS and other sexually transmitted diseases, a different one each day.

Comrade Abraham was an engaging speaker during the Health Education talk that I observed about anemia (my request). He began by asking the crowd if anyone knew what *safura* was. Painful silence. Finally, one woman very reluctantly responded that it was *upungufu wa damu*. He moved on with the causes of anemia, which he reported as not enough food, the fetus needing additional blood, peptic ulcers, hemorrhoids, and hookworm. He then explained that the treatment for *upungufu wa damu* was tonic. After he had finished, Biubwa asked him (reminded him) if he could also explain what the symptoms were, which he did: breathlessness, weakness, swollen feet, dizziness and strange heartbeat. A pregnant woman volunteered that turning white “like paper” was also a sign. He agreed.

Although his presentation was of noble intentions, he made some serious errors. He neglected to discuss malaria as a contributing factor, while some of the causes he did mention were pretty tangential. He forgot to discuss any of the symptoms, and when prompted, he did discuss the symptoms, but left out the most salient sign of anemia: paleness. Because women attend so few of these health education talks, they are too precious for such mistakes to be made.

Dr. Ali

Tuesday and Friday mornings, the UN Land Cruiser ambulance picks up Dr. Ali at his home and brings him to the hospital. Dr. Ali is a Nigerian UNDP doctor, and he does not want to wait around to start work. Dr. Ali is a very knowledgeable doctor with noble intentions. He has lots of experience, such that he can divine a lot from the little information that women share with him. His care could be improved if he was told more about the woman, and he could adapt his approach in ways that would make this easier. Women would receive better care if they could tell him more about their problems, but many either do not know how to or are unwilling to do so.

He takes his seat and immediately signals for a pre-interviewed woman to be brought into his office, a room curtained off from the waiting room. He sits at a desk with a nurse at his side. She is responsible for writing down the names and diagnoses of the women who attend the clinic in an enormous record keeping book and pouring water from a jug on to Dr. Ali's hands when he washes them at the sink after examining patients, as the running water does not work. When a patient enters, she sits between Dr. Ali and the nurse.

Because he is a man, in a position of authority, and a foreigner, even the nurses who interview women when they first come to the ANC are more approachable than Dr. Ali is. He has worked in Tanzania for almost a decade, so he speaks Swahili well enough for communication with the women, though he complains about *their* conversation skills. "These poor women, they even have problems with language." I can understand why women are so reticent when talking with such a *kali* man about their private parts when they are not used to speaking up to men whatsoever. I can also understand Dr. Ali's frustration with women who cannot announce and present their problems clearly. Is it fair to say that if he really cared about their health he would learn how to ask and listen?

He is also quite impatient. If the pre-interview is done badly, he slams the *buku* or *kardi ya kliniki* on the table and flops back into his chair, exasperated. Such outbursts have caused all of us in the room to flinch. When women are slow to answer his questions, he may slap the desktop, "Chop, chop!" or "*Haraka, haraka!*" Literally, *haraka* means fast, but "*Haraka haraka*" in this context can better be translated as "Spit it out!"

Sometimes he does physical examinations in the course of the interviews, either pelvic exams or abdominal palpations, to check the progress of the baby. An anxious husband swiped back the curtain one morning. Another time, a woman called her husband in from the waiting room so that he could witness the pelvic exam. Dr. Ali sent them both out immediately, "This is not Saudi Arabia!"³²

Though he was impatient with his inarticulate patients and bumbling nurses, he says he takes health very seriously. "No room for mistakes! Soft doctors make bad doctors." He took a lot of time to explain his work to me, like how he would write prescriptions for vitamin pills if women insisted they needed medicines, rather than antibiotics as some *daktari* did, or how prone to urinary tract infections pregnant women

³² A funny thing about Dr. Ali is that many mistakenly call him Dr. Alex. I did too, until he barked at me, "My name is not Dr. Alex! It's Ali, Dr. A-*li*." My theory is that because Ali is a Muslim name and he does not seem very Muslim, Pembans have changed his name to suit his "Christian" attitude. But I did not have the guts to ask him what his religion was.

were. He laughed at his patients, but he was also compassionate; he gave medicines from his own supply to women he thought would not be able to buy them. Though he was disparaging about them, he seemed like he admired the strength of these women, “If I had this Hb, I’d be dead.”

If their problems are critical, women are admitted to the Maternity Ward at the hospital, a rather grim place. There are about ten beds in the dimly lit ward. Most of the bed sheets are bloodstained, the walls are peeling, and the cement floor is filthy, from tea dregs and sputum. The smell of urine is dense in the farthest corners. The operating theater, where women gave birth and caesarian sections are performed was even less appealing. I only went into the theater for one procedure, and it turned out to be the most embarrassing moment of my research. I was holding the hand of a woman while her infected stitches were being cleaned. Dr. Ali told the nurses to squeeze the area where the stitches were, the mother screamed, pus oozed, my face flushed white hot, and I collapsed. I was a bit more coddled after that; I was permitted to see only young, healthy genitalia.

ANC's at PHCU's

It is common knowledge that PHCUs have distinctly fewer resources than hospitals do (Herr 1998, Lees-Mlanga 1998, Zanzibar 2002, Zanzibar and UNICEF 2001). Health aides, who have only two years of training, are mostly responsible for running them. First aid treatment, vaccinations, and prenatal examinations are the most common procedures. Pregnant women with warning signs are referred to the hospital (though this does not mean they go). Blood can sometimes be tested at them, but not urine or stool. Health education sessions are more sporadic, equipment is minimal, and there is never enough medicine.

I did most of my PHCU observations in the village of Konde. It is rural, but because it is located at a major junction for *dala dalas*, it has more supplies, and more patients, than the average PHCU. Dr. Ali visits even there once every second Wednesday to see the patients with the most complicated problems. Despite these relatively strategic location, there was little the PHCU could offer pregnant women in the way of care.

WOMEN'S EXPERIENCES WITH ANC

Every woman with whom I spoke had visited the ANC clinic several times during each pregnancy. Pemban-wide 90% of women receive prenatal care (Garssen

1993b). But what happens when they are there? The timing and motivation of their visits, and what they said and were told once they were there is the focus of this section.

Permission

I had suspected that husbands might prevent women from leaving the house to seek treatment. For example, I had read that in Unguja, “Women complained about their husbands’ forbidding them to leave the house... Men were often said to refuse permission for their wives because they were suspicious of their spouses straying.” (O'Malley 2000: 177) In Pemba, husbands are said to be much more strict than they are in Unguja, so I was convinced this would be likely. At the outset, I thought I was wrong. All women but one needed permission from her husband to go to the clinic or hospital, but I did not speak to or even hear of any woman who was prevented from going.

When I questioned one of the nursing officials, she told me that husbands denying permission was the case “only a long time ago.” This was the same lady who told me women do not refrain from eating for fear of a fat baby, and that spirit-caused anemia is only superstitions of *washamba*. So, this actually made me think that perhaps it was more of a problem than I was led to believe. In her study of maternal mortality in Zanzibar, Lees-Mlenga indicated that men were often a dominant force in the health decision-making process. “Women rarely make the decision to go to hospital, and this is a reflection of their lack of status” (1998: 7). Furthermore, she found that women are often unsupported by their men when they are ill during pregnancy. Despite not having heard of any such incidences, I can imagine that husband’s attitudes may have prevented women from attending the clinic.

Motivations for clinic visits

The government encourages women to attend the ANC clinic by the third month of pregnancy. Most women in town went by their fifth or sixth month. The health aide in Konde told me that most women there attended in their seventh month of pregnancy.

