Chapter 1: Introduction

Self-Reflections on the Development of the Project

When I first began graduate school in Science and Technology Studies at Virginia Tech, I was really unsure of what I wanted to 'study.' Students come to our program sure that they are interested in the history of medicine or in the philosophy of biology or in the relation of gender to science. While these are all broad topics, they illustrate possible trajectories and often serve as the impetus for more concrete and manageable projects. I came with an interest in the relationship between culture and technological change and a willingness to learn what STS is and how I might use it to determine a research plan.

At one of my first jobs out of college, I worked as the lowest link in the food chain known as 'development.' At a small 'technical assistance' consulting firm, I was a most junior Jill-of-all-trades dealing with everything from pouring coffee to consultant recruiting. I learned the ins and the outs of the 'development' business – the competition involved in the bid and proposal process, the politics of fielding consultants, and even the ways that my firm (at least) cheated the government. As a naïve twenty-two year old, I thought that my boss would appreciate the 'double-billing error' that I had found in one of our USAID accounts. Instead, I was told not to ask questions. Subsequent fraudulent activities by the firm forced me to leave the world of international development and pursue other avenues, but I was left wondering about the relationship of the 'development business' to 'development' at all.

I had intended a career in development to be an altruistic pursuit – one where I earned little, but somehow made a difference. Instead, I was jaded by the money-grubbing and dishonest attitudes that I encountered in the field. A few years later after taking an international development course at Virginia Tech, I became still more critical of the teleology of economic growth models and projects that relied exclusively on western technology and implementation. I learned about alternative development models that focused on women, participation, and appropriate technology, and once again became enchanted.

Like the college-educated masses that flood the Peace Corps, Americorps, and other volunteer programs, I wondered if volunteerism wasn't a more appropriate means to 'improve' the lives of others. I applied to the Adventures in Health, Education, and Agricultural Development (AHEAD, Inc.) project in Tanzania as Summer 2001 volunteer. AHEAD works in the Meatu District of Tanzania and in the Gambia. In the Gambia, AHEAD runs summer

leadership camps for urban youth, while in Tanzania, AHEAD's work has a comprehensive health focus. In Meatu, AHEAD sponsors monthly 'Health Outreach' visits to 17 villages including baby-weighing, vaccination, nutritional counseling, antenatal care, family planning, and health education; a Teen Action Program (TAP); and has recently initiated a water testing and solar pasteurization project. I had hoped to look at the relationship between family planning and culture as a thesis topic and thought that volunteer work in Tanzania provided an appropriate action-research platform.

In the months leading up to my summer in Tanzania, I imagined exhausting days where a team of volunteers worked closely with local staff to provide excellent health care to the women and children of Meatu. I envisioned myself vaccinating children against measles, discussing birth control methods with clients, and weighing babies. I saw myself in action, proving that development doesn't have to be a dirty word and that volunteerism, altruism, and adventure can all be synonyms. The experience that ensued was actually quite different and rather than answering my questions about development, it led me to new ones.

What is the relationship of development to 'globalization'? How do 'volunteerism' and development fit together? Is development necessarily a top-down project; do 'alternative' development frameworks really exist? Where does AHEAD fit into discussions of development? Is it a health care project? A development project replete with transfer of 'appropriate technology'? Or does the cultural exchange of volunteers and villagers fit into the larger project of globalization? In the thesis that follows, I attempt to 'unpack' development, appropriate technology, volunteerism, and globalization.

The AHEAD Founding Tale

As the story goes, Irving Williams, a pediatrician; his wife, Elvira Williams, an educator; and their four children moved to Tanzania for a two and a half year appointment at a pediatric hospital in 1974. As African-Americans, the Williams' were interested in both reclaiming their heritage and making a difference in newly independent Tanzania. It was the first time that Dr. Williams "saw children die from childhood diseases" (Fieldnotes 10 June 2001). Working with the Tanzanian government, the Williams' developed an experimental farm, near the hospital, based on the argument that death is complicated by nutritional status. Returning to the United States, the Williams family "was prompted to dedicate their lives to this rewarding cause"

(AHEAD website). Today, Elvira Williams is the Executive Director of AHEAD, Irving Williams is the Medical Director, and several of their (now-adult) children sit on AHEAD's Board of Directors.

AHEAD was formed to address issues of health and poverty in Shinyanga Rural, a District in the Shinyanga Region. Working for over a decade in 28 villages, first in Shinyanga Rural and then in the Meatu District, "AHEAD is guided by the following philosophical principles: 1) For any human being, health requires good nutrition; good nutrition requires good agriculture; 2) Education is the path to sustainable development; and 3) A healthy environment is mandatory to ensure a healthy future" (AHEAD website). Following an invitation from the Gambian government in the mid-1990s, AHEAD has provided summer youth leadership camps in the Gambia which include workshops on self-esteem, communication, conflict resolution, health (including family planning, STDs, first aid), environmental studies, and provides opportunities for Gambian students to visit the hospital and national library. Both AHEAD programs to take summer volunteer groups and occasionally place volunteers for 6-12 month periods. Summer volunteer programs are led by the Williams (to Tanzania) or by Malcolm Gee (to the Gambia). The Williams travel to Africa several times a year and maintain a Tanzanian staff in Mwanhuzi, the District seat of Meatu.

In Summer 2001, conflicts between AHEAD and the volunteer group were a regular part of the learning process. Mama Williams is a strong woman, with strong opinions, who at times, clashed with a group of (mostly young) women with occasionally different ideas. Bob Metcalf, a volunteer whose special status as a solar cooking 'expert' and microbiologist (See Chapter 3) added emotional distance, expressed this notion:

> [Y]ou know because you can't communicate too well here, there are these ups and downs. And Mama Williams is a very strong woman and if you volunteer then you are strong too. And there are times when she is in charge and she is going to do things her own way, and I think there are better ways to do things, sometimes that are more logical. But hopefully out of this, those bumps are not going to mar the whole journey
>
> And I'm amazed too. Elvira is on my board, on my Solar Cookers board too, and there are plenty of times that I wonder if she thinks that I'm doing okay. I have these doubts also, even though – I've been dealing with things and she's not overtly complimentary about things and doesn't go out of her way to reinforce, to say how glad we are to have you here, but as useful as you've been, that's her way of doing things, though sometimes you like a few strokes, You know, you've

done some things and they're short on coming and so that gets kind of challenging, but when you look at all she and her husband have done, I also admire her like that and she obviously feels that my contribution is useful.

Metcalf argues that regardless of any interpersonal conflicts, AHEAD's contributions to health in Meatu and the Williams' protection of the place and people they served superseded any general tension.

Theoretical Influences

Despite a summer in a rural Tanzanian 'village' in the Meatu District, I claim little ethnographic understanding of Tanzanian life. The 'culture', that I 'interrogated' is small and comprised of AHEAD leadership, western volunteers, and AHEAD's Tanzanian staff. I do analyze the interlocution of AHEAD and the women served by its health programs, but to be clear this is not an ethnography of life in the Meatu District. This thesis is, rather, an account of one NGO analyzed in part through ethnographic methodology. My eight weeks with AHEAD do not qualify me as the organization's ethnographer.

This thesis continues the project of anthropology of science and technology. Anthropologies of science and technology have included Downey's (1998) ethnography of computer engineering, Martin's works on reproduction (1987) and immunology (1994), Rapp's (2000) work on amniocentesis, Traweek's (1988) research on physics, volumes edited by Hess and Layne (1992), Downey and Dumit (1998), and Davis-Floyd and Dumit (1998), as well as Latour and Woolgar's classic *Laboratory Life* (1979). On the anthropology of science and technology, Downey (2001) writes, "Key categories of projects include juxtaposing shared systems of cultural meaning, following flows of metaphors back and forth across the boundary, and retheorizing or relocating the boundary itself in ways that reconnect science and technology to people." In my analysis of AHEAD, I discuss healthcare, technology transfer, development, and volunteerism with the goal of elucidating the connections of medicine and technology to people. A close look at the work of healthcare professionals in a non-western setting suggests that medical pluralism is at work. I attempt to humanize both technology transfer and development, by looking at the motivations of a scientist, constructed as an 'expert' by AHEAD. I use globalization as both a metaphor for the "flow of information, goods, capital and people across political and geographic boundaries" (Daulaire 1999: 22) and as a means to conceptualize AHEAD volunteerism as a form of globalization on the ground.

My work is theoretically informed by a number of sources. Rather than including an explicit 'theory chapter,' I have chosen to begin each chapter with a theoretical discussion of relevant concepts and then move to ethnographic analysis. In Chapter 2, Weighing Babies, Planning Families: AHEAD as a Primary Health Care Project, I begin by examining the Tanzanian Health System drawing heavily on the work of Lucy Gilson (1995). As I narrow my lens to explicitly at AHEAD's health practice in Meatu, I argue that AHEAD nurses practice "medical pluralism" (Meade and Earickson 2000). By combining differing knowledge systems, including western biomedical training, WHO protocol, family planning through contraceptive technology, traditional birthing practices, ancient Chinese conception lore, and an overall emphasis on Sukoma culture, AHEAD's health initiatives take on a unique and pluralistic form. While patients do not select from these methods – by visiting Health Outreach, they have already chosen 'non-traditional' healthcare – they are exposed to all of them in a co-mingled and uniquely local form.

Throughout Chapter 3, Does Development Have to Be a Dirty Word?, I interrogate the relationship between the anthropology of development and development anthropology, reflecting on the history of the invention of development. This broadens my focus as I examine the AHEAD project in a development context. After interrogating economic theories of development from Linear-Stages-of-Growth to structural adjustment, I examine critiques of development ranging from the dependency argument proffered by World Systems theory to post-development as advanced by Arturo Escobar. Escobar (1995, 2000) argues that development is a hegemonic and teleological 'discourse' that produces and legitimates a 'First World/Third World' dichotomy. I offer critiques of Escobar's work from the field of development anthropology, a field bent on shifting the focus of development from economic growth to sustainability. Crewe and Harrison (1998) and Gardner and Lewis (1996) offer ethnographic accounts of development as a means to articulate the experience of development on the ground. Feiring's (2000) notion of the 'schizophrenia' of development anthropologists who simultaneously critique and advocate development offers inspiration for my analysis of Bob Metcalf's work on water quality testing and solar pasteurization. Following Hess (1995), I argue that Metcalf's work straddles the divide between high and low technology.

In Chapter 4, Volunteer Capital: Globalization on the Ground, I look closely at the literature of non-profit and voluntary action research, as advanced by David Horton Smith and

others which provides me with an academic ground with which to investigate volunteerism. While I often find NPVAR to be void of qualitative details, the discipline offers a helpful starting point for thinking about volunteerism. In addition, I examine both accounts of volunteerism and guidebooks for fledgling medical volunteers. Bourdieu's (1986) "The Forms of Capital" provided me with the impetus for my notion of 'volunteer capital,' a concept that encapsulates both the 'expertise' of international volunteers and volunteer 'value' as agents of globalization. Appadurai's (1996) notion of the "scapes" of globalization, Jameson's (1998) articulation of the communicational aspects of globalization, Harvey's (1989) account of space-time compression, Buroway's (2000) notion of "global ethnography", and Daulaire's (1999) theorizing of the flows of globalization allowed me to sift through the many definitions of globalization. Drawing on these theoretical frameworks, I argue that AHEAD is both a product of and pathway of globalization, through which 'volunteer capital' is exchanged for 'experience.' Finally, in Chapter 5, I offer a brief articulation of my entire argument, which read across these chapters suggests a movement from the extreme local of AHEAD's health outreach in the Meatu District to the global movement of international volunteers. In this sense, I offer an account of 'Globalization on the Ground' seen through the lenses of health, development, and volunteerism.

Methodology

Methodologically, the thesis relies on global fieldwork as conceptualized by Buroway:

> To be a global ethnographer is one thing; to do global ethnography is another. We had to rethink fieldwork, releasing it from solitary confinement, from being bound to a single place and time. We had to endow fieldwork with the flexibility to adjust to the space-time coordinates of the subject population. We had to self-consciously combine dwelling with traveling (2000: 4).

I began my research at a three-day orientation session in Rockville, MD, and then traveled with several of the volunteers to Dar Es Salaam. After a week in Dar, the volunteer group including AHEAD founder-directors, Irving and Elvira Williams, traveled by train to Shinyanga town, and finally to the Meatu District. At the end of the work period, the volunteers traveled as tourists to the Serengeti, Arusha, and finally to Dar/Zanzibar. The research was truly multi-site as researcher, project leaders, and volunteers adapted to different cultural environments.