One of the questions I asked was if women went to the clinic “even if you weren’t sick.” Many of them said that they had gone because they were pregnant and they were supposed to, and not because they were sick. But when I compared their first visit to the timing of the things they had told me they were suffering from, I realized they overlapped. They were suffering from some painful conditions, but stated they were not having any problems. I inquired again and again if it was acceptable to complain during pregnancy; I thought that perhaps women were bearing their ills stoically. Yet all women

said that it was acceptable to complain, even though so few of them had. It seems they attributed symptoms like dizziness, nausea, fatigue, swollen ankles and a racing heart to *ujumbe*, the signs of pregnancy. This was further confirmed when they told me that they would have gone to the doctor earlier if they had not been pregnant.

Other women went to the clinic because of a particularly painful condition, like a urinary tract infection, and not because they were pregnant. Three of the women I spoke with were diagnosed as anemic in the course of seeking treatment for other symptoms, such as badly swollen legs or pain during urination.

The consequences of considering potentially pathological signs as (harmless) *ujumbe* were even farther reaching. When they were at the clinic, they did not feel it important to report these problems to the doctor, such that when I asked if they had told all of their symptoms to the *daktari*, and they said they had they actually hadn't. By not telling all of their symptoms they made the diagnosis harder for the doctors, and the cycle of silently pathological pregnancies was perpetuated.

Aweina, a confident, well-spoken woman who normally lives in Dar es Salaam, and is one of the ladies I ate with across the street, is an example of a woman who did not communicate her problems. Anwar, her son, fell off the *baraza*. I went with Aweina to the hospital to get him X-rayed. On the way, I persuaded her to get her Hb tested. I got mine done too: she had 8.5 g/dl, I had 12.5 g/dl . Since we were at the hospital, she decided to stop in at the ANC clinic (which I had been bugging her to do for a few weeks) and I took Anwar to the X-ray area. She was soon back from the ANC. The nurse had asked her if she had any problems, and Aweina told her that she didn't. So the nurse said it was better if she came back on a less busy day when Dr. Ali wasn't there. We sat in silence for a while, while the *daktari* finished someone else's X-ray. Aweina suddenly blurted out, "If my blood is enough, why do I still have problems like dizziness and weakness?"

I looked at her in amazement. I asked her why she didn't tell the nurse that she had these problems with dizziness and weakness. She laughed. "Oh Sera, you just don't say them like that. And anyway, they don't care about pregnant women here."

Prescribing ferrous

The UN office and the MCH office of the government concurred that health care workers had been trained on how to treat anemia. However, there were a number of errors that I happened upon, without even purposely seeking them out.

The most recurrent advice nurses gave for both preventing and curing anemia was to eat *chakula bora*, a well-balanced diet. Such advice was familiar enough to women that they did not need to wait in line at the clinic to hear it. And anyway, encouragement to eat nutritional food does not solve the problems of women unable to eat because of nausea or poverty. It seems that nutritional advice has become a panacea. Nurses dispensed nutritional advice even when a woman's hemoglobin was dangerously low. According to the *kardi ya kliniki*, if a woman's Hb is below 60% she must be brought to the hospital.³³ Yet women who had Hb levels at or below 60% and even 50% were advised "to eat nutritious food" and were not offered any ferrous sulphate, even when the clinic had it available in stock.

Nurses used vastly different and sometimes very erroneous "standard" hemoglobin levels to determine anemia.³⁴ One told me that if the patient's Hb is below 50%, they should receive one tablet per day. Another said that if blood is at 5.2 g/dl they should be admitted to the hospital, but as soon as it is at 5.3 g/dl they can go back home. Another nurse told me that 5.0 g/dl is the intervention point for transfusion if women have already given birth, and 6.0g/dl is the cutoff if they haven't. The Motivator told me that women receive two tabs of ferrous folate per day if their Hb levels are between 50% and 70%, and one per day if Hb levels are between 70% and 80%.

Once they had determined a woman was anemic, they sometimes neglected to tell her that she had anemia, even after they had written the diagnosis on her card.

Even when told they were anemic, women were sometimes not written a prescription³⁵ for tonic. (The *kardi ya kliniki* are particularly handy here, because there is a designated area devoted completely to ferrous being prescribed.) At Jadida PHCU, where there hadn't been any ferrous for a long time, workers seemed to have given up on advising women to buy ferrous, because "no one has money to do so." The only thing they told anemic women was to eat nutritional food. I know at least one anemic woman who went to Jadida and could have afforded ferrous, but simply was not told to purchase

³³ Sometimes women's Hb levels were given in percentages, other times in grams per deciliter. An Hb of 60% is approximately 8.5g/dl. For comparison, WHO defines Hb blood levels in pregnant women < 11g/dl as anemic (Eddleston and Peirini 1999) Severe anemia is defined as (Hb) < 70 g/L (Stoltzfus et al. 2001).

³⁴ Measured hemoglobin levels can be misleading, and have a certain margin of error. For example, if someone is very dehydrated, his or her blood can seem very dense in hemoglobin. The range of what is normal varies by age, sex, pregnancy state, genetic, and environmental factors (Eddleston and Peirini 1999). The *kardi ya kliniki* cite an Hb of 60% (approximately 8.5 g/dl) as a dangerous level of anemia.

³⁵ Writing a prescription sounds more involved than it is. It entails nothing else than writing down the medicine that a woman should buy in her book or on her card.

any. Even when it was prescribed, women did not always know that it had been and did walk down the hallway to the dispensary to get the free medicine.

There are other problems with getting ferrous from the hospital, even when it is available in the dispensary or even right on top of the nurses' desk. One woman went to dispensary in Wete to get ferrous, was told there wasn't any, when in actuality there was. Another woman was admitted to the maternity ward with a range of medical problems, including anemia. During our interview, the nurse administered her medicines, but ferrous sulphate was not among them. Even the mother stated that she was surprised she had not been given it (she had used it before and knew it was for anemia). When I asked the nurse why, she told me she had forgotten and brought it to her directly. Later, I asked the pregnant woman why she hadn't asked for it, she shrugged her shoulders and said that she thought the workers here knew best. In a second maternity ward case, a woman had been prescribed ferrous because she had lost a lot of blood after the birth of her first child. She waited for the doctor to come by to give it to her, but he was in surgery for a long time. Finally the nurse just discharged her and told her to go home. She left without ferrous.

When ferrous was prescribed, it was sometimes prescribed incorrectly. Previously, ferrous was a separate tablet from folic, but now they often are combined in one tablet. This change has not been recognized by everyone, so sometimes a woman was misprescribed ferrous; she was given tablets that contained both ferrous sulphate and folic acid together in one pill and then an additional dose of folate. I am not sure that an extra tablet of folate is extremely dangerous, but it does point to another misguided health care worker's prescribing practices.

Additionally, when women were given ferrous, they were not told what it was for. Dr. Sogora, the head of MCH for all of Zanzibar, told me that all women get health talks, thus they know what ferrous is for. This is not necessarily true. Perhaps some do, but exceptional was the woman who was properly instructed in the use and the purpose of the medicine. One woman, who was diagnosed as anemic when she went to the clinic for a urinary tract infection thought that tonic she was given was to cleanse her urine. Later she told me it was for blood pressure.

Finally, if nurses did tell the woman that she was anemic, reminded her to get tonic, and explained what tonic was for, they did not always explain how it should be taken. This is not the most crucial concern, but it is worrisome because certain foods can decrease the absorption of iron. When women were given the specifications, they seemed

to retain them. One woman living in Konde told me how several years ago an English midwife gave her tonic and instructed her not to take it with tea but with *uji*, porridge. She remembered the advice to this day.

Some of the problems with anemia diagnosis and treatment were exemplified in the case of one woman I interviewed. The nurse sent her over to talk to me, as I had asked them to keep an eye out for anemic women. She had an Hb of 63%. Though they had identified her as anemic, they did not inform her that she was, nor did they prescribe any medicine for her whatsoever, or even tell her to eat nutritious food, but had only told her to return in a month.