I was a true participant-observer – I served as a volunteer, engaging in public health and cultural exchange work and living day-to-day with the volunteer group. I interviewed several of

the volunteers and one AHEAD employee formally and the rest of the group informally on numerous occasions. The group of non-Tanzanian volunteers (including the Williams and myself) fluctuated between 9 and 6 people, though a total of ten participants were involved. Demographically, three volunteers are of European descent, five are of African decent, one is Asian/Euro-American, and one is Latino. Eight of the volunteers are female and all, but one, are American citizens. An eleventh volunteer was a local Tanzanian from the village of Mwanhuzi. I also observed and interacted with AHEAD's paid Tanzanian staff members: a project coordinator, two nursing assistants, two nurses, two nurse-midwives, and a driver/water specialist. I have used pseudonyms for all but three of these individuals. I refer to Elvira and Irving Williams as Mama and Baba Williams. In Tanzania, it is appropriate to call all married people (with children) Mama or Baba (Mother or Father). Typically, Mama or Baba is followed by the name of one's firstborn child, such that my mother would be known as Mama Amy. A miscommunication, regarding a volunteer named William (who many people assumed was the Williams' son) has led to the 'naming' of the Williams as Mama and Baba Williams. I also explicitly name Dr. Robert (Bob) Metcalf, of Solar Cookers International, because I draw heavily his own writings on his work as a water pasteurization 'expert', solar-cooker, and microbiologist. Fieldnotes, personal letters, photographs, and AHEAD's promotional materials serve as texts, appropriate for ethnographic analysis.

Ethnographic methodology provide an opportunity to look at international volunteerism from the perspective of the volunteers and as a "real-life example" of practices that have been quantified in the literature of Non-profit and Volunteer Action Research (NPVAR). Ethnography allows for a multi-textured analysis of culture (in the case AHEAD), which relies on the senses (Stoller 1989) as tools to make visible categories that may otherwise be hidden (Downey 2001). Ethnography provides both reader and writer the opportunity to deeply understand a cultural experience as it unfolds, providing solid interpretation for events and meanings that may be difficult to understand for non-members of the culture. Uses of ethnography are expanding from the remote village to the global marketplace and beyond. Buroway has suggested that ethnography, once the analysis of the extreme local, is appropriate for the analysis of the transnational or global:

> [G]lobalization [can be understood] as the recomposition of time and space – displacement, compression, distanciation, and even dissolution. Here lies the connection to the ethnographer, whose occupation is, after all, to study others in

their "space and time." In entering the lives of those who they study, ethnographers attune themselves to the horizons and rhythms of their subjects' existence. The ethnographer has, therefore, a privileged insight into the lived experience of globalization. On that basis alone, if ethnography can establish a terra firma and deploy new cognitive maps, it can shed light on the fateful processes of our age – processes that leave no one, least of all ethnographers, untouched (2000:4).

Analyzing AHEAD as a culture is particularly strange, because the flow of new volunteers to an existing social network requires immediate cultural adaptation and adherence. This is contrary to the notion that "[c]ulture is public because meaning is" and thus that "culture consists of socially established structures of meaning in terms of which people do such things as signal conspiracies and join them or perceive insults and answer them" (Geertz 1973: 12-13). The culture that was created by and within AHEAD in the Summer 2001 was a spatio-temporal snapshot, a global moment. This may seem a bit dramatic – after all, as volunteers, we shared our western-ness, and the Tanzanian staff could use their experiences with other western volunteers as a cultural template for understanding us. I believe the process to be more complex, more global – we were westerners learning to live in Tanzanian national culture, then to live in Sukoma ethnic culture, as we struggled to grasp the hierarchies and roles of AHEAD – in some ways, we subordinated our own experiences to produce something new. We were agents of globalization, but globalization also acted upon us.

Studying volunteers as agents of globalization furthers the project of global ethnography and addresses Hackenberg's suggestion, that globalization could become a touchstone policy concept for applied anthropology. "Globalization, when grounded empirically at *both* intercontinental and local community poles, and connected by verifiable linkages, with consequences observed over time, could become the touchstone conceptual frame for revitalizing applied anthropology" (1999:212).

The AHEAD project is about globalization of healthcare – western dollars fund a public health project under invitation by the Tanzanian government. AHEAD volunteers use cultural capital and economic resources as an unconscious means of making global rural Tanzanian life. Volunteers promote an agenda of cultural change, exchange by their very presence in isolated Mwanhuzi and offer an economic boost to an area that receives its minimalist income from cotton crops.

Introduction

Perhaps the simplest means of understanding AHEAD and its mission in Tanzania is to read' the project as a 'primary health care' provider. After all, AHEAD's 'founding tale' is the narrative of Dr. Irving Williams, an African-American pediatrician who wanted to improve Maternal and Child Health (MCH) services in Tanzania. By all accounts, the project provides care to seventeen villages (in the Meatu District) that would otherwise go without medical services through its 'Health Outreach' activities. In order to contextualize AHEAD's work as a primary care provider, I begin this chapter by briefly describing the Tanzanian national context. I draw heavily on the work of the UN Development Project (UNDP) Human Development Indicator as a way to quantitatively assess Tanzanian health. I then narrow the focus of my analysis to the Meatu District located in the Shinyanga Region. In characterizing health and economic well being in Meatu, my methods are qualitative, relying both on my own ethnographic recollections of Mwanhuzi Town (the District Seat) and other villages that I visited and photographed, and Participatory Poverty Assessments (PPA) for the Shinyanga Region (December 1998) and Nzanza Village in Meatu (May 2002.) Finally, I examine the practice of Health Outreach by AHEAD focusing on baby-weighing, immunizations, antenatal care, nutritional counseling, and family planning. I use fieldnote and interview data to characterize much of AHEAD's Outreach activities, but rely heavily on the Tanzanian Demographic Health Survey and other sources in discussing family planning practices in Tanzania at large. While Halfon has been largely critical of the relationship between demography and the overpopulation discourse "which contingently links together many rhetorics, practices, institutions, objects, and categories (1997: 121)," I use these data simply because they are the only information that I have about contraceptive use in Tanzania as a whole.

The Tanzanian Health Care System: Prevention through Primary Care

Tanzania has a population of about 35 million, which is increasing at about a 2.3% growth rate (UNDP 2002). The Annual UNDP Human Development Report ranked Tanzania 156th of 174 nations with respect to human development. The Human Development Index (HDI)

is "[a] composite index measuring average achievement in three basic dimensions of human development-a long and healthy life, knowledge and a decent standard of living" (UNDP website). Table 2.1 compares select development indicators for Tanzania, Sierra Leone (the nation ranked lowest for HDI), South Africa (as a 'more developed' Sub-Saharan African nation), and the United States. It is important to note that these numbers are provided only as a sort of relational apparatus and not as hierarchical indicators of 'progress.'[1]

Table 2.1 demonstrates both the successes and crises of the Tanzanian Health Care system. Tanzania enjoys a relatively high immunization rate (87% for TB and 73%), high access to sanitation (90%), but poor access to safe water (54%). Compared to Sierra Leone, a nation that has experienced decades of civil war and is thought to be far less developed (HDI Rank of 173 vs. 151), Tanzania falls short with respect to physician/population ratio and is roughly equivalent for per capita health expenditures ($8). Wealthier, more literate Tanzania actually has higher percentages of malnourished citizens and children who are underweight and under height for their age than Sierra Leone. Despite a high literacy rate of over 75%, school enrollment at all levels remains at less than a third of the potential pupil population. Low education rates, poor child health, low life expectancy, and low GDP per capita act to produce a society that remains impoverished – more than half of the population lives on less than $2 per day (1740 Tsh.)

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[1] I am responding to the critique in Ehrichs, L. (2000: 7), that development "continues to be a top-down ethnocentric approach, which treats people and cultures as 'abstract concepts, statistical figures to be move up and down charts of 'progress'.' "

Table 2.1: Select Indicators for Tanzania, Sierra Leone, South Africa, and the USA

	Tanzania	Sierra Leone	South Africa	USA
SELECT DEVELOPMENT FACTORS				
Human Development Index Rank 2002 (of 173)	151	173	107	6
GDP per capita (PPP US$) 2000	$523	$490	$9,401	$34,142
Adult Literacy Rate (%, Age 15 and Above) 2000	75.1%	36%	85.3%	99%
Combined Primary, Secondary, and Tertiary Gross School Enrollment Ratio (%) 1999	32%	27%	93%	95%
Traditional Fuel Consumption (as % of total energy use) 1997	91.4%	86.1%	43.4	3.8%
SELECT DEMOGRAPHIC FACTORS				
Total Population (millions) 1975	16.2	2.9	25.8	220.2
Total Population (millions) 2000	35.1	4.4	43.3	282.2
Change in Total population (% Change) 1975-2000	116.7%	51.8%	67.8%	27.2%
Total Fertility Rate (per woman) 1970-1975	6.8	6.5	5.4	2.0
Total Fertility Rate (per woman) 1995-2000	5.5	6.5	3.1	2.0
Change in Total Fertility Rate (% Change) 1970-2000	-19.1%	0%	-42.6%	0%
Life Expectancy at Birth (years) 2000	51.1	38.9	52.1	77
Infant Mortality Rate (per 1000) 2000	104	180	55	7
Probability at Birth of Not Surviving Until Age 40 (% of cohort) 1995-2000	33.3%	51.6%	24.4%	3.9%
Probability at Birth of Not Surviving Until Age 60 (% of cohort) 1995-2000	52.6%	68.6%	44.8%	12.8%

Table 2.1: Select Indicators for Tanzania, Sierra Leone, South Africa, and the USA (Continued)

SELECT HEALTH INDICATORS				
Population Using Improved Drinking Water Sources (%) 2000	54%	28%	86%	100%
Population Using Adequate Sanitation Facilities (%) 2000	90%	28%	86%	100%
One-year-olds Fully Immunized Against Tuberculosis (%) 2000	87%	73%	97%	---
One-year-olds Fully Immunized Against Measles (%) 2000	72%	62%	82%	92%
Oral Rehydration Therapy Use Rate (%) 1994-2000	21%	28%	----	---
Contraceptive Prevalence (%) 1995-2000	24%	---	56%	76%
Births Attended by Skilled Health Staff (%) 1995-2000	36%	42%	84%	99%
Physicians (per 100,000 people), 1990-1999	4	7	56	279
Health Expenditure per capita (PPP US$) 1998	$8	$8	$230	$4271
Undernourished People (as % of total population) 1997/1999	46%	41%	---	---
Children Under Weight for Age (% under age 5) 1995-2000	29%	27%	---	1%
Children Under Height for Age (% under age 5) 1995-2000	44%	34%	25%	2%
Infants with Low-Birth Weight (%) 1995-2000	11%	22%	---	8%
SELECT POVERTY INDICATORS				
Population Below Income Poverty Line (%) $1 a day (1993 PPP US$) 1983-2000	19.9%	57%	11.5%	N/A
Population Below Income Poverty Line (%) $2 a day (1993 PPP US$), 1983-2000	59.7%	74.5%	35.8%	N/A

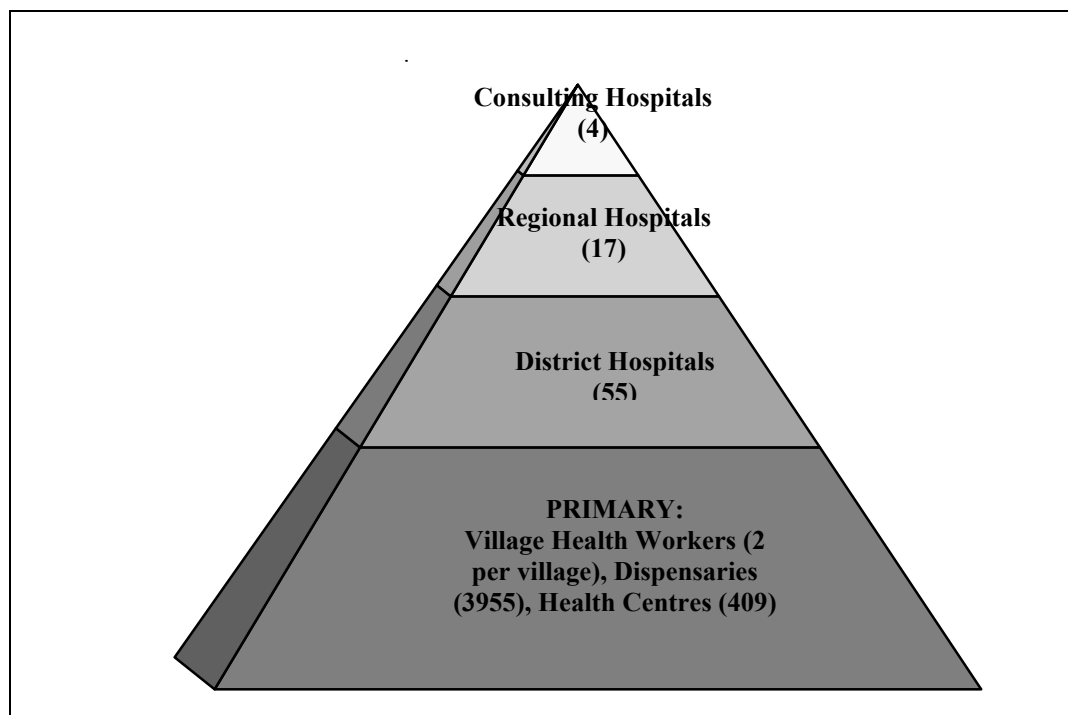**Source: adapted from the UN Human Development Report 2002**

Historically, Tanzania's health care structure has been well defined and relatively well funded. "In the twenty years following Tanzanian independence [1961-81] the proportion of the national health care allocation directed towards rural health care doubled, whilst the proportion of the population living within 10 km of a health unit increased to 90%, and within 5 km to 70%" (Gilson, 1995: 696). Beginning in the 1980s, however, healthcare funding has decreased in real terms.[2] In a 1993 speech, the Minister of Health stated that to adequately meet healthcare needs, the government would have to spend at least three times more than its current allocation, or 14% of its total budget (Gilson 1995). The Tanzanian health sector is increasingly reliant on external sources of funding. Both the Expanded Programme[3] of Immunization (EPI) and Essential Drugs Programme (EDP) are "almost entirely donor funded and there is concern about the sustainability of primary health care programmes" (Gilson, 1995: 697). Problems with the primary care system stem from shortages of supplies, drugs, and vehicles, as well as inadequate supervision, isolation, and compensation of health workers (Gilson 1995). Despite decreases in real spending, Tanzania continues to emphasize primary care as demonstrated by its pyramidal healthcare scheme:

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[2] Real per capita spending decreased by 46% between 1978 and 1988. Gilson, L. (1995). "Management and Health Care Reform in Sub-Saharan Africa." Social Science and Medicine 40(5): 695-710.

[3] As a former British colony, Tanzania uses British English for much of its health terminology. Therefore, I use programme instead of program, centre instead of center, and antenatal instead of prenatal throughout this chapter.

Figure 2.1: The Tanzanian Healthcare System (2000)– Government Facilities Only[4]

Consulting Hospitals (4)

Regional Hospitals (17)

District Hospitals (55)

PRIMARY: Village Health Workers (2 per village), Dispensaries (3955), Health Centres (409)

Source: Data from www.tanzania.go.tz.html

Primary care begins with village health services, which "essentially provide preventive services which can be offered in homes. Usually each village Health post have [sic] two village

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[4] Many health facilities in Tanzania are administered by volunteer/religious organizations, private corporations, or "parastatal" funds. The Tanzanian Health Pyramid refers specifically to health facilities administered by the government.

Facility	Agency				
	Govt.	Parastatal	Vol/Rel	Private	Others
Consultancy/Specialized Hospitals	4	2	2	0	---
Regional Hospitals	17	0	0	0	---
District Hospitals	55	0	13	0	---
Other Hospitals	2	6	56	20	2
Health Centres	409	6	48	16	---
Dispensaries	2450	202	612	663	28
Specialized Clinics	75	0	4	22	---
Nursing Homes	0	0	0	6	---
Private Laboratories	18	3	9	184	---
Private X-Ray Units	5	3	2	16	1

 Source: Government of Tanzania Website

health workers chosen by the village government amongst the villagers and be given a short training before they start providing services" (Government of Tanzania Website). Dispensaries are supposed to serve between 6.000 and 10,000 people while Health Centres are expected to care for approximately 50,000 people (Government of Tanzania Website). Health care at the primary level is supposed to be free though in practice, fees may be levied and bribes may be expected for even the most basic of services. Nzanza, a village in the Meatu District, lacks a dispensary. Villagers walk 5 km to the Mwandoya Health Centre where they often pay for health services and medication:

> This argument is contrary to the Health Policy, which states that the vulnerable people such as pregnant women, children less than five years, and patients with chronic illnesses such as T.B are exempted from paying cost sharing in all public health facilities. Although health services in all the health centres and dispensaries in the Shinyanga region are free including Mwandoya health centre, practically they are not free. Most people have continued to access services only after offering bribes at the Mwandoya health facility and thus services are not free. The staffs [sic] are notoriously corrupt, a fact also known at the district [level] (Temu, et all 2002: 15).[5]

Secondary and tertiary care also fall below expected and desired levels of accessibility. Each region is supposed to have a Regional Hospital (providing specialty care), while each district is supposed to have a District Hospital (providing care beyond the Health Centre level). However, only 17 of 25 regions have Regional Hospitals; the case is more severe at the District level, the government only administers 55 District Hospitals, even with 13 volunteer/religious facilities at this level of care, at least 57 (of 125) Districts go without hospital services (Government of Tanzania Website).

Narrowing the Health and Human Services Lens – the Meatu District

The Meatu District is located in the drought-ridden Shinyanga Region of Tanzania. If Tanzania, as a whole, struggles with poverty and healthcare inadequacies, then Meatu's troubles are far greater – the Meatu District lacks basic infrastructure and is primarily a pastoral and

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[5] The United Republic of Tanzania President's Office – Planning and Privatization 2002/3 Tanzania Participatory Poverty Assessment Site Report for Nzanza Village (Temu, et all) is government report written in English by Tanzanians. While Swahili and English are both official languages of Tanzania, documents written in English are often ungrammatical and contain spelling errors. Rather than editing or revising this narrative, I reproduce quotes from the Nzanza Report in their original language.

subsistence crop economy. The Meatu District is comprised of 29,701 households, which

support 376,724 cattle (or 12.7 per household) (Temu, et all 2002). Most of Meatu's residents

are members of the Sukoma ethnic group for whom "[c]attle are a traditional symbol of wealth

and status, an asset that can be converted into other assets such as money, food and farm

implements. Cattle are also used for paying bride-price[6], and byproducts from cattle are used by

the family as a source of nutrients and income" (Regional Government of Shinyanga 1998: 13).

The Wasukoma rarely sell or slaughter cattle, thus school and medical fees as well as non-local

foodstuffs must be purchased using income from sale of cotton. There is a dearth of jobs.

"[M]ost of the 200,000 Meatu residents are subsistence farmers raising maize and sorghum to eat

and cotton as a cash crop. The average income per day in Meatu is around 200 shillings – about

25 cents or a loaf of bread" (Metcalf 2000: 3). This assessment of Meatu income suggests that

most Meatu residents are among the 19.9% of Tanzanians earning less than $1 (870 Tsh) per day

(UNDP 2002). The few individuals earning wages are government officials, medical staff,

schoolteachers, extension workers, and employees of NGOs operating in Meatu. The PPA team

assessed Nzanza, a Meatu village, as follows:

> [The] vulnerability of Nzanza community is triggered largely by high levels of
> corruption and people's inability to make use of their wealth specifically cattle to
> improve their living standards. It was found that although the people in Nzanza
> village have wealth in terms of large number of cattle, money after sale of cotton
> and earning of millions of shillings through mining, the living standard is still
> very low, characterized by poor housing, poor clothing, unplanned families,
> children not sent to private secondary school or vocational training, early
> marriages and in some cases food insecurity (Temu, et all 2002: 6).

To earn cash, Meatu residents grow cotton , earning one of the lowest government prices[7]

(150-175 Tshs or $.17-$.20) per kilogram of the 16 cotton-growing districts in Tanzania

(Tanzanian Cotton Corporation Website). The difficulty of raising cotton in Meatu inspired the

production of *Hanging By a Thread: Trade, Debt and Cotton in Tanzania* (1992), a Leeds

Development Education Centre social studies activity pack for 13-19 year olds. *Hanging by a*

Thread uses photographs from five Meatu villages (Mwabuzo, Paji, Sumve, Bubombi, and

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[6] The more accurate term is actually bridewealth or childwealth; bridewealth is the East African pastoral
custom, by which a future son-in-law (and his father) exchange cattle for a bride. Daughters are valued in
this system, because they are seen as household assets, rather than liabilities.
[7] Meatu cotton farmers may earn more per kilogram on the 'open market', but may have to hold off sales
till the end of the harvesting period (May-July) to earn higher prices.

Igoweko) to raise "awareness of rural life in Tanzania (Borowski and West: 1)" and the "Meatu Maze" to teach students about economic decision-making in the district. The Meatu Maze Scenario reads as follows:

> You and your family are farmers in Meatu District of Tanzania. Traditionally you have grown sorghum (a type of grain) or rice as staple FOOD crops for your family. You also keep livestock, cattle, and goats, which are a store of wealth and act as a mobile bank account. Any extra sorghum or rice you may grow can either be sold or exchanged for livestock to other families in Meatu District.
> During colonial times cotton, a CASH crop, was introduced into Tanzania…
> The size of your farm is about 4 acres. You normally grow 1-2 acres of food crops for your family. The rest of your land can be used to grow extra food crops or cotton which could increase your wealth but will mean extra wealth for you and your family (Borowoski and West: 10).

Students then make decisions regarding crop production and intensity, allocation of school fees, while responding to erratic weather, child health concerns, and poverty. Each student is given a stack of cow cards and may earn or lose cards depending on his or her economic choices. While this game is meant to encourage British teenagers to think critically about rural economics, the "Meatu Maze" is illustrative of the hardships of Meatu residents. Young men without sisters (to bring in bridewealth) may forgo secondary education in order to purchase cattle with which to procure their own future wives. Parents may opt to remove children from school after primary school in order to use their labor in the cotton fields.

> The cotton market has recently been deregulated:

> Until early 1990s the sole cotton buyer in Shinyanga region or Meatu district was SHIRECU (Shinyanga Regional Cooperative Union). The then Tanzania cotton marketing board set the price. Following government reforms, the market or a number of private buyers has come into the region to compete with SHIRECU in buying cotton. Some of these buyers have constructed their own ginneries in the zone. During the discussion with the community, many people noted that the market is now more superior over the public institution-SHIRECU. They argue that the market offers competitive prices. Although the price offered during the harvesting season is low, it gradually increases depending on the market forces of supply and demand. As such in the year 2,000/01, the market or business people purchased one kilogram of pure cotton at between Tshs 110/= to 250/=. SHIRECU bought at only Tshs 150/= per kilogram in the same year but on credit and sometimes delayed payments for several months (Temu, et all 2002: 13).

The opening of the (private) Mwanhuzi Ginnery has impacted cotton sales in several ways. The price of cotton is much more variable because pricing is based on demand – farmers who sell

earlier in the season may earn less per kilo then farmers willing to wait for higher prices. However, transportation costs are often lower, because farmers have a much lesser distance to travel with their cotton – few Meatu farmers own lorries (trucks) or ox carts, so they pay dearly for the transportation of their cotton stores. Cotton is only harvested during the dry season, thus families may earn the bulk of their annual income in the short harvest season of May to June, picking approximately 80kg per day (per person) (Borowoski and West: 10). Meatu has also become the site of an award-winning Swiss[8] organic cotton project. Over 1900 farmers in Meatu and Maikaal India use biodynamic cotton farming techniques to produce organic cotton, which is then spun into BioRe yarn and used in the production of Naturaline Textiles:

> Remei AG and Coop have received the International Environmental Award for Sustainable Development Partnerships in recognition of their efforts in developing the Naturaline organic-cotton projects in India and Tanzania. The award constitutes an appreciation of the exemplary nature of committed co-operation between Remei AG and Coop, and its sustainable impact on the entire value chain from farming through production and processing to its distribution (Remei AG Website).

Under the rhetoric of 'development', the BioRe cotton buyers, the Mwanhuzi Ginnery, the Cullman and Hurt Community Wildlife Project, Dutch Rural Development Project (DRDP), ICS, and AHEAD introduce 'outsiders' (both Tanzanians from outside of Meatu and westerners) to the Meatu District. These organizations bring vehicles (Toyota Land Cruisers), cash, and wage-jobs – they alleviate some of the hardships of Meatu life, while increasing social stratification. In Mwanhuzi, petty shopkeepers, government employees (including District nurses and teachers), and employees of the NGOs and Ginnery are the few people who have access to wage labor – all others must rely on sale of cotton or other agrarian products for cash.