Dr. Ali says he recommends ferrous to 90% of women. He thinks that receiving medicine encourages women to come to the clinic. Moreover, he believes that the use of ferrous truly benefits them. Because of it, he has noticed a greatly reduced number of hemorrhaging cases. In addition to ferrous, he also dispenses nutritional advice. He told me that he tells all pregnant women to eat one egg per day (even though I never heard him say this in any of the interviews I sat in on). I asked if women did not have difficulties affording eggs (they cost about 100 TSH or 0.10 USD). He told me that if a doctor tells them to do it, then they would do so. This was perhaps the only instance he showed confidence in women's ability to comply.

Impressions of tonic

Women were not hesitant to use hospital medicines during pregnancy, so long as a *daktari*³⁶ had advised them to do so. The hospital medicines that the women with whom I spoke had used included Chloroquine, Dopamet, Voltarin, Phenegan, Aprinox, ferrous sulphate, folate, Stomatil, vitamin B12, and intravenous drips. Tetracycline and Chloroquine were the drugs most commonly cited as ones to avoid, though some women who had malaria were prescribed, and used, Chloroquine. Aspirin was a distant second as medicine to avoid during pregnancy. Another woman said, "Anything besides Panadol, go to a doctor." None of the pregnant women I spoke with acknowledged having heard any stories about purposefully malicious campaigns of certain medicines, although I found out that these were indeed factors in women's unwillingness to take certain drugs.

³⁶ Because the advice of a *daktari* could come from an OTC employee, this section is also relevant to the passage below, about care at an OTC.

With such an outlook on hospital medicines, women easily accepted advice to use tonic during pregnancy. I was pleasantly surprised by how many women thought favorably of it. “It helped my swollen feet and my breathing.” “I felt better after two weeks.” “It helps the blood.” One woman’s neighbor had used tonic from hospital when she had anemia, and seen improvements in her health, so she too said she would be happy to use it. Another woman said she liked it, although she didn’t know what it was for, “But my hands weren’t yellow anymore, and my eyes weren’t so white.” Another woman said, “Ferrous helps me...I couldn’t eat, and the red ones, they help me to eat.” The woman who diagnosed herself as needing ferrous told me that she feels more energy after a month of use (she bought 20). Even women who had not used it knew what it was for. “*Inasaidia damu*,” it helps the blood, and “*Inaongeza damu*,” it increases, or adds to the blood, were common responses.

The nurse at Konde told me the only complaint women had about tonic was that there was none. “If they didn’t believe in the effectiveness of tonic, they wouldn’t ask for it,” she told me. Only one woman reported using ferrous without a marked improvement in her health, and she had *baridi yabisi*. Several women complained about the smell of ferrous sulphate pills, even though they smelled odorless to me.

Ferrous seemed so well accepted and supply seemed to be such a difficulty, that at first I thought an inadequate supply of medicines was the only reason ferrous was not more frequently used. Later I realized that ferrous was always available at OTC’s, and that the reasons are much more complicated than those of supply only.

Women did not indicate a preference for redder pills as I had expected they would. One preference that was indicated was for that of privately acquired medicine over that from hospital dispensaries. OTC’s spoon ferrous tablets nicely into small paper and sometimes even plastic envelopes. At the hospital dispensary, they treat medicine much more carelessly. I once saw a man pour them from the container, without even counting them, onto a sheet of paper ripped from a *buku*, and then crumple the whole lot into a wad.

The use of nutritional and tonic advice

Women told me that they made a concerted effort to eat more nutritiously when they were pregnant. One woman told me of how she plugged her nose while she drank bean soup—she could not bear the smell, but felt it important to eat blood-giving foods. Two women noticed an increase in their Hb levels the next time they were measured and attributed it to nutrition because they had not used any medicine.

Three women threw their tonic away because the pills had become *baridi*, moist and then powdery. Some women had thought up creative storage solutions to prevent moisture from ruining the tablets. I always asked to see the ferrous if women were currently taking it. Several women showed me how they kept it in little containers, either in a plastic film canister or a small glass bottle packed with cotton balls.

Of the three women who had tonic remaining after giving birth, two did not continue to use them. None of them had been told to. This is different from what the Motivator told me. He said that all women are given ferrous postpartum, which is just not true. Another woman postponed taking them until she finished the Chloroquine she had been prescribed. The first day, when she took ferrous, folate, Pandadol and Chloroquine all together, she fainted. She reasoned that she would first finish the chloroquine, which she had been prescribed fewer tablets of, and when those were finished, resume the ferrous. Not one woman reported stopping because of side effects.

NON-BIOMEDICAL TREATMENTS

Blood-giving food, the most commonly mentioned treatment for all of the anemias, could, in fact, be considered as medicine. To understand this, a brief note on the Swahili for medicine, *dawa*. *Dawa* means medicine, but it can refer to any transformative substance, like bug killer, fertilizer, or hair dye. Given this broader definition of medicine, food could certainly be considered *dawa*.³⁷ Because *chakula bora*, nutritious food, has been so strongly encouraged by the biomedical establishment, I do not know if it has come to be considered as biomedical treatment, remains a traditional treatment, or is simply a treatment, devoid of any qualifiers.

Traditional midwives did not seem to be particularly involved with the treatment of anemia. They were generally able to recognize the signs of low blood: paleness that verges on yellow, breathlessness, racing heart, white tongue, spitting, nausea, feeble legs, dizziness, and trouble seeing for periods of 30 minutes to an hour. They were very insistent that when they saw these signs, they always recommended women to go to the hospital and that their domain was primarily massaging the mother's abdomen during the first week after birth. I do not believe this is the case; I think they were afraid if they shared with me all that they did, they could get into trouble with the biomedical

³⁷ For an interesting treatment of the overlapping realms of food and medicine, see the article, "Food as Medicine, and Medicine as Food" (Etkin and Ross 1982). For discussion of the broader use of the term "medicine," see Pool 1994: 120-128 and (Whyte 1988).

establishment. Various *wakunga* prepared traditional medicines to ease some of the discomforts of pregnancy, which sometimes overlapped with the symptoms of anemia.

All the women with whom I spoke indicated that non-biomedical treatments that traditional healers offered were not of great importance during pregnancy. They seemed to rely on traditional healers more for fertility regulation, i.e. either for help with conceiving or with ending a pregnancy. Many women said they feared traditional medicine because of the danger to the baby, and that if there was a serious problem, they went to the ANC clinic. For periodic check-ups, they also went to the ANC clinics. As such, any “traditional medicines” that were used, the women knew of themselves, and sought them out for themselves.

The treatments in Table 3 below are the non-hospital medicine cures used by women during pregnancy that aren’t meant to cure anemia, though some of them alleviate symptoms that may accompany anemia. Some of them were known only to *wakunga*, but for most, the women knew them themselves.

Table 3. *Non-hospital cures used during pregnancy, excluding those for anemia*³⁸

SYMPTOM	TREATMENT
DIZZINESS	AFTER COOKING CASSAVA OR POLENTA, EMPTY OUT THE FOOD AND PUT WATER IN THE DISH, THEN SMELL IT
DIZZINESS	<i>MBAAZI</i> & <i>MBANGI WAZIMU</i> OR <i>KUNGUNI</i> , GROUND TOGETHER AND INHALED
DIZZINESS	SMELLING ARMPITS
DIZZINESS	SMELLING WHOLE LEMON OR LEMON LEAVES
LOW BP	COCONUT WATER AND SALT
NOT MENSTRUATING	<i>PENDAPENDO</i> AND HENNA
PAIN DURING URINATION	BOILED BANANA ROOTS
PAIN DURING URINATION	<i>MKOMAMANGA</i> , <i>UKWAJU</i> (<i>TAMARINDUS SENEGALENSIS</i>), AND <i>MWANAMIMBA</i> BOILED TOGETHER TO MAKE TEA
PRE-ECLAMPSIA	<i>NYUNGO</i> MAKE A STEAM TENT IN WHICH SCENT OF LEAVES IS INHALED
RECURRENT SPONTANEOUS ABORTIONS	<i>MAKOMBE</i> WATER IN WHICH WRITINGS OF THE QURAN HAVE BEEN WASHED INTO
STOMACH PAIN, MENSTRUAL CRAMPS, LABOR PAINS	<i>MPATAKUVU</i>
STOMACHACHE	<i>MWANAMIMBA</i>
TO TREAT BLEEDING WHEN IT IS NOT TIME TO BE MENSTRUATING, OR MUCH BLEEDING DURING MENSTRUATION	<i>MKOMAMANGA</i> (<i>PUNICA GRANATUM</i>)
ULCER	HONEY, HARBOR SODA, AND OTHER SPICES
VOMITING	CARDAMON

³⁸ The translations of the Swahili herbal terms that I have been able to find is taken from an article about oral herbal medicines used by women in Tanga (Mbura et al. 1985).