Meatu is incredibly flat, dusty, and rocky. The landscape is quite barren, covered with brush and the occasional baobab or acacia tree. Residents live in small mud brick or concrete houses with thatched or (the more desirable and expensive) aluminum roofs. "There are no paved roads in the district, and transport is by foot or bicycles capable of holding hundreds of

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[8] Interestingly enough I heard early on in my stay at Mwanhuzi about the Germans who would give you a higher price for your cotton if you agreed to go without chemicals. I then confused the BioRe logo, which I saw on the Remei AG vehicles with the Biore skincare line. Internet research demonstrates that Remei AG is a Swiss firm. On a further point, the owners of the Mwanhuzi Ginnery struggled when ginning cotton for Remei AG, because they had to fully clean all of the machinery to remove traces of non-organic cotton.

pounds of goods" (Metcalf 2000: 3). Many of the roads are impassable during the rainy season, as they run through creek beds that are bone dry in the winter (May-August.) During my fieldwork, Mwanhuzi (the district seat) was the only village in the district with electricity[9] and was not wired for telephone service. Water sources (in the dry season) are open holes dug in dry riverbeds that are shared with livestock, and as a result are heavily contaminated with fecal coliforms. Water as a health and development issue is the focus of Chapter 3.

The AHEAD Project and Health in Meatu

Access to health care in Meatu is a problem. While Mwanhuzi, the District seat does have a hospital and a second hospital is available in the northern part of the District, many villages lack health centres or dispensaries. According to Mama Williams, after working for a decade in Shinyanga Rural (another District in the Shinyanga Region), AHEAD was invited by the Tanzania government into the newly formed Meatu District in order to improve access to healthcare and service delivery. AHEAD's nurses provide health outreach to 19 villages, visiting a total of 17 sites. Nzanza village, which is located in Meatu, is not one of these sites:

> Under the health sector reforms introduced in late 199O's, special attention is paid to gender and extreme vulnerable social categories across the country. Along with this line, the poorest people including women and children and the elderly have been exempted to pay fees in all public health facilities. But implementation of these initiatives has been severely affected by the inadequate supply of drugs to the public dispensaries and health centres. At Nzanza village, there is no dispensary it is only now that the village government in collaboration with the community has planned to construct one. Meanwhile they have to walk 5 km to access such services at the nearby village at Mwandoya Health Centre, which is supplied with medical kits once per month. The kit medication is generally inadequate and is enough only for about 15 days per month. During this period, usually there are many patients seeking health care. However they end up getting consultation services because there are no drugs. Patients are normally advised by the medical staff to buy their own medications, which are also not available in the village. Only few financially capable people can afford drugs and the most vulnerable groups such as the elderly and orphans suffer most. As an alternative one can go for the traditional medicine, borrow money from friends or relatives in order to bribe the medical staff to access health care services or wait for your death. In the course of individual interviews, one youth noted that "*if one has no money one would suffer and thus await death*" because all public services now are sold like any other goods in the market. According to him under the market

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[9] Mwanhuzi has had electricity since November of 2000.

oriented economy all things are determined by market forces of supply and demand (emphasis in original, Temu, et all 2002: 15).

Healthcare provided by AHEAD nurses and volunteers is more preventive than the services of dispensaries and health centres. Specifically, AHEAD uses a "multi-disciplinary approach to primary health care" suggesting that health is more than the "prerogative of the medical worker," but requires the collaboration of the community (Mpanju-Shumbusho, Williams et al. 1995: 19). Using VHWs as assistants and liaisons, AHEAD's health outreach provides monthly primary care including the weighing and immunization of children under five, topical health lectures, nutritional counseling, family planning services, and antenatal (prenatal) care. While the AHEAD nurses have an office with a computer in the Mwanhuzi District Hospital and use the hospital refrigerator (one of 5 or 6 in town) to store vaccines, they are understood as separate from the District healthcare network. The Tanzanian AHEAD staff is comprised of Mboje, water specialist/driver; Elisa, the project coordinator (who is also a nurse-midwife and Councilwoman); Fatima and Dorga, nurse-midwives; Agnes and Regina, nurses, and Joy, a nursing assistant.[10] As NGO employees, they have access to higher salaries and more equipment – the lack of medicines described in the Nzanza Report seemed to be less of an issue in the 'AHEAD villages.' Non-outreach activities include administration of the Teen Action Program (TAP), work with village-level primary health committees (PHCs), and school health initiatives in standards one and two. The nurses also write progress reports, plan health outreach lessons, and conduct training for village health workers.

Meatu's district goals for healthcare demonstrate the need for improved health care service delivery. At a volunteer briefing in Mwanhuzi, Elisa, AHEAD's Project Coordinator, presented these goals which seemed contrary to both Gilson's description of Tanzania's primary health successes and national health statistics:

- By 2005, everyone will have basic healthcare access within 10 km
- By 2015, reduce infant mortality from 215/1000 to 180/1000.
- Vision – every village will have dispensary

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[10] Expressed in American terms, nurses are probably equivalent to Registered Nurses (RN), the nurse assistant to a Licensed Practical Nurse (LPN), and the Nurse-Midwives to Nurse Practitioners (FNP or WhNP). However, the length of study is far shorter than the American equivalents.

Infant mortality at the national level is a high 10% (104/1000) of births, however the rate of infants dying before their first birthday in Meatu is more than double the national figure. Deaths from water-borne illnesses including cholera, which claimed 464 Meatu residents in the first quarter of 2001, continue to proliferate, while malaria and other infectious diseases weaken and sometimes kill community members.

Despite a national commitment to the training of village health workers, the 34 VHWs working in the AHEAD villages are AHEAD trainees. They are essentially volunteers[11] – the villages that they work in are often unable to pay them other than in kind. Mama Williams explained that AHEAD is able to maintain long-term relationships with VHWs, because the NGO provides continual training opportunities. In non-AHEAD villages, VHWs are often unwilling to continue their service, frustrated by the lack of financial compensation, training opportunities with the government, and resources available to them. The VHWs organize AHEAD outreach visits, store scales, keep village logs, as well as collect and organize children's health cards on Health Outreach Days. AHEAD's staff has clearly been successful in increasing patient contact. "AHEAD's Health Outreach had brought the Meatu District from the bottom to the Number 1 District in the Shinyanga Region in primary health initiatives" (AHEAD 2000: 1). In addition, UNICEF noted that in 2000, Meatu had 98% immunization coverage (AHEAD 2000: 1), far higher than typical coverage in Tanzania or the US. AHEAD's work seems to demonstrate a commitment to HFA2000[12] by promoting healthcare from below (Carpenter 2000).

Medical Pluralism in Health Outreach

Between July 2 and July 17 of 2001, I was able to accompany and assist AHEAD's Health Outreach team on 10 of 12 preventive visits to villages throughout the District. AHEAD volunteers were often divided between villages, so I did not visit all nineteen villages served by AHEAD. Outreach days began with the meeting of the volunteers at the 'AHEAD house,' a three room building that functions as the AHEAD staff's main office during the vast majority of the year – during the 2001 volunteer season, it also served as Mama and Baba Williams and

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[11] The VHWs function as a "different " category of person then the AHEAD 'volunteers.'
[12] Health for All by the Year 2000 initiated by WHO in the 1970s.

Carla's residence. While eating breakfast, Mama Williams briefed the volunteers about village(s) to be served and assigned our roles for the day. Around 9 am, the volunteers, Mama Williams, and the nursing staff would embark in AHEAD's Land Cruiser for villages up to two hours away. Packed with pressure cookers filled with vaccines, nutritional and educational materials, and other equipment, the AHEAD vehicle would arrive to large groups of women and children under five who had traveled up to 10 kilometers for outreach. Because the AHEAD villages typically lack dispensaries or health centres, outreach may take place in schoolhouses, government buildings, or under the shade of a large baobab or acacia tree in the village center. Mothers hold their children's health cards (which include the child's weight by month for his/her first five years charted onto a "health status graph" and dates of immunizations) and carry "weighing pants." [13]

Outreach begins with call and response singing by one of the nurses or Mboje, the water specialist/driver. As visitors, the volunteers are expected to stand and greet the women, saying good morning and our names in rudimentary KiSwahili or KiSukoma. Before baby-weighing begins, one of the nurses typically makes a participatory health education presentation. Topics may include malaria prophylaxis, diarrheal disease, sanitation, but always include a family planning message. Fatima, a nurse-midwife explained, "When we are doing health education, we talk about family planning. The first subject is chosen by the village, but another, the second subject, [is used to] teach the family planning." Village Health Workers (VHWs) and nurses collect the health cards and then weigh and chart each child, systematically screening out children whose nutritional status falls in the 'red zone' or consistently in the 'gray zone'[14] as well as children who need immunizations. A large scale with a hook (to connect to the weighing pants) is suspended from a tree or the rafters of a building. Each child's name is called by a VHW, nurse, or volunteer. Then the child is lifted and suspended by his or her weighing pants and the person weighing calls out the weight to the person who is charting:

> For the last two days, we've been out in the field doing health outreach in the
> villages. Yesterday, we went to one village where 3 villages worth of mothers
> and babies had gathered for baby weighing, immunizations, and prenatal/antenatal

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[13] My best description of weighing pants is cloth diapers with long suspenders, which are connected to hooks on scales.

[14] The health status charts are divided into three areas – green (healthy), gray (borderline), and red (malnutrition) based on weight/age ratios.

care. At first we just observed and hung out, but quickly the AHEAD nurses (who are Tanzanians and work in the villages all year round) gave us jobs and taught us how to do them. My job was to record each child's weight in kilograms on their health cards and then graph their weight progression to ensure that they were healthy (green) or to send their mother to a nurse if they were borderline (gray) or malnourished (red.) You also have to check their card for immunizations (polio x3, diphtheria x3, measles x1, and TB) and send the ones who need shots to the appropriate station. You should see these villages. The women greet you with songs of welcome and hang out all day in the shade of a big tree or the schoolhouse. You have never seen so many babies in your life – ranging from newborns to five year olds – and all strapped on their mother's or sister's backs in brightly colored cloths (either *kanga* or *kitenge.*) The range of colors is outrageous from the brightest purples, yellows, oranges to more subdued greens, browns, and blues. Yesterday we weighed 360 babies, today 216 (Letter to Brad Belo, 3 July 2001).

This process is chaotic and time consuming – while the children are well behaved, they often become cranky waiting in the hot sun without food or drink. Several scales may be in use and it is often difficult to keep track of which weight goes with each child. Mothers often wait all day for their children to be weighed and immunized. Women who desire family planning services, antenatal care, or nutritional counseling spend far longer at Outreach. Despite AHEAD 's commitment to baby weighing between zero and five years, Gilson (1995) suggests (following from Gerein and Ross) that child growth monitoring which took up 75% of the MCH workers' time (at her study site) is an unnecessary burden. The AHEAD staff would seem to disagree, despite its high time consumption, baby-weighing allows VHWs, volunteers, and nurses to assess immunization-need, screen for malnutrition, and potentially gain new family planning clients.

The AHEAD volunteer role was primarily to support the nursing staff and VHWs, filling in as needed. However, from the very beginning this created tension in our small community. In addition to Mama and Baba Williams, our group was comprised of six women and Dr. Bob Metcalf, a Sacramento State microbiologist and board member of Solar Cookers International. Jayne, a twenty-nine year old undergraduate studied film and African/African American studies student and had previously traveled to Kenya. A student who had just finished her freshman year, Kaylie was majoring in Environmental Science with Medical School aspirations. Carla, an evangelical Christian, is a retired podiatrist who teaches biology part-time at a community college. Karen and Maria were students about to begin their last semester of nursing school.

Finally, my role as a researcher was well defined, but as a volunteer at Planned Parenthood in Blacksburg, I had both a clinical and research interest in family planning, an interest that I had hoped to apply in Meatu. In short, many of us had a connection to healthcare and all of us were interested in the 'developing world.' Reasons for international volunteerism among the AHEAD group and others are more fully explored in Chapter 4.

As senior nursing students who had lots of clinical experience – Karen in emergency medicine and Maria in pediatrics – they expected to be more fully integrated into Outreach, providing both preventive and curative care. They had come to Meatu armed with two large boxes of medical supplies donated by their hospital at home. In actuality, there was little difference between the tasks that Karen and Maria completed at Health Outreach and the work done by the rest of the group. Maria explained her expectations:

> I didn't see it as all of us volunteering together. I thought there were different aspects of the organization, AHEAD, that everyone was kind of going into, that Karen and I were falling in to. Healthcare, nursing, immunizations, kind of things like that. That's what I thought. That's what I took it as. …go out to a village and be providing healthcare like getting into a little assembly line. I didn't know how they did it. … They'd give you the patients, you're assigned today to do immunizations or you're assigned to do weighing you know. Kind of the way, we do it in the States – you go first to weighing and then you get moved over to wherever you need to go. Or do you need to be seen by a doctor, you know that kind of thing. Kind of assessing the patient, [asking] "Okay, why are you here?"

If the two nursing students hadn't left Mwanhuzi after just two weeks[15], then their expertise as nurses might have been better utilized. Karen, in particular, was very self-righteous about her experience. She often felt unappreciated, as though Mama Williams and AHEAD failed to understanding the value of her nursing education. Prior to our journey to Meatu, after finding out that airfare was included in the "8-week volunteer fee," but not in the fee for her shorter trip, Karen became agitated, suggesting that AHEAD should be paying her for her experience, "I'm overqualified for this work, they should want me because I'm a nurse." This trend continued as we entered the field in Meatu. During a post-dinner meeting on June 28th, Karen explained, "I don't want to be an observer, I've done six years of standing around

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[15] Karen and Maria were college friends who had signed on with AHEAD for a shorter 4-week period, rather than the 8 week full program.

observing." From our arrival in Mwanhuzi, Mama Williams had made it clear that despite our assumptions that we would be *providing* healthcare during health outreach, our volunteer role was much more subtle – we might provide aid to the nurses or VHWs, but we were not Doctor's Without Borders, entering an area to provide dramatic change or quick solutions. In that same meeting, Mama Williams encouraged us to "take off our references" – from her perspective, none of the volunteers were ready to work in Mwanhuzi until we removed our status assumptions inherent in our differential educations. Mama Williams was essentially asking us to discount our social and cultural capital (Bourdieu 1990, 1998), a suggestion that seems tenuous in light of the evidence for the importance of forms of capital to international volunteerism that I provide in Chapter Four. What Mama Williams understood, and what became clear later to all of us, is that it did not matter what we knew or what 'expertise' we brought with us. In Meatu, we were all the same – *Wazungu*[16] without understanding of Sukoma culture, AHEAD's medicine, or an adequate understanding of our own context and meaning to the project. As I argue more fully in Chapter Four, it was our 'whiteness,' phenotypic or otherwise, that made us 'special' in Mwanhuzi not Karen or Maria's medical schools, my graduate work in Science and Technology Studies, or Carla's evangelism.

While at times, we functioned in a cohesive capacity fitting neatly into the outreach system and occasionally substituting for the nurses while they took much needed vacation or sick leave, it was difficult not to impose our western ideas of what healthcare should look like. In my 4 July fieldnotes, I wrote:

> Things ran very smoothly and we really accomplished the baby-weighing quickly, taking the time to sort the cards into piles of "babies" that needed malnutrition counseling or immunizations. Kaylie and I also took the time to *fix* some charts that *hadn't been logged or that had been done incorrectly*.

As a volunteer at a Planned Parenthood with rigid ideas about medical charting, I felt a need to correct health cards that seemed 'poorly' done – warnings by Mama Williams and the AHEAD staff that the VHWs rarely had formal education beyond the third grade led me to impose my

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[16] According to my Swahili Dictionary (Perrott 1992, originally 1965:55), *Mzungu* (plural *Waznungu*) translates as "a European." *Mzungu* is used for all whites, regardless of nationality, as well as Americans and Europeans who are not phenotypically white. The term has a more derisive usage, akin to *gringo*, than *Mwingereza* (English person) or *Mmarekani* (American person.) It is notable (given this Chapter's discussion of technology transfer) that *mzungo* can also mean "a clever device or something wonderful." (Perrot 1992, originally 1965: 55)

'expertise' upon 'sloppy charts.' This situation was even more profound for hospital-trained Karen:

> Unlike our previous experiences in Village E and G, things ran poorly and inefficiently. I made the mistake of trying to correct Karen when I thought she was being culturally insensitive. She had come up with a *better* way to prep charts (by pre-writing today's date and the return date) and I suggested "that it wasn't our show" and that *we shouldn't make any changes to someone else's system* (Fieldnotes, 8 July 2001).

While there were consistencies between villages with respect to the nurses' techniques – each pair of VHWs and the women and children that they served followed slightly different procedures. In some villages, the health cards were kept by individual mothers, in others, VHWs pre-registered children based on health cards that they kept all year round. Despite our notions of appropriate charting, the VHW-AHEAD system is terribly effective in reaching women and children who are underserved by the District health system and the notion that we, as summer volunteers should make modifications was problematic.

After a few days at work in Meatu, it was clear that the nursing experience needed in Meatu fell outside of Karen and Maria's expertise. When they were finally offered the opportunity to assist with immunizations, the two nursing students declined. The AHEAD nurses work very efficiently using needles that are sterilized nightly in a kerosene-powered pressure cooker. For each injection, the nurse assembles and fills the needle in about ten seconds. Immunizations in the United States are always given using single-use needles, requiring no assembly. Often, one-use needles are pre-filled with the vaccine. While single-use needles have effectively removed the opportunity for blood-borne disease transmission from immunization, I would argue that nurses trained in the West have been 'deskilled,' in a sense. Despite Maria and Karen's expertise in giving immunizations in a Western context, neither woman has the appropriate skill set for Meatu. Maria explained that it was interesting to see how the nurses immunized; quickly lining up infants in groups of five and giving them the vaccine. Jayne, a 29 year-old film student, described immunizations as a lack of western frivolities, noting the absence of alcohol pads, rubbing of the injection site, and Band-Aids. Karen was more skeptical stating, "You just hope they [the mothers with their children] don't get out of line… you really see the potential for error." While Karen and Maria's training dictated that

immunizations be provided through one-on-one nurse-patient contact, the AHEAD nurses immunized over 150 infants in just a few hours, often running out of vaccines.

At the same time, Karen told me that it was almost better to stay out of the way, than to jump in, and try to assist. Both nursing students were actually relieved that they didn't have to give immunizations without gloves and "Scooby-Doo Band-Aids", using needles that are dull compared to the single-use needles used in the United States. The recognition that immunization protocol is different in Meatu is a testament to medical pluralism, though not in the western/ non-western dichotomy described in Hess (1995). Medical pluralism can be defined in two senses, by which "several systems of medicine coexist, giving multiple choices to individuals, or it may mean pluralism within a particular system, allowing patients access to various levels and types of care" (Meade and Erickson 2000: 313). This is not a case of one national medical culture versus another, but rather of hybridity. The AHEAD nurses appear to be practicing western biomedicine Meatu-style. After all the nurses are administering three-injection series of polio and diphtheria vaccines and single injections of the measles and TB vaccines per WHO protocol. They also give rubella vaccinations to expectant mothers. Like immunization, other outreach medical activities including nutritional counseling, antenatal care, and family planning have their own local flair.

Equipment Unnecessary: Nutritional Counseling and Antenatal Care

Mothers of children whose weights fall into the red zone or stay in the gray zone for three or more months are targeted for nutritional counseling. Mothers are encouraged to breastfeed, but may supplement milk with *ugali* (a stiff porridge) or rice. Birth of a subsequent child may result in rapid weaning or the mother's own poor nutrition may decrease lactation. Malnutrition is considered a grave concern in dry, food-poor Meatu. The elaborate ritual of monthly baby-weighing is an effort to combat poor nutrition. Joy, a nurse's aide who has developed practical expertise in nutrition, counsels women in groups about the importance of a balanced diet including fish, beans, rice, and corn. Her nutritional teaching kit includes small bottles of each of these foodstuffs, but her counseling is, for the most part, an oral presentation. She explained to me that she strives not to embarrass mothers by pointing to the malnutrition of their children.

Health outreach may include antenatal care as well. Because health outreach visits are monthly, AHEAD's western-trained nurses work closely with Traditional Birth Attendants (TBAs) to ensure healthy pregnancies:

> The pregnant woman is supposed to come to the clinic four times throughout the pregnancy. We encourage the women to come within the first trimester, first three months. First you assess them, then you give them one and a half month, if for example she comes on the 3rd month they are advised to come back after six weeks. After the sixth week, it will be at 4.5 months, you check them and tell them to come after another 2 months depending on the risk factors. If it is risky they might need to come every month. Many times when we are doing antenatal care, we usually have a traditional birth attendant working hand in hand with us. We usually are both checking on the mother. When we are in the antenatal room I ask the traditional birth attendant questions, regarding the mother, and how the birth is going and how to access antenatal mothers. (Fatima, Nurse-Midwife)

AHEAD nurses do pelvic exams on pregnant mothers during outreach visits and calculate delivery dates, but rarely have adequate private space for pelvic exams or the 'necessary' equipment. Fatima and the Dorga (another nurse-midwife) listen to fetal heartbeats using conical fetal stethoscopes positioned on pregnant women's abdomens. Their antenatal visits often take place in a small room of the rare multi-room schoolhouse or in a windowless corner of a cotton warehouse. The role of the AHEAD nurse is to evaluate pregnancies for risks – typically, TBAs actually deliver babies in the AHEAD villages. Since the AHEAD nurses are based in Mwanhuzi, often a several hour drive from their pregnant patients, the opportunity for nurse-midwife attended deliveries are rare. The time it would take for a messenger to travel by foot or bicycle to alert and return with either an AHEAD or government nurse is probably greater than that of a TBA-assisted delivery. Furthermore, Health Outreach is in many ways a seasonal activity – during the rainy season, many villages are unreachable as roads through riverbeds become impassable. The relationship between AHEAD nurses and TBAs is yet another example of medical pluralism; both parties rely on the other for their differential knowledge base.

From Family Planning to Child Spacing

Much like antenatal care, family planning counseling at Health Outreach requires privacy and sensitivity beyond the level of volunteer assistance and participation. Therefore, despite my family planning interest and experience, I was unable to observe one-on-one family planning

counseling. Instead, I interviewed Fatima about her experiences with family planning and listened intently to all health education discussions that included mention of contraception.

The 1996 Tanzanian Demographic Health Survey (TDHS)[17] suggests that more than 80% of men and women know of at least one modern family planning method, but that only 16% of women and 22% of men currently use contraception. More than 24% of married women have an unmet need for family planning services. This percentage has declined from 30% in 1992, while demand satisfaction has improved by 63% (Kopoka 1999). Jato et all (1999) reported that contraceptive knowledge and use do improve dramatically when individuals are exposed to multimedia family planning promotion pieces. These media included radio ads, three radio serial dramas, promotional activities, posters, leaflets, newspaper articles, and audiocassettes that promoted husband-wife communication. These media were used to promote Green Star family planning initiatives.

On a national level, the Green Star logo identifies sites where family planning services, including supplies, are available. Family planning knowledge assessment surveys were used to test female respondents' exposure and reception to the Green Star media campaign. While 79.3% of all women knew of family planning methods, 91.4% those who recalled exposure to media knew of contraception. Similarly, while the study found that 17.6% of all women used contraception, 25.4% those exposed to media images used birth control. The more Green Star media that women was exposed to, the greater incidence of birth control use reported (Jato, et all 1999: 62-65). In Meatu, the campaign did not appear to be in effect. While I did see the Green Star logo on an occasional poster in a Village Health Worker's home or prominently featured on a door at the District hospital, family planning services were for the most part administered in the field in conjunction with baby weighing, nutritional counseling, antenatal care, and routine immunizations.

Figure 2.2 Green Star Family Planning Logo

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[17] As I state at the outset of this chapter, the TDHS data is the only 'survey level' data available regarding contraceptive use in Tanzania. It is important to note that this data is not generated by the Tanzanian government, but rather as part of a larger project of demographic and health surveys conducted with USAID funding. Many reports dealing with DHS data are authored by World Bank or USAID employees and are situated within the 'development discourse.' (See Chapter 3.)

Instead of focusing on family planning, AHEAD devotes its energy and resource to 'child spacing.' As Mama Williams explained at volunteer orientation in Rockville, MD, "we encourage mothers to wait until their bodies are strong before becoming pregnant again. If a woman would normally have 10 children, but she uses child spacing and has a baby every other year, then that is family planning, because we have reduced her fertility to only five [live births]." Child spacing is certainly a far cry from the recent history of western-funded population reduction programs (Halfon 1997, 2000) or even the Tanzanian National Population Policy (1992) which strives to meet five goals through the development of the Tanzanian Family Planning Association (UMATI):

> 1) Establishing information, education, and communication systems to encourage provision of family planning and responsible parenthood, such as directing a significant part of family planning programs to *include men* so that couples are able to decide and plan the size of their family;
>
> 2) Making family planning means and services easily accessible so as to reduce maternal and child mortality;
>
> 3) Preparing young people, before marriage, to become responsible parents through proper upbringing and the provision of family life education;
>
> 4) Educating the public on the benefits of women marrying and bearing children after the age of 18 years;
>
> 5) Improving the status of women and children by reviewing existing laws which discriminate based on gender (quoted in Martinez, et al. 1998:4).

Women using AHEAD's family planning services may have greater access to contraceptive methods then women seeking services through dispensaries or health centres outside of the AHEAD service area:

> [M]any health providers impose age requirements and restrict provision of oral contraceptives. A significant number of providers also adhere to parity limitations, requiring on average that a woman have at least 2 children before providing her with birth control. In this regard, staff members, such as medical aides, maternal and child health aides, and auxiliary staff, tend to be the most conservative in distributing contraceptives. In the 1996 [Service Availability] survey, 35% of medical aides, 24% of maternal and child health aides and trained midwives, and 32% of auxiliary workers reported using parity to restrict the provision of injectable contraceptives (CRLP 2001: 127).