Though traditional midwives did not offer any cures for anemia per se, only for some of the symptoms thereof, there were several cures for anemia that did not involve hospital medicine. The most frequently mentioned one is *chomwe*.

Chomwe

Chomwe is a very fragrant traditional medicine used to treat *safura*. It is made from powdered iron filings and *dawa za kikaango*, a combination of medicines³⁹ available pre-mixed from traditional medicines shops. Increasing the cooking time can increase the strength of *chomwe*. The name *chomwe* likely comes from *chuma*, which means iron. Both of the *chomwe* makers I met were women who had learned the technique from their fathers who had been *waganga*, traditional healers. They each explained they were not *mganga*, they only know how to make the medicine.

There are at least two versions of *chomwe*. The *chomwe* maker in Konde explained that a non-pregnant adult should use a small teaspoon of it three times per day. It is too strong for pregnant women and can cause miscarriages. You can either put it directly on your tongue and swallow it, or mix it with *uji*. She said that she tells the people who buy it that this is the dosage, but after they leave, they decide for themselves how much they will take. She said that, in contrast with hospital medicine (ferrous), her *chomwe* works for everyone who uses it, because it is very strong. Its strength lies in the fact that it has so many more ingredients. She told me that everyone who comes to her for *chomwe* has already tried hospital medicine to no avail, but I doubt it.

The *chomwe* maker in Pandani said that pregnant women could use *chomwe*, only the ingredients and dosage need to be adjusted accordingly. A pregnant woman should use a small teaspoonful of a mix of *sanamaki* (dried crumbled leaves with laxative properties), *zamda*, (an opaque crystal-like substance that dissolves in water), *manjano* (turmeric), and *chomwe* once a day. A non-pregnant adult should use all of those plus *kamul-abyadh*⁴⁰ twice a day.

Most of the women that I questioned about *chomwe* did not think too highly of it as a treatment during pregnancy; I think part of their indifference was an artifact of my

³⁹ The ingredients of *dawa za kikaango* are: *halmar*, *kamuni aswedi*, *kamuni abiyadh*, *haldal*, *habasoda*, *halelungi*, *zamda*, *darafilfil*, *suga*, *sokota*, *sbomkari*, *kuzharat*, *uwatu*, and *sanamaki*. The ingredients that I have been able to translate are found in the glossary.

⁴⁰ *Zamda*, *sanamaki*, and *kamul-abyadh* are ingredients that come exclusively from Arab countries, often brought back after visits to family members in Oman or United Arab Emirates. I sometimes wonder if the importance attributed to medicines from Arab countries has important ethnic connotations.

association with the biomedical world. One participant in the focus group discussion was an exception. She felt that *chomme* was superior to ferrous sulphate because, “With ferrous, they tell you to eat nutritious foods, but with *chomme*, you don’t even have to do that.”

Other non-hospital medicine treatments are *umatu*, fenugreek in English, or *Trigonella Foenum-graecum* in Latin. This yellowish, grain-like substance was considered very nourishing for people like the elderly or pregnant women in need of a dietary boost. Sometimes it was sprinkled directly into food. Other times, it was mixed with *samli ya ngombe*, (ghee made of cow milk), garlic, milk, honey, *zumba*, and several other untranslatable ingredients, like *habasoda* to make *haluwat saumu*, a treatment for *baridi yabisi*.

Spirit prevention

As I mentioned in Chapter 4, bloodthirsty spirits can cause *upungufu wa damu*. There are three main ways in which spirits can be prevented from doing this, and one possible way to be cured of this. Only one woman was sure there was no prevention for them, that those who try are just being tricked. She was the lady who had suffered through 12 miscarriages.

Masking the smell of blood, either before it is released from the body or afterwards, is very important. As discussed under the heading *ujusi*, women often add good-smelling substances such as sugar, *udi*, or herbs to the fire that burns under their bed to hide the smell. Rural women mentioned the importance of hiding the smell of *ujusi* much more frequently and emphatically than urban women did. It could be because urban women felt such behavior to be sacrilegious, because they wanted to seem sophisticated, or because it is a leftover tradition whose origins they no longer can identify.

A second way of protecting oneself and ones unborn child is by wearing special jewelry. *Hirinzi* are necklaces on which small black pouches are attached. In these small black cloth pouches are *yasini*, verses from the Quran. “*Hirinzi ni dawa*,” one mother told me. “These necklaces are medicine.” One can also wear *mvuje*, a bracelet of black cloth, in which herbs are concealed; it is common to see small children wearing these. Some women do not wear them because they claim they go against their religion.

A third way of protecting oneself against spirits is by limiting your movement. “You shouldn’t go to the *bonden*,” the low-lying cultivated area between valleys, I was advised. Certain *bonden* are inhabited by spirits, and sometimes women visit them at

night if they want to abort. Other precautions are not standing in doorways, not standing at crossroads, not walking around anywhere at night, and not being in the *bondeni* at 12 PM.

I learned of only one way of treating spirits that were causing anemia, *chonjwa*. An *mganga* spoke with me about this technique. He used it on his daughter who was suffering from spirit-caused anemia during pregnancy. One or two small incisions are made on the forehead, near the armpits, the knees, and the ankles. A paste of chicken blood, honey, and secret roots is rubbed into the wounds. This process is purported to change the smell of the person's blood. I assume that exorcising the spirit would be another way of ridding oneself of it, but no one actually mentioned this as a possibility in the context of spirit-related blood problems.

OTC's

The last important location where women can receive both advice and treatment for health problems during pregnancy are the small pharmacies found in every town and most villages in Pemba. Omar estimated that in the whole of Pemba, there are roughly 60 OTC's and 5 or 6 dispensaries, and the number continues to grow. My attention was first drawn to private drug sellers as potential points of distribution of ferrous sulfate in an article in *Social Science and Medicine*, "Can Licensed Drug Sellers Contribute to Safe Motherhood? A survey of the treatment of pregnancy-related anaemia in Nepal" (Kafle et al. 1996). Living in the same house as a pharmacy was an excellent way to witness the impact that private drug sellers could have. To further compliment my observational data I conducted a small exploratory study of treatment offered at OTC's, the result of which are summarized in Table 4.