While I did not question AHEAD nursing staff about parity as an access issue for contraception – the CRLP report was published while I was in Tanzania – two factors suggest that AHEAD offers contraception more liberally than the providers in the Service Availability Study. AHEAD's child spacing experts are nurse-midwives with formal education in family planning. In addition, the inclusion of family planning information into every health outreach education session suggests a strong commitment to family planning/child spacing measures for all women at health outreach.

Fatima, an AHEAD nurse-midwife, is a mother of three who lives far from her husband whom she only sees several times a year. In order to use her 5-year nursing degree and to earn a second income, she and her two youngest children left her husband outside of Shinyanga Region to accept employment with AHEAD. As a non-Sukoma woman and Muslim in heavily Christianized Meatu, Fatima sometimes struggles when communicating with her family-planning clients. Not all Sukoma women understand KiSwahili, so Fatima must often ask a bilingual VHW or other woman to assist her as a translator. When asked how she went about her child spacing or family planning work, she explained:

> I find the women who come to outreach to get their children checked. I go talk to them like a friend, first asking them, "How many children you have?" I can talk to them as a friend, "How many children do you have?"
> " 6, 7, 8, 9 or 10."
> "Are you married?"
> "Yes, I am married."
> Some are in multiple wives households. "What do you think of family planning?"
> " I would like to be a client, but my husband doesn't like it. I would like to have family planning but my husband is against it.'
> "Your husband doesn't like it?," I ask.
> "Yes," say the women.
> I say "My friend, go home and talk to your husband nicely. And tell him something like this. We have many children and life is difficult, school is expensive, when they get sick, it is expensive. How about we try family planning, to try and reduce the costs of school, healthcare, etc. ?" I try to encourage and after I talk to them, they are excited. After I talk to them, the women say they'll explain it to their husband and come back the next month. I talk to the mother about how when you become a client you get benefits.

Many women covertly become family planning clients. While Tanzanian national data suggests that birth control pill and condom use are prevalent, Fatima provided me with differing information for Meatu:

> Many men don't like family planning. So many women, because their husbands don't like family planning, do it secretly by getting the shot [Depo-Provera]. Otherwise, if they take pills home, the husbands will find out. They don't like it because they think if you use this method than --the reason they don't like their wives using birth control is that they believe they won't be able to have children in the future. Some also believe that you will catch cancer (including women) if you use birth control.

Depo-Provera, the three-month injectable contraceptive functions as invisible contraception, unseen by husbands who view birth control as something dangerous and other women who view family planning as wrong. Fatima told me that between 10 and 30 women per village are on Depo-Provera. While some women do elect oral contraceptives, traveling difficulties by both clients and AHEAD staff necessitate that women receive 2-6 cycles of pills at one time.

AHEAD nurses struggle when working with men. Young men occasionally request strips of 50 condoms, but involving men in family planning decision-making is often difficult. Fatima explained her frustration, "I try very hard to talk to the guys, but they say their wives will come later only to please me, but they never come. I tried to get the husband to come with the wife but they don't come." Following traditional Sukoma beliefs about the importance of large families, men may block access to family planning services. Elisa, the AHEAD Project Coordinator explained, according to culture, "[Sukoma] women should continue to have children from marriage until the time that God says to stop, but this is difficult because God will often take women from this Earth before their time." All of the AHEAD nurses, regardless of cultural or religious background, expressed conflict between the culturally desirable concept of an unbounded family and the financial and health costs of unlimited childbearing. In advocating childspacing, Elisa advised, "Be sure that you have enough for your children. Be sure they all pass through school."

Despite the traditional exclusion of men from family planning marketing and intervention, at the national level, Tanzanian men appear to have greater knowledge of contraceptive technology than women. In a comparative study of 10 nations, Hulton and Falkingham (1996) analyzed 1992 Demographic Health Survey data for men married to women aged 15-49:

Table 2.2: Knowledge and Use of Contraceptive Methods

		Knowledge Of		Ever Used		Currently Use	
		Male	Female	Male	Female	Male	Female
Male Contraceptive Methods	**Condom**	71.2	55.0	14.4	3.6	4.1	0.7
	Withdrawal	46.3	27.1	19.3	8.7	2.5	1.9
	Periodic Abstinence	44.8	24.7	22.9	6.5	7.7	1.3
	Male Sterilization	27.7	11.3	0.0	0.1		
Female Contraceptive Methods	**Pill**	76.0	74.6	10.7	12.3	4.2	3.4
	IUD	34.9	35.0	1.3	1.5	0.2	0.4
	Injection	38.0	44.0	1.0	1.0	4.1	0.4
	Female Sterilization	60.4	54.6	3.2	1.6	1.9	1.6

Sources: Adapted from Hulton and Falkingham 1996

Despite 1992 national data suggesting that 21% of women and 15% of men did not want any more children, and that 42% of women and 35% of men wanted to wait at least 2 years before having more children, contraceptive usage and awareness remained low. Both men and women were familiar with the condom and birth control pill. However, condoms were then in use by less than 4% of couples and birth control pill use decreased over time. Tanzanian fertility control seems to be less an issue of knowledge and more of sustained use (Hulton and Falkingham 1996: 96).

While Hulton and Falkingham provide analysis of Tanzanian national level data, which may be used for comparison with my ethnographic data in Meatu. Halfon (2000) offers two important critiques of Demographic Health Survey data writ large. First, that the concept of 'unmet' need in the DHS is problematic. Unmet need is an assumptive category; one in which women are seen without the agency to limit their fertility until their unmet need for contraception is met by the appropriate (development) intervention. While my analysis of the AHEAD project is unable to address the problems inherent in this concept, I would argue that AHEAD's child

spacing program is articulated in terms of education and access, without suggesting that MEatu women have unmet need. Secondly, the seeming disconnect between knowledge, 'ever use', and 'sustained use' found in Table 2.2 may point to the actualization of child spacing programs. After all, if family planning programs intend to space births, then sustained use is not the primary issue; ever use may actually demonstrate the implementation of such programs. However, I would argue that child spacing requires sustained use between pregnancies. Furthermore, as HIV increases in Tanzania, regular use of condoms as a family planning measure may dramatically reduce transmission.

Thus it is important to note the work of AHEAD nurses and the subsequent contraceptive practices by Meatu women do not explicitly fit the population control/development terminologies of unmet need, ever use, sustained use, and knowledge.   Family planning is articulated as a project of medical pluralism – nurses incorporate discourses of parental responsibility and maternal health into western technologies like Depo-Provera. One afternoon, in a casual conversation, Dorga and Regina, asked me about my upcoming marriage. They were curious about my interest in family planning and asked how many and what "types" of children I wanted. I answered, "I would like to have one boy and one girl, if I am so lucky." They answered, by asking if I knew about the "Chinese calendar" which would help me to plan my future family. Confused, I asked them to explain the calendar and later to show it to me. The calendar turned out to be an ancient Chinese conception chart that was used as part of the AHEAD nursing staff's repertoire:

> This chart was found buried in a Royal Tomb, near Beijing, China, by the Chinese scientists about 700 years ago. You can choose to get a boy or a girl by following the chart. The woman's age from 18 to 45 years is mentioned in the horizontal columns, while the months when the baby is conceived (i.e. when the pregnancy starts, are indicated in the vertical columns.) X stands for male and O for female. For instance, if the woman is 27 years old and her baby is conceived in January (according to the Chinese lunar calendar) then the baby will be a girl. The original copy of this chart is kept in the Institute of Science in Beijing. The accuracy of this chart has been proven by thousands of women and it is believed to be 99 percent accurate (Fieldnotes 27 July 2003). [18]

I had never imagined that I would see such a 'technology' at work in Meatu, but Dorga and Regina assured me that in their nurse training courses, the "Chinese Calendar" was taught as part of the family planning unit.

To critique AHEAD as a western biomedical project is then problematic – from family planning to baby-weighing, AHEAD's Health Outreach is a model of medical pluralism. Western volunteers assist Tanzanian trained nurses who use a mixture of 'modern' and 'traditional' techniques in a wide variety of settings. This medical pluralism is not the stuff of competing knowledge systems, which patients sift through to determine the appropriate form of care, but somewhat more monolithic. When women choose to attend AHEAD's Outreach, they make a choice to embrace 'modernity.' At the same time, the care that they receive represents mitigation between 'western-style' medicine, Sukoma cultural tradition, and (in the case of family planning) ancient Chinese lore. Among the AHEAD nurses, these modes of practicing medicine appear to be seamless and context-appropriate – the AHEAD practitioners are not competing for application of their medical technologies, though they may 'compete' with the District Hospital for patients and community status. Outreach is seasonal, unstructured, and poorly supported by the government infrastructure, but works through a combination of ingenuity on the part of the nurses, VHW volunteerism, and AHEAD development dollars. In Chapter Three, I turn to the complex (and often problematic) discourses of international development, situating AHEAD as a 'development project.'

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[18] **Chinese Conception Chart (x=boy, o=girl)**

Month	Woman's Age at Conception																											
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Jan.	O	X	O	X	O	X	X	O	X	O	X	O	X	X	X	O	X	X	O	X	O	X	O	X	O	X	X	O
Feb.	X	O	X	O	X	X	O	X	O	X	O	X	O	O	O	X	O	X	X	O	X	O	X	O	X	O	X	X
March	O	X	O	O	X	O	X	X	X	O	X	O	O	X	X	X	X	O	X	X	O	X	O	X	O	X	O	X
April	X	O	X	O	O	X	X	O	O	X	O	O	O	O	O	X	O	X	O	X	X	X	X	O	X	O	X	O
May	X	O	X	O	X	X	O	O	O	O	O	X	O	O	O	O	O	O	X	O	X	X	O	X	O	X	X	O
June	X	X	X	O	O	O	X	X	X	O	O	X	O	O	O	O	O	O	O	X	O	O	X	O	X	O	X	O
July	X	X	X	O	O	X	X	O	X	X	X	O	O	O	O	O	O	O	O	X	O	X	X	O	X	O	X	X
August	X	X	X	O	X	O	O	X	X	X	X	O	O	O	O	O	X	O	X	O	X	O	X	X	O	X	O	O
Sep.	X	X	X	O	O	X	O	O	X	O	X	X	O	O	O	O	O	O	X	O	X	O	X	O	X	X	O	X
Oct.	X	X	O	O	O	X	O	X	O	X	X	O	O	O	O	O	O	O	X	X	O	X	O	O	X	O	X	X
Nov.	X	O	X	O	O	X	O	X	O	O	O	O	X	O	O	O	X	X	X	O	X	O	X	O	X	X	O	X
Dec.	X	O	X	O	O	O	O	O	X	O	X	O	O	X	X	X	X	X	X	X	X	O	O	O	X	O	X	O

Chapter 3: Does Development Have to Be a Dirty Word?
Water and Technology Transfer in Meatu

Introduction

AHEAD stands for Adventures in Health, Education, Agriculture, and Development. While AHEAD is most easily analyzed as an NGO providing primary health care, its identity as a 'development' organization requires the most theoretical examination. Work classified as international development ranges from humanitarian aid to structural adjustment. Development, thus, is a contested category – simultaneously lauded for its achievements and critiqued for its hegemony. The discipline of anthropology demonstrates this schizophrenia – development anthropologists work as 'experts' within the billion-dollar aid industry, while the anthropology of development deconstructs concepts such as 'expertise.' In this chapter, I attempt to unpack the discourse surrounding development by providing a historical review of development theory and through examination of recent critiques from the field of anthropology.

I then move to the specifics of the AHEAD case by examining the activities of Dr. Robert Metcalf, microbiologist and Solar Cookers International board member, in Meatu. Metcalf's attempts to transfer water testing and pasteurization technologies to administrators at Muhimbili Hospital in Dar-Es-Salaam and Meatu villagers can be read as development. Technology transfer can be critiqued as a "black box"[19] wherein the intelligence of projects or schemes lies with experts, while the 'assisted' are provided with the most routine training. Metcalf's work complicates this and other critiques of development, potentially offering a 'sustainable solution' to polluted water in Meatu.

Unpacking 'Development': Theory and Critiques

International development emerged in the 1950s in response to colonial emancipation and to Cold War polarization of nation states. In the second half of the twentieth century, development was analyzed in purely economic terms through a series of models:

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[19] Within Science and Technology Studies, the term "black box" is itself contested. My use of "black box" follows Cockburn (1981) in Mackenzie and Wajcman (1999).