Table 4 *Summary of Advice by OTC's around Pemba*

OTC	ADDITIONAL QUESTIONS ASKED BY OTC WORKER	MEDS TYPICAL FOR PREG-NANT WOMEN	MEDICINE SOLD TO SURROGATE	EXPLANATION	ADDITIONAL ADVICE FROM OTC WORKER	SYMPTOMS FOR WHICH FERROUS IS BOUGHT	EDUCATION OF WORKER	HOW THEY KNOW MEDS TO GIVE
1	none	ferrous	ferrous	take three per day	better if A.H. takes her to a hospital	pale body	I'm not educated as a daktari	In their book
2	none	ferrous	none	Were afraid to sell meds to A.H.; recognized him as a <i>daktari</i>	Give her food to build body, e.g. milk, spinach, and beans	I don't know	I'm not a daktari	In their book or they tell me
3	Appetite? Fever? Vomiting?	ferrous, panadol, magnesium (for nausea)	Vitamin B12	to increase her appetite	none	pale, swollen feet	Community Health nurse (5 years of edu)	In their book or they know
4	Age? Fever? Able to eat?	Panadol, chloroquine, ferrous	none	ferrous was sold out. he advised AH to go to another store to buy a month's supply of ferrous, one per day	Go to dr. to check for worms. they can cause anemia. use Food to build body. go now b/c 7 th month is critical	pale, breathlessness, tiredness of the body (especially in the morning)	Laboratory assistant	their book or the woman herself comes and I can see her and tell her
5	Does she have other symptoms of anemia? Pale? ⁴¹ Where is her buku?	ferrous panadol	none	A.H. said she wasn't pale; worker became unsure of what to give	he needed to bring either her buku or to see a doctor	appear pale	I'm not a daktari so i don't know	they tell me them-selves
6	Ever had safura? # of pregnancies? Fever?	ferrous	ferrous and folic	3 and 1 per day, respectively	If you send her to a clinic you can get better advice	a bit pale	I'm just the brother (owner is health aide)	they tell me, I don't decide for them

⁴¹ Ali Hamisi forgot that his sister was pale.

This study revealed some very encouraging practices on the part of OTC workers. It also corroborated with my own personal visits to OTC's in Wete and Chake Chake, where I was consistently given appropriate advice. I had attributed it to the employees being overcautious, fearing that I was testing them. But both in my experiences as well as those of Ali Hamisi's, the appropriate follow-up questions were asked. They were familiar with both the symptoms of and the treatment for anemia. The fact that every OTC recognized ferrous as a medicine for pregnant women means that the medicine is both valued by the users and profitable for the store. The workers also seem to know the limitations of their own pharmaceutical knowledge. Vitamin B is the one questionable recommendation, albeit one that is often made to pregnant women around the world. *Daktari* at the hospital had prescribed it in *bukus* as an appetite stimulant, and it was commonly prescribed in Kafle et al.'s study as well (1996).

As discussed in the section on methodology, employees with medical training should staff each OTC. This is not always possible. What often happens is a less-qualified person works at the OTC during the day while the more qualified person works at their other job, perhaps as a teacher, a lab assistant at the hospital, or even as a nurse. Then, in the evenings, the more qualified person works. Because Ali Hamisi visited the majority of the OTC's during the day, he spoke primarily with the less qualified workers. If women are employed at the OTC, they usually work during the day, even if they have more training than men, as was the case at Chasasa OTC. Omar's wife, Amine, and a second lady, Bi. Mchanga worked at Chasasa OTC during the day. Omar and Ali Hamisi worked in the evenings.

These scheduling details are important, given the fact that women prefer to discuss their health problems with other women. Ali Hamisi told me that women were embarrassed to speak to him even about blood problems, because they are so associated with pregnancy. For women to talk with Bi. Mchanga about anemia was no problem, because they are "*sex moja*," the same sex. Ali Hamisi thought that women in the countryside are less embarrassed to talk about such things than women from the town were. He told me about some research regarding intestinal worms that he was assisting with. "We went house to house in the towns and countryside to ask if people at that household were infected with worms. In the cities, no one would admit to having them, even when you could tell by looking at them that they did. And plus the rate of infection is about the same everywhere. But they say, 'We wear shoes, we don't get those things.'" The delicacy of anemia means that women will be most likely to visit the store during the day, or obtain medicines via their husband.

SUMMARY OF TREATMENTS FOR ANEMIA

The table below is helpful for summarizing the treatments that women use for anemia. What this table doesn't include are the limitations women face when getting, and how, or even if, women can get around those. These questions bring us to the final chapter, *Struggling is Life*.

Table 5. *Summary of all possible treatments for anemia on Pemba*

NAMES OF TREATMENT:	AVAILABLE FROM:	PREVENTION/CURE FOR:	COST:
AVOCADO LEAVES BOILED INTO TEA, <i>MAPAYA</i>	TRADITIONAL HEALER, TBA, SELF	<i>UPUNGUFU WA DAMU</i>	VERY INEXPENSIVE
BLOOD TRANSFUSION	HOSPITAL	<i>UPUNGUFU WA DAMU</i>	FREE IF FROM FAMILY, 40 USD TO PURCHASE
NUTRITIOUS FOOD, BLOOD-GIVING FOOD, <i>CHAKULA BORA</i> E.G. BEANS, FISH, SPINACH, EGGS, MILK	HOME, MARKET	<i>UPUNGUFU WA DAMU, SAFURA, BARIDI YABISI</i>	FOOD WITH PROTEIN IS MORE EXPENSIVE THAN JUST STARCHY FOODS
SMALL INCISIONS, <i>CHANJWA</i>	<i>MGANGA</i>	<i>UPUNGUFU WA DAMU</i>	UP TO 50 USD
<i>CHOMWE</i> , TRADITIONAL MEDICINE POWDER WITH SPICES AND GROUND IRON	TRADITIONAL MEDICINE MAKER	<i>UPUNGUFU WA DAMU</i>	AROUND 0.05 USD PER DAY
FERROIN INJECTIONS	PRIVATE DISPENSARY	<i>SAFURA, UPUNGUFU WA DAMU</i>	2000 TSH OR 2 USD
RIBENA, LUCOSET	SMALL SHOPS SELLING FOOD	<i>UPUNGUFU WA DAMU</i>	1.50 USD FOR SMALL BOTTLE
FERROUS SYRUP, <i>TONIC YA MAJI</i>	OTC, PRIVATE DISPENSARY	<i>UPUNGUFU WA DAMU</i>	800- 2500 TSH, OR .80-2.50 USD
FERROUS SULPHATE, TONIC, <i>TONIC YA VIDONGE, HABAMLA</i>	HOSPITAL DISPENSARY, PHCU, PRIVATE DISPENSARY, OTC, DR. ALI, MATERNITY WARD	<i>UPUNGUFU WA DAMU</i>	FREE, 0.01 PER TABLET, OR 0.10 USD PER PILL
VITAMIN B12	OTC, DISPENSARY	STIMULATE APPETITE?, SO INDIRECTLY FOR <i>UPUNGUFU WA DAMU</i>	.01 USD PER PILL
PHENAGAN	OTC, DISPENSARY	STOPS NAUSEA, SO INDIRECTLY UWD BY ENABLING WOMAN TO EAT	.05 USD PER PILL
FISH OIL TABLETS, <i>VIDONGE VYA MAFUTA YA SAMAKI</i>	OTC, DISPENSARY	<i>BARIDI YABISI</i>	.30 USD PER PILL

<i>UWATU</i> , A GRAIN MIXED WITH MILK, BUTTER, ETC.	MARKET	<i>BARIDI YABISI</i> , <i>UPUNGUFU WA DAMU</i> IN PREGNANT WOMEN	VERY INEXPENSIVE
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7. STRUGGLING IS LIFE

On the wooden shutters of the OTC, Omar has scotch-taped a photocopy, now curled and yellowing, that reads, “Struggling is Life.” As much as I dislike slogans, I don’t think it is so very far-fetched to say that struggling *is* life, for Pembans more than Ungujans, for women more than men, and for pregnant women more than non-pregnant ones. Omar’s weather-beaten sign is instructive as we return to the three stated objectives of this research: 1. to contribute to the small body of ethnographic literature about Pemban culture, (i.e. what is the environment in which they struggle?) 2. to engage in current theoretical discussions, (i.e. how is the struggle about issues bigger than just what happens in one tiny island in the Indian Ocean?) and 3. to make suggestions for ameliorating the toll that anemia takes on pregnant women and their unborn children (i.e. how to make the struggle easier?).

OBJECTIVE ONE: ETHNOGRAPHY

Chapter Four, *Without Blood There is No Life* discussed what women think of as normal health and typical behavior during pregnancy (e.g. eating habits, behavior) and what they considered to be unhealthy. It became clear that women have different expectations of health when pregnant: what was conceived of as normal symptoms during pregnancy, *ujumbe*, would be considered pathological if women weren’t pregnant. Despite the conflation of *ujumbe* with pathological symptoms, the potential to have serious problems with blood was still recognized, and discussion of the anemias is the second half of the chapter. The types of anemias are discussed, as are their symptoms and etiologies. A discussion about postpartum blood-related practices and beliefs sheds light on ideas about blood-giving substances, the cessation of bleeding, and the importance of shedding dirty blood while stopping the flow of “normal” blood.

Chapter Five presents medicine as a metonym for government. Shortages of medicine and medical staff are seen as analogous to shortages of day-to-day necessities like electricity and water: emblematic of a faulty government. Perceptions of the distribution of health care resources are manipulated by political parties, e.g. CCM is accused of withholding containers of aid from Pemba, while CUF is accused of urging NGO’s to withhold all aid to Tanzania. Meanwhile, perceptions of their uses are politicized, e.g. CCM feels that Pembans don’t want to be helped because they been unwilling to use some of the free medicines offered, while CUF suspects CCM of ruining their reproductive capacities with the medicines they did take. In the midst of all this strife, the highest-

ranking government official on Pemba perpetuates the animosity related to health care use and abuse.

Finally, in Chapter 6, the three types of medicines women can use to cure themselves are discussed: hospital medicine, traditional medicine, and OTC medicines. Experiences and perceptions of each type are discussed. Nearly all women visit ANC clinics before giving birth. Their visits there are often fraught with impatience, disrespect, and ineptitude from the nurses and the doctor, such that one should not wonder why they attend the ANC so late in their pregnancy. One can better wonder why they go at all.

I have not presented all of the ethnographic information I learned about pregnant Pemban women. There is still much to be said about subjects like the decisions women make about where to give birth, and the fact that so many Pemban women return to their natal villages for the duration of their pregnancy. I have, however, presented everything directly germane to the subject of anemia during pregnancy, in keeping with my critically ecological goal of describing the environment in all its dimensions.

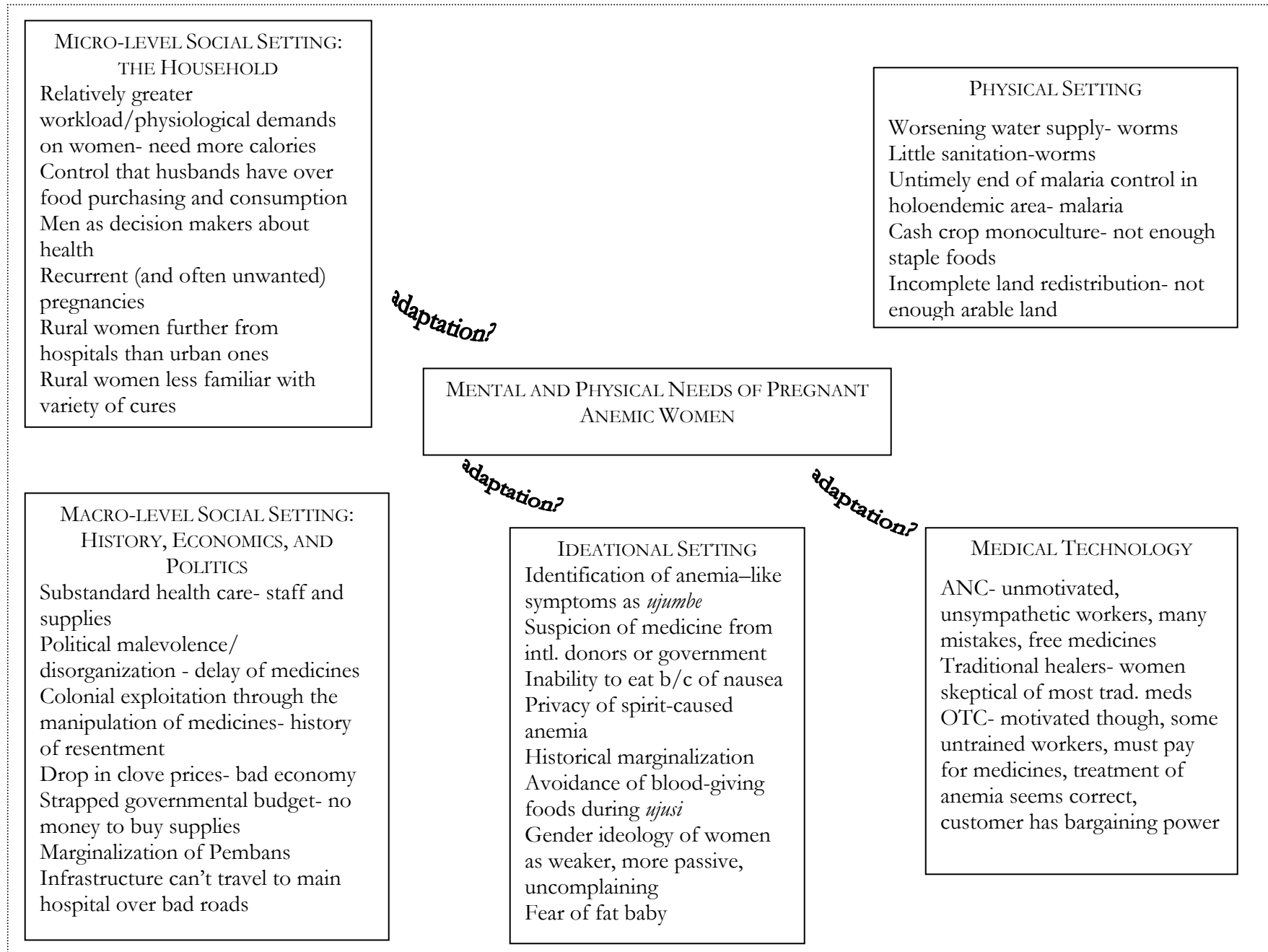
There has not been much written about perceptions of health and pregnancy on Pemba with which I can engage, except for that of Rachel Herr, “Perceptions of Anemia by Pregnant Women on Pemba Island, Zanzibar” (1999) There were a number of similarities between our findings: blood-giving foods were important preventions and treatments of anemia; certain traditional cures for symptoms of anemia, like dizziness, overlapped; and some of the symptoms of anemia that women identified were similar. Though her study is both instructive and useful, I have found several important discrepancies between her and my findings. My research noted the importance of *ujusi* to understanding of blood and blood loss. *Mjusi*, “lizard,” was mentioned in her report, and was considered to be a “Swahili illness” for which there was no medicine (Herr 1999: 10). I found that *kuchangaa*, to be pale, is a salient sign of anemia, and not *kuchanga*, to be cut down, or cut up into little pieces (Herr 1999: 9). *Chomme* as a cure for anemia is new; the women in her study stated that there wasn’t any cure. Another difference between our findings is that women with whom I spoke did not cite the inability to afford *chakula bora* as a hindrance to eating properly during pregnancy (and by extension a cause of anemia) nearly as often as they did the inability to eat because of nausea. My study also added the eating of *udongo* as a perceived cause of anemia, and situated the eating of non-food substances in a wider context. Lastly, Herr writes that women “used the symptom and illness interchangeably” (Herr 1998: 12) but I wonder if perhaps she assigned anemia as the meaning when women were talking more generally, about *ujumbe* during pregnancy.

OBJECTIVE TWO: THEORETICAL ENGAGEMENT

As you will recall, there were three salient features of my “critically ecological” perspective. The first was the inclusion of tangible and intangible settings to be able to demonstrate how factors like history, politics, and household structure can affect one’s state of health as much as the topography and physical needs of the body do. The second was the broadening of the term adaptation such that it took on tactical and cognitive connotations. The third was a political engagement, with an eye on social change.