Table 3.1: Economic Development Models

Theory	Decade	Key Actors/Models
Linear-Stages-Of-Growth Theory	1950s-1960s	Walter Rostow, Harrod-Domar Growth Model
Structural Change Theory	1970s	Lewis Two-Sector Model, Hollis Chenery
Dependency Theory	1970s	Draws from Marxism
Neo-classical/Neo-liberal Economics	1980s	Free Markets

Linear-stages-of-growth theory "viewed the process of development as a series of successive stages of economic growth through which all countries must pass" (Todaro 1998). Economic historian, Walter Rostow identified all societies as fitting into one of five categories: "the traditional society, the pre-conditions for take-off into self-sustaining growth, the take-off, the drive to maturity, and the age of high mass consumption" (quoted in Todaro 1998) where all industrialized nations are understood to have achieved take-off. Linear-stages-of-growth assumed that all nations that saved 15% or 20% of GNP could develop enough to reach take-off. This could be achieved, theorists argued, through supply of capital and training. At its core, linear-stages-of-growth theory relied on the Marshall Plan induced German *Wirtschaftwunder* (Economic Miracle) as evidence, but did not take into account the fact that European nations already had much of the human, economic, and cultural capital necessary to meet take-off. Furthermore, the model failed to recognize that Third World nations were part of an international system through which external forces could derail development efforts (Todaro 1998).

The 1970s saw the emergence of two competing theories of development: structural-change models and dependency theory. Structural-change theory suggested that development was the shift from agrarian traditional economies to urban industrialization. The Lewis two-sector model divided economies into rural areas with surplus labor and urban areas, which could absorb labor. In the Lewis model, urban wages are assumed to be 30% higher and the supply of rural to urban labor is considered to be perfectly elastic. In reality, urban areas cannot always absorb labor from rural areas and wages are not necessarily higher in cities than in the country. Furthermore, there may not be an excess of workers in rural areas, after all a certain critical population mass is required for food and resource production (Todaro 1998).

Dependency theory emerged in competition with structural-change theory arguing that 'Third World' nations were systematically underdeveloped and that infusions of capital as proposed by the linear-stages-of-growth model were not the answer. Rather, underdevelopment could be explained by Marxist historical materialism.

Dependency theorists argued that the world system can be divided into core (wealthy, industrialized) nations and those that are peripheral (low income, agrarian). Nations on the periphery function as satellites whose human and natural resources are extracted in support of core capital accumulation. At the same time, developing nations are made dependent upon the world system:

> For dependency theorists the penetration of capitalism is never complete in the developing countries. Indeed, where development does occur in the periphery, it is usually sector-specific (rather than generalized throughout the economy) and 'disarticulated' from any autonomous process of economic expansion in the developing countries. Hence, the Third World remains locked-in place, unable to grow, by virtue of its dependent position in the world system (Browder 2000: class notes).

The very notion of multiple worlds – First, Second, and Third – is an artifact of dependency theory and of Immanual Wallerstein's world systems theory. "A hierarchy of worlds within a greater system suggests both dependence and inequality. While dependency theory first called attention to the neocolonialist and neo-imperialist aspects of development, and described underdevelopment as the product of historical relationships and the unequal divisiveness of capitalism, it is often criticized for its analysis of peripheral states and populations as passive, being blind to everything but their exploitation" (Gardner and Lewis, 1996:18). Gardner and Lewis argue that both the linear stages of growth and structural change models exemplify 'modernization' in their emphases on rationalism, social and economic change, and their optimistic outlook that suggests that all nation states can and will achieve development. Despite its radical Marxist critique of development economics, Gardner and Lewis argue that dependency theory is surprisingly similar to modernist development theory:

> Both are essentially evolutionary, assuming that countries progress in a linear fashion and that it is capitalism which propels them from one stage to the next. Both assume that change comes 'top-down' from the state; they ignore the ways in which people negotiate these changes and, indeed, initiate their own. Both are fundamentally deterministic and are based upon the same fundamentally rationalist epistemology (1996:19).

In response to the anti-development dependency revolution, a neo-liberal economic counterrevolution took hold in the 1980s. Neo-liberal theorists suggested that free trade, removal of market controls, and privatization of government enterprises were the key to development. Neo-liberal economics suggests that all nations have competitive advantages for certain goods and that free trade ensures that nation states produce only those goods. International trade, by way of free trade areas and free trade zones (FTAs/FTZs), import substitution strategies, and Third World capital investment, increased as a result of neo-liberal policies. However, free trade is rarely fair trade. Non-industrialized nations are still dependent on wealthy northern nations for many industrial goods. Furthermore, a shift towards neo-liberal economics has led to increased Third World debt and greater health and wealth inequalities (Kim et al. 2000). Gardner and Lewis critique the static nature of economic articulations of development:

> ' Development', the argument goes, represents the world as in a state of linear progression and change in which the North is 'advanced', and the South locked into static traditionalism which only modern technology and capitalist relations of production can transform. We now know that these understandings of the globe's shared history and shared future are deeply flawed. By the mid-1990s it has become clear that the supposed benefits of modernization are largely an illusion: over much of the globe the progressive benefits of economic growth, technological change and scientific-rationality have failed to materialise [sic] (1996: 1).

As development practitioners, Gardner and Lewis are unwilling to scrap development altogether, instead they argue for increased practice of development anthropology. The most scathing critique of development comes from 'Third World Intellectuals' who argue for post-development.

Arturo Escobar's *Encountering Development: The Making and Unmaking of the Third World* (1995) is a foundational document in the nascent post-development critique. Post-development scholars (Escobar 1995, Bawtree and Rahnema, eds. 1997) criticize economic development theory, providing a postmodern (perhaps anti-modern), poststructuralist view of development as (an unfavorable) discourse. Escobar and the post-development school argue that the very notion of development is teleological, assuming the sort of unidirectional evolution promoted by Rostow's Linear-Stages-Of-Growth model. Post-development theory uses Foucauldian power/knowledge to accurately and articulately critique the imbalanced power

relations perpetrated by the assumption of development discourse that the Third World requires First World financial assistance and technical savoir-faire. However, post-development scholarship falls short in undoing the discourse of development in several key ways:

1) By emphasizing the hegemony of the discourse development, Escobar risks legitimating it;

2) Post-development theory fails to extend beyond the dependency critique;

3) Escobar provides no alternative framework to think about inequality or to better our world; and

4) By focusing so narrowly, on discourse, Escobar fails to account for the real world.

In *Encountering Development*, Escobar argues that the notion of global poverty was a post-World War II 'discovery.' According to early theories of development, poverty was curable, provided that the 'Third World' focused appropriately on economic development, the handmaiden of both capitalism and modernity. The post-WWII world was recreated as tripartite – a capitalist First World, a communist Second World, and a non-aligned, post-colonial, and impoverished Third World. Mitigating the divide between the First/Second Worlds and the Third was 'development' via aid and loans – the postcolonial world thus became a site for Cold War controversy as the US and Soviet Union struggled for power through demonstrations of generosity. Escobar is right to criticize the development business – from its roots in Rostowian teleology to structural adjustment; it has often been a power-laden mess. Yet by giving the development discourse so much power, by arguing that it invents poverty, produces inequality, and disperses power, Escobar undoes his own project – setting up development as an unconquerable Goliath with no alternatives. Furthermore, post development may actually maintain the same power-laden relationships:

> For post-development theorists, the "Third World" thus remains objectified, and its peoples' need externally defined. Not only do 'reformist' critiques misunderstand the point of the development exercise, they may also encourage the adaptation and extension of the underlying power relationship (Storey 2000: 41).

While focusing on discourse is a means to levy a critique, I remain unconvinced as to the potency of post-development and what additional value it adds to dependency theory. In articulating 'discourse,' Escobar (1995) makes the claim that the shift from economics to discourse allows us to focus on the domination, inherent in that discourse. The argument reads the same to me – colonialism marginalized nations and made them peripheral; or (alternatively)

it disempowered them through discourse. In either case, a postcolonial era committed to economic development reemphasizes and legitimizes these inequalities. Escobar's critiques of neo-liberal economics and structural adjustment (which follow dependency temporally) add something, but not enough to the discussion.

Both dependency and post-development theory posit the North as hegemonic – Escobar includes the development discourse in his articulation of that hegemony. I read this as reductionist – there is no room for sustainable development strategies, grassroots aid, bottom-up community-based projects, or alternative development frameworks. In Chapter 5, "Power and Visibility: Tales of Peasants, Women, and the Environment," Escobar focuses on small-scale agriculture, women in development (WID), and sustainable development programs. For Escobar, the 'objectification' of peasants, women, and the environment through the 'gaze' of development creates Foucauldian 'spectacles.' WID programs, sustainable development, and alternative agricultural programs are often articulated as alternative development schemes; for Escobar, they remain problematic:

> Integrated rural development, WID, and sustainable development exhibit features that betray their origin in a common discursive practice. This "endoconsistency" (Deleuze and Guattari 1993) of concepts such as development refers to the concept's systematicity, despite their heterogeneity of the elements that inhabit the spaces it creates. The repeated bifurcation of development – into discourses such as those analyzed in this chapter -- reflect the appearance of new problems, even if the new discourses exist in the same plane of the original concept, and thus contribute to the discourse's self-creation and autoreferentiality. (1995)

More simply put, even though 'alternative development' programs seem new, they are still part of the discursive system that is development. While sustainable development is (often) poorly understood and tritely used and women are often marginalized as cheap labor sources particularly in FTAs/FTZs, failures of the system are not reasons to shelve the vocabulary. Sustainability is something to strive for; micro-credit loans to women are often very successful. Throwing up our hands and calling development a dirty word changes nothing –we are left with a world where marginalization is propagated and academics can avoid looking out of the windows of their ivory towers. I am not alone in my concerns about Escobar's work. In addition to the arguments that I have articulated above, Storey (2000) suggests that post-development theory has the following real world and theoretical problems:

1) Escobar and others generalize development.

2) Post-development theory romantically ignores the desire of "Third World" people to live like industrialized Northerners.

3) Social movements are presumed to be anti-authoritarian and democratic in nature.

4) Social movements may be no match for the power of global capital.

Escobar's divorce of real world practice from development theory suggests a disconnect. While I am no advocate of top-down development and I view economic growth models as hegemonic and teleological; like Bourdieu (1990, 1998), I believe that theory and practice need to be merged in ways that produce meaningful action in the real world. Is this possible or does it leave the practicing-theoretician, applied-academic, development critic-practitioner in a state of schizophrenia? Drawing upon Gregory Bateson's notion of the schizophrenic double-bind, Birgitte Feiring, an anthropologist, activist, and international development practitioner asks:

> Should critical anthropologists get involved in development and contribute to the legitimization of this particular power/knowledge structure, or should we stay out of the development business, and reserve the right to be critical from a clear and clean external point, thereby risking not changing anything all? (Feiring 2000: 28).

Feiring's response is as a practitioner-activist who works with indigenous peoples who have appropriated development discourse as a 'lever' of political action; she overwhelmingly supports action over critique (Feiring 2000). Two recent scholarly works attempt to straddle the divide between the anthropology of development and development anthropology. Crewe and Harrison, authors of *Whose Development? An Ethnography of Aid* (1998) use ethnography as a means for understanding the international aid projects that sometimes employ them. *Anthropology, Development and the Post-modern Challenge* (Gardner and Lewis 1996) provides both case-studies of development and a primer of anthropological and development discourse. Unfortunately, both texts are in some senses failures unable to critique development enough for academic anthropology and too distant from the practice of development.

Storey 2000 wishes to reconcile the important notion that development is a discourse that promotes power inequality with notions of agency. Development, as a field remains contested. While development cannot be characterized in the glowing terms of the 1950s and 1960s, small-scale projects often make change on the micro-level:

> We now know that aid (ODA) has a mixed record in promoting development. There has been remarkable success when aid has been targeted on specific problems such as food production and child survival. But recent analyses of aid's

impact on development show that contrary to popular views on both left and right, aid seems to have had no systematic effect on either growth or policy change.(Sewell 1999: 33)

AHEAD's work on child survival suggests a pattern of 'success' in the extreme local of Meatu, without the mass policy shift of larger agencies.

Meatu as a "Site" for Development: Reconciling Self- Help and Development

As a non-governmental organization which strives "to provide direct hands-on, people-to people assistance to underserved communities in Africa (AHEAD, 2000a: 1)," AHEAD falls into the same niche as several other organizations working in Meatu including the DRDP (Dutch Rural Development Project) and the Cullman and Hurt (a western-funded anti-poaching) Community Wildlife Project. There is also a Christian-based development group (ICIS) staffed entirely by Tanzanians. In the relatively isolated community of Mwanhuzi, the *Wazungu* associated with AHEAD, DRDP, and Cullman and Hurt are incredibly visible, embodying a postcolonial 'otherness.' Along with the District Hospital and Government offices, these organizations own and operate the only automobiles (typically Toyota Land Cruisers) in Meatu. These vehicles are stored at the DRDP guesthouse in the sole parking lot in Meatu. Incidentally, the DRDP guesthouse and the DED's office are the only locations in Meatu that have western-style toilets.

The individuals associated with these projects, regardless of their nationality or employee status hold and use different social capital than the other residents of Mwanhuzi. AHEAD employees in Meatu earn higher wages than their counterparts at the District Hospital. Village Health Workers (VHWs) who are associated with the 17 AHEAD villages are eligible for training seminars including food, travel, and lodging grants in Mwanhuzi. These special privileges often lead to jealousy and tension between the AHEAD staff and other Mwanhuzi Residents and District Hospital nurses. Towards the end of my time in Meatu, controversy broke out. The nurses collectively seemed withdrawn in conversation. I was unsure if Mama Williams' no nonsense personality had taken its toll or if we, as volunteers, had overstepped our boundaries. On a walk to the market, Dorga privately explained to me that a villager had complained about an immunization given to one of her children by an AHEAD staff member. The site was inflamed and sore. Rallying behind the angry parent, the District Hospital nurses

were suggesting that the AHEAD nurse who administered the injection was incompetent and should be fired by Dr. Meru (the hospital administrator.) With concern, I asked Dorca if the AHEAD nurses would be okay. She seemed to think that Mama Williams and Elisa would smooth things over with Dr. Meru. Besides, she thought that the hospital nurses were just jealous because the AHEAD nurses were more highly paid. In many ways, the District Hospital staff and the AHEAD staff are interconnected and overlap. One of AHEAD's two small offices is located at the hospital. Many of the same services are provided by both organizations, with AHEAD providing referrals to the hospital. The District Hospital staff are often highly critical of AHEAD's healthcare practices:

> Yes, there is a problem because we do the same work, many times we might be unlucky at a village and give a pregnant mother an appointment …[that] requires an investigation into her pregnancy. If she doesn't go for the investigation, the doctors blame us. They ask us why we didn't do this and we they didn't do that. With the District Hospital, it doesn't matter but with AHEAD, the doctors are very strict. (Fatima, Nurse-Midwife)

Mwanhuzi functions as a 'site' for development activities. As the district seat for one of the poorest districts in the nation, aid in the form of agricultural programs (AHEAD, DRDP, ICIS), economic development (DRDP, ICIS, Cullman and Hurt, the BioRe Organic Cotton Venture), and healthcare (AHEAD) is welcomed with open arms. Yet, little is done to prevent overlap between NGOs or between specific NGOs and the District Government. At a meeting in late July, Elisa explained that she was working for increased transparency between the NGOs and the government. "Now we are talking about partnership [in order to] prevent the duplication of work." So what does it mean for AHEAD to participate in Meatu as a development NGO? According to Maimuna, a trainer at the AHEAD orientation in Washington, DC, AHEAD promotes "interconnectedness in development – behavior, lifestyles, education." At orientation, Mama Williams explained the nature of AHEAD, "We train people to help themselves." The comments of Maimuna and Mama Williams suggest that AHEAD's goals are in the vein of feminist "moral-minded development" which suggests that development be phrased in women's terms and in women's goals, placing value on people-to-people interaction, consensus-building, free expression of desire, invocation of change, with profound emphasis on human interaction rather than individual success (Reid 1995). AHEAD's goals are made explicit by the emphasis on both water quality testing and a possible solution via solar water pasteurization. By engaging an expert in both microbiology and solar energy, AHEAD produces expertise through training

seminars and workshops, providing one means for "children, youth and adults [to] gain the confidence, knowledge and skills they need to live a productive life" (AHEAD 2000a:1). At the same time, the introduction of a western expert as a 'solution' to the underdevelopment of Meatu's water system is contrary to notions of 'self-help.'

Technology Transfer: The Fight for Safe Water

The water supply in Meatu is heavily contaminated with fecal coliforms. In the dry season of June-August, the only sources of water are holes in riverbeds that are used for drinking water by humans and cattle alike. Meatu suffered a cholera outbreak in early 2001. The water at our guesthouse frequently tested as heavily contaminated as 200 E. coli per ml.[20] AHEAD's invitation to Dr. Robert Metcalf, a professor of microbiology at Sacramento State University and board member of Solar Cookers International (SCI) was extended in hopes of dealing with the water crisis in Meatu. In a November 2002 article for the *Solar Cooker Review*, Metcalf wrote:

> Water in Meatu villages most often comes from open holes dug in the sand of dry riverbeds, and it is invariably contaminated. Indeed, the water that was provided in our guesthouse was heavily contaminated. Bacteriological tests of the water during solar pasteurization repeatedly showed indicator bacteria (key bacteria whose presence indicates fecal contamination) becoming inactivated at temperatures just below 60°C (140°F). I was so confident that water heated to 60°C was safe that I allowed it to cool and used it as my own drinking water for the two weeks I was in Meatu in 2002. I had no intestinal problems (2002: www.solarcooking.org).

Metcalf was first introduced to AHEAD when Mama Williams joined the board of Solar Cookers International – she invited Metcalf to join the AHEAD volunteer team in Summer 2000 (as essentially a consultant) to test water in Meatu. For Metcalf, it was a rare opportunity to have access to "local water supplies that are heavily contaminated and are reliably, all the time, contaminated." In 2000, he spent just three weeks with the AHEAD project, returning in 2001 for six weeks, and returning for a third trip of just two weeks in 2002. In 2001, Bob continued water quality testing in the Meatu District and facilitated training workshops for public health workers, AHEAD volunteers, and VHWs on both water testing and solar pasteurization.

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[20] Water that is even 1 part E. coli per ml is too contaminated for use in American sewage plants. From experience, I can attest that bathing in water that is 200 parts E. coli per m. is not pleasant. The water is murky and has a fishy smell about it.

Metcalf's role in AHEAD invokes a classic version of development as a discourse of power -- a white male scientist is brought into a 'developing' context in order to 'educate' locals by downloading his western expertise into a struggling community. Development critics problematize this methodology. "The ensemble of forms found along these axes constitutes development as a discursive formation, giving rise to an efficient apparatus that systematically related forms of knowledge and techniques of power (Escobar 1995: 10)."

Bob Metcalf's own understanding of his place in the AHEAD project suggests the "schizophrenic" nature that Feiring (2000) articulates, as he mitigates between the roles of white western expert and development critic. Metcalf explained the difference between work done by 'development experts' and 'sustainable' projects:

> Bob: There's a lot of money in development And a number of people are very good at being the experts and getting the 1200 bucks, just think what you could do with $1200 worth of salary here, you could get 5 people for a year with that. Though I had these experiences, talked with the UN people, I've really come to the conclusion that you gotta have things that are sustainable, otherwise don't even bother doing it. Because you've got the project funded for three years, if there is no plan, who will take it over afterwards? You've got these facilities that are built, all these vehicles.

> Amy: Like the library? [A building in Mwanhuzi that was built as a community library which now holds very few books and is rarely unlocked.]

> Bob: The library like this. Then three years later, they are using it to keep livestock in. And there are very few people, I mean I've talked to UN people who are consultants, Very few of them are really optimistic about anything that they've done that's made a difference three or five years later. Because things haven't been worked out or [been] negotiated with governments.

Metcalf has worked as both a paid development consultant and as a volunteer through SCI projects. His work with AHEAD straddles this divide, while AHEAD paid his airfare and accommodations, he donated his labor and all of the supplies need for the workshops and test kits. This sets Metcalf's work apart from the classic 'appropriate technology' project which (like other traditional development projects) is funded by a larger scale organization and may involve hefty consultant fees. Metcalf's development work with Solar Cookers and AHEAD takes the form of 'volunteer development' with the intent of true sustainability.

As a scientist and a westerner, Metcalf holds the specialized knowledge of water testing and pasteurization, but unlike the experts that Escobar critiques, Bob is passionate about sharing

this knowledge, rather than using it as a source of differential power. Before leaving for Meatu, the volunteer team was based in Dar-Es-Salaam. In Dar, Metcalf facilitated a two-day workshop at the Muhimbili University Hospital for faculty, staff, and Ministry of Health employees. While the Minister of Health was unable to attend the workshop (as he was at an HIV conference in New York City), he sent a letter emphasizing that "clean and safe water is very fundamental to primary health care in Tanzania." The workshop centered around two concepts: 1) reducing and eliminating diarrheal disease and 2) fostering sustainable environmental activity.

Bob described a strategy for "doing microbiology without the lab" using two technologies, ColiAlert tubes and 3M™ Petrifilm™. ColiAlert tubes contain a chemical compound that reacts to coliform. Within 24 hours of incubation on the body – this was accomplished by tucking the test tube into ones waistband or wearing a small pouch – the liquid in a tube containing water that has been contaminated with coliforms will change from clear to bright yellow. Use of a UV (black) light demonstrates if the coliforms are the deadly Escheria coli. 3M™ Petrifilm™ allows quantitative sampling of 1 ml of water. Using an eyedropper, 1 ml of water is placed on the film. After 24 hours of incubation on the body, red and blue coliforms show against the pink background. The blue coliforms are E. coli bacteria. By counting the number of E. coli on the film, the person testing the sample can estimate the level of contamination in the water supply. With AHEAD volunteer assistance (we had gone through a crash course in microbiology the previous day), the workshop participants sampled from four water sources and prepared both ColiAlert tubes and 3M™ Petrifilm™ samples. Metcalf sent each participant home with additional kits so that they could test their home water supply.

The workshop's focus then turned to solving the problem of contaminated water supplies through solar pasteurization. As any traveler to the underdeveloped nations knows, it is unsafe to drink water that has been boiled for at least twenty minutes. Not so, argues Metcalf:

> It has been known since the late 1880s, when Louis Pasteur conducted groundbreaking research on bacteria, that heat can kill pathogenic (disease-causing) microbes. Most people know that contaminated water can be made safe by boiling. What is not well known is that contaminated water can be pasteurized at temperatures well below boiling, as can milk, which is commonly pasteurized at 71°C (160°F) for 15 seconds.
> The chart [Table 3.2] below indicates the temperatures at which the most common waterborne pathogens are rapidly killed, thus resulting in at least 90 percent of the microbes becoming inactivated in one minute at the given temperature. (The 90 percent reduction is an indicator frequently used to express the heat sensitivity of

various microbes.) Thus, five minutes at this temperature would cause at least a 99.999 percent (5 log) reduction in viable microbes capable of causing disease (Metcalf 2002: www.solarcooking.org).

Table 3.2: Microbe Pasteurization Temperatures

Microbe	Killed Rapidly At
Worms, Protozoa cysts (Giardia, Cryptosporidium, Entamoeba)	55°C (131°F)
Bacteria (V. cholerae, Escherichia coli, Shigella, Salmonella typhi), Rotavirus	60°C (140°F)
Hepatitis A virus	65°C (149°F)

Source: Metcalf 2002

Instead of boiling water, Metcalf advocates solar pasteurization. Table 3.2 demonstrates that the temperatures required to kill worms, cysts, bacteria, and the Hepatitis A virus are well below boiling. Solar energy offers a cheap, family-friendly, low labor alternative to costly petrol and time-consuming firewood collection. Metcalf's method involves the use of SCI's CooKit (a simple solar cooker made out of reflective cardboard) a black covered pot, and a WAPI or Water Pasteurization Indicator. The WAPI (a basic thermometer), shown on right, was developed David Andretta, a doctoral student at Berkley, based on a concept by Metcalf and Fred Barrett, formerly of the USDA:

Figure 3.1 Water Pasteurization Indicator

Source: Metcalf 2002

> The WAPI is a clear plastic tube partially filled with a soybean wax that melts at about 70°C (158°F). With the solid wax at the top end of the tube, the WAPI is placed in the bottom of a black container of water that is solar heated. If the wax melts and falls to the bottom of the tube, it ensures that water pasteurization conditions have been reached. The WAPI has a stainless steel washer around it to keep it at the bottom of the container, which is the coolest location when solar heating water (Metcalf 2002: www.solarcooking.org).

Metcalf argues that the WAPI will revolutionize how travelers, international workers, and residents of nations with unsafe water will go about making their drinking water safe. The movement of the wax provides a visual cue, replacing the image of rolling water, for safe water:

And I think within 5 years or so that people around the world are going to be using it because everybody around who boils there water, if they used the WAPI, they could save about half their energy and still have safe water. I mean that's a really clever device that the World Health Organization ought to have come up with, but we developed it without any grants, without any funding, just like we developed the CooKit after the box cooker in '94. After the Rwanda crisis, somebody came to Solar Cookers International and said "We gotta come up with something that can address a situation like that!"

While it does take several hours for the sun to pasteurize the water, the method is virtually labor-free and environmentally sustainable. On the second day of the workshop in Dar-Es-Salaam, Metcalf showed "before and after Petrifilms" to demonstrate the effectiveness of solar pasteurization. He also taught