With the ethnography, I have attempted to present as much relevant information about the environment as possible while justifying its inclusion with my theoretical perspective that requires a holistic view. Through the inclusion of biology, history, topography, economics, politics, and household structure, I hope to have made it clear how a number of factors have worked concomitantly to contribute to the prevalence and treatment of anemia. Below I have recapitulated the elements of the environment I have deemed important and attempt to reiterate their linkages by using a diagram, my favorite heuristic device from ecological anthropology’s toolbox. This diagram could be considered as an etic counterpart to the explanatory model developed in Chapter 4. The compartmentalization of the box renders the factors more separate than they actually are. One can become caught up worrying if sanitation goes under “land” or the macro-level social setting, or if the priority men have when eating fit under the household or ideational setting. The answer is that those factors go under both headings, but that it does not matter so much. This is not a literal representation. If taken literally, this diagram can seem deceptively simple. But I feel confident that the preceding text has explained their delicate entwinement, and this diagram is simply heuristic in its purpose.

FIGURE 6. A CRITICALLY ECOLOGICAL MODEL FOR ANEMIA DURING PREGNANCY



The second facet of my framework was the re-use of the term adaptation, “the ability to respond to or seize opportunities, which in turn is circumscribed by the resources (material and biological) available to the individual or group” (Wiley 1992: 228) with a more tactical nuance. This “new” adaptation was one that can consider the potential for cognitive adaptation. Understanding how the individual, especially a rather marginalized one, interacts in the environment-at-large, brings the discussion full circle. “Until we fully realize that social process in the medical arena is shaped not by the unrestrained will and might of potent oppressors but by an ongoing clash between those best served and those least served by existing medical institutions and between those most in control of and those least in control of medical knowledge, procedures, and technology, we will misunderstand [clinical process]” (Singer 1987: 1199).

So, what can women do? Within the environment laid out in the ethnographic chapters that considers all the constraints and possibilities, I believe that there are three realms within which women can tactically adapt to, or cause to adapt to her needs. These are denoted with the linkages “adaptation?” on Table 6 above. I do not believe that she can much change either the macro-level setting (history, economics, and politics), nor at the level of topography. But perhaps she *can* negotiate a few adaptations in the household setting. She can figure out how to better get permission from her husband to go to clinic, OTC, or traditional healer. She could devise ways of having enough money to afford medicines and/or transportation to care. She can get this money either from her husband or through small enterprises she does on the side, such as selling foods or extra crops. Lastly, she can try to get more nutritious food. She can do this by growing more food herself, convincing her husband to purchase more nutritious foods when he does the shopping, or persuading him share more of the protein that they do have.

The second adaptation is that she could change her ideational environment, e.g. what she considers as illness, and what she considers as health. If she learns more about anemia she can distinguish between *ujumbe* and signs of anemia. Additionally, her perceptions of what is acceptable behavior for a woman may now keep her from insisting that her symptoms are unreasonably unhealthy. She may consider treating spirit-caused *upungufu wa damu* with tonic as well as *chanjwa*. She may be come to realize the value of blood-giving foods during *ujusi*.

Thirdly, she can make better or different uses of the medical technology at hand, i.e. the ANC’s, non-hospital medicines, and the OTC’s. She could become more of a participant in her diagnosis, by clearly explaining her symptoms. She could seek medical treatment earlier (which

necessitates changing her ideational environment, i.e. perceiving when she is having symptoms grave enough to merit treatment). She could ask more questions when she is at the ANC, and she could be more assertive about knowing what her diagnosis is, comprehending what that means and understanding the proper treatment thereof. Alternatively, she could seek assistance from a place where she has more bargaining power as a paying customer, where she is served by those who she feels comfortable with, who can diagnose her on the spot, without long waits and excruciating interviews, i.e. the OTC. This means she must time her visit to coincide with the time a woman is working as a *daktari*.

All of these adaptations require a woman to recognize that she can help herself. This shoots straight to the heart of critical theories, which is a critique of ideology and power. "Ideologies can mystify reality, obscure relations of power and domination, and prevent people from grasping their situation in the world... When institutional arrangements and practices reproduce inequality, domination, and human suffering, the aims of critical theory are emancipatory" (Scheper-Hughes 1992: 171).

In pointing out all that women can do to improve their health, there is a potential for an accusatory tone. There is a certain danger in assigning such control. "...[I]n granting power, agency, choice and efficacy to the oppressed subject, one must begin to hold the oppressed morally accountable for their collusions, rationalizations, 'false consciousness' and more than occasional paralyzes of will. With agency begin responsibility and accountability" (Scheper-Hughes 1992: 533). My intention is not to blame women for not trying hard enough; my intention is to acknowledge a degree of agency in women who don't necessarily think of themselves as having a say in their reproductive health.

Adaptation, framed as such, is inextricable from my third component of critical ecology: an eye on social and political change. As discussed above, I want women to change their own status, but I also personally intervened to change the "anemia setting" in the process of my research. Some of my involvement was obvious, such as dividing up and insuring delivery of ferrous to PHCU's that would have otherwise gone undelivered, and giving my old medicine containers and film canisters to people who were using ferrous. Other interventions were more subtle, such as explaining the uses of the ferrous to the women I interviewed, pointing out to the ANC nurses that they had forgotten to give ferrous when it was needed, and raising the consciousness about anemia of all the lay people with whom I spoke regularly about health during pregnancy.

OBJECTIVE THREE: APPLICATION

This final section of my thesis is the part in which I had planned to save the world in a five paragraphs, based on the insights garnered from the theoretical approach to the ethnography. Overly ambitious? I believe so. I have had to lower my goals. This is now the section in which useful suggestions will be set forth which could, perhaps, somehow, some way, improve conditions for pregnant women in Pemba. I do want to at least try to make my anthropological observations useful: “Action without reflection is wrongheaded; reflection without action is self-indulgent (Scheper-Hughes 1992: 171).

Ideally, I would recommend equal treatment of all citizens by the government, decentralization of government, the end of nepotism, and a focus on preventative health care (see Van der Geest 1982). This Herculean task is beyond the scope of this subject, and perhaps beyond that of any social scientist. On a smaller scale, ANC care could be improved. Women already have a wonderfully high attendance rate at ANC clinics; each visit represents an opportunity to help women to have healthier pregnancies. It would be wonderful if these visits could be used to their potential to improve women’s health: compassionate nurses, well-supplied dispensaries, and doctors who have time to listen should all help to convince women to return frequently during their pregnancy. Alas, this, too, would require a vast overhaul of the system.

Suggestions on an even smaller scale are the most effective recommendations that I can give. The most pragmatic are those that work within the environment that has been dictated by forces more powerful than I, and not those that change it. Given that these are the limitations and options, how can women struggle better? How can they be helped with their struggle?

First, some general remarks about improving care of pregnant anemic women: All health care workers should learn to recognize and explain that paleness is salient feature of anemia. They should also recognize that anemia is understood not only in terms of *upungufu wa damu*, but also phrases like “the blood has gone down” “*damu imepungua*” or “*matatizo ya damu*” “problems with blood.” The public needs more information in general about anemia; with the exception of the pamphlet at the MCH head office, there are no public health posters explaining anemia. Even one poster at each OTC and PHCU would be a valuable source of information. Marketing of ferrous should link the idea of the strength of iron to the powers of the ingredients of ferrous (van der Geest: pers. comm.). There is no connection currently made to the commonality of any of the ingredients of *chomme* to those of tonic, the most important one, of course, being iron. The benefits of ferrous to the unborn child should be emphasized as an incentive for a mother to use them.

Women care about the health of their children; this is a persuasive argument. Lastly, women should be encouraged to continue with ferrous after birth; this is currently being neglected.

Lastly, a few words about the liberating power of OTC's (see also Van der Geest and Hardon 1988, Van der Geest and Whyte 1988, Van der Geest et al. 1996, Whyte 1988). The overt contradiction between the government health policy and the everyday health experiences of many pregnant Pembans is a painful one, and as far as I can tell, can only be addressed through tactical individual struggle, not by changing the system. As such, I suggest that OTC's on Pemba as one of the most empowering places to receive health care. Private sales of medicine have the potential to be liberating, especially when the appropriate ones are prescribed. If individuals have access to this power, they are freed from depending on the healing power of the authorities. With OTC's, Pembans need not depend on irregular supplies from a government perceived as oppressive, but can buy medicines from their friends or neighbors who are also Pemban. Through pills, customers have immediate access to healing substance, and are no longer patients without any real bargaining power, at the mercy of potentially hostile or indifferent staff. Well-being become dependent upon their purchasing power, and not on their relationship to the healers (Nisula 1999) which has the potential to be negative (who wouldn't prefer to get something for nothing?), but in contrast to the situation now, it could be seen preferable.

Selling tonic is profitable endeavor that OTC's are motivated to continue to do. Because OTC business depends on paying customers (who have the choice to shop elsewhere), they are keen to provide quick, attentive service to those seeking it. As part of their efforts to respond to the customer's needs, I would suggest to them that they employ at least one woman, so that women have someone to whom they can come to explain their problems. In my short survey, it seems they do give reasonable health advice to women, often better than that given at the ANC. Other advantages of OTC's are that they are generally very convenient: there is less waiting and they are located closer to home. OTC's are not dependant on donor aid; OTC owners make a living for themselves while allowing women to find health care without humiliation. OTC's seem to be a win-win situation.

In the course of this text, I have demonstrated that the prevalence, perceptions, and treatment of anemia during pregnancy are embedded in all facets of the environment of Pemba, and that this environment is, ironically, dense with shortages of medical supplies and equality between islands, between political parties, and between genders. After some engagement with ongoing

theoretical debate, I have concluded by suggesting a remedy or two unsupportive governments and husbands. In the last pages of her book, Crandon-Malamud writes, “people are empowered by [medicine] and thus change their social, economic, and political conditions” (1993: 205). Dare we hope that medicines, by lessening the burden of anemia on women, could actually help to heal some of the oppressive aspects of the environment, and change their social, economic, and political conditions?

APPENDIX A: INTERVIEW CHECKLIST FOR EVER-PREGNANT WOMEN

Interview Number
Date
Location
Time
Translator

Woman's name
Husband's name
Age
Reside
Born
School
Work

Anemic now?
Anemic ever?
Rural/Urban

Number of Children living: boys _____ girls _____
Number of children ever born
This is pregnancy #

Subjects that should be covered

Her pregnancy:

Like being pregnant

Symptoms/illness during pregnancy

Treatment of symptoms/illness (dawa ya hospitali and miti shamba- list those from E. Africa Medical Jnl.)

Mwanamimba or mpatakuva+ / mkomamanga+ / ukwaju+ / msarafu+ / mtunda - / shubiri -

Causes of symptoms/illnesses

Clinic even if not sick

Needed permission?

Which month did they first go?

What they did at clinic?

Were you able to do your work during pregnancy?

Did you get advice from anyone? (mother's advice conflicting with hospital)

Pregnancy in general:

Mgonjwa au mzima?

What do women do when pregnant that is different generally than when they aren't?

Food during pregnancy Udongo? Msheli? Barafu?

Anything you should not do when pregnant? E.g. certain medicines.

Rumors about any meds that are bad, e.g. zinc project maneno

Advice for me?

Do you feel cold or hot during pregnancy?

Should you eat hot or cold things? (Bheta)

Are pregnant women allowed to complain, or is it better not to? To husband or clinic?

Anemia:

How did you know you had anemia?

Symptoms of

What is blood like if you have it?

Causes of

Treatment for (hospital and miti shamba)

Sniffing armpits?

Leaves/fruit of lemon tree?

(why do these work?)

What is tonic for?

Seriousness of anemia compared to other illnesses during pregnancy?

Why?

Ever heard of chomwe?

Painful blood?

If you have anemia, do you feel hot or cold?

Birth:

Where

Why

Home to mom for first or more babies?

Are you hot or cold after birth

Baby hot or cold?

Ujusi:

What is it: blood or period of time?

To draw blood away or to dry it up?

Use it?

What else did you use? Like tea, etc.

Does the fire also heat up the body?

The body is normally cold after pregnancy?

Baby is too?

Mashatani:

Are pregnant women more vulnerable?

Why?

Because they like the blood smell or don't like the blood smell?

Which types?

APPENDIX B: KARDI YA KLINIKI

GLOSSARY

Baridi	moist, cold, damp
Bibi	literally grandmother, also respectful title, like Mrs., abbreviated Bi.
Binadamu	human being, literally son of Adam
Bondeni	low-lying cultivated area between valleys
Buku	cheap notebook in which medical notes are made
Chama cha Mapinduzi	Revolutionary Party, the dominant political party today, CCM
Chakula bora	nutritious food, balanced diet
Chonjwa	small incisions made by <i>mganga</i> for treatment and/or prevention of anemia
Civil United Front	the opposition party, CUF
Daktari	doctor, but also term used for anyone working in health care field, e.g. employees at pharmacy, nurses, lab assistants, etc.
Dala dala	local public transport, open truck fitted with benches in the bed
Damu	blood
Dawa	medicine, but can refer to many transformative agents, like fertilizer, hair dye, and inner tube repair glue
Fuka la uzazi	placenta
Habamia	another term for ferrous a.k.a. tonic, derived from Arabic?
Haluwat saumu	traditional cure for <i>baridi yabisi</i>
Kali	sharp, piercing, aggressive, sour, spicy
Kanga	squares of thin colorful cotton cloth generally worn by women in pairs, one as a skirt on top of normal clothes, the other as a head covering
Kardi ya kliniki	antenatal checkup card
Kifafa cha mimba	pre-eclampsia, i.e. high blood pressure, edema and proteurea
Kivunge	lit. small bunches, refers to shortages
Kizunguzungu	dizziness
Kuchangaa	paleness
Kuchefuchefu	tiredness
Kunonya	to suck as spirits do blood; to breastfeed
Kutapika	vomiting
Kuvimba	swelling e.g. of limbs, face

Maji	water, liquid, e.g. <i>tonic ya maji</i> means syrup form of tonic
Malaika	angels
Manjano	turmeric
Mcheli	husked but uncooked rice
Mjamzito	pregnant woman
Mkunga ya kinyegi	traditional birth attendant
Mkunga	birth attendant
Safura	approximately the clinical term for anemia
Sanamaki	dried crumbled leaves with laxative properties
Shamba	countryside, rural area
Shehe	religious leaders, teachers of Quran lessons
Siku zako	menstruation, lit. “your days”
Ubuyu	baobab tree, <i>safura ya ubuyu</i> is <i>safura</i> with swelling
Udongo	soil, clay, dirt
Ujumbe	a sign or message, also the signs of being pregnant
Ujusi	period of time, about forty days, after giving birth, or postpartum blood
Ukosefu	lack of, deficiency
Upugufu	lack of, deficiency
Uvyele	a sign or message, also, the signs of being pregnant, used mostly in countryside
Uwani	open courtyard around which many houses are build
Uwatu	fenugreek, <i>Trigonella Foenum-graecum</i>
Vidonge	tablets, pills
Washamba	rural dwellers
Zamda	an opaque crystal-like substance that dissolves in water, comes from Arab countries

ABBREVIATIONS

ANC	antenatal care
CCM	<i>Chama cha Mapinduzi</i> , Revolutionary Party, the dominant political party today
CUF	Civil United Front, the opposition party
Hb	hemoglobin
MCH	mother and child health
OTC	Over the Counter pharmacy
PHCU	primary health care unit
PDQ	pretty darn quick

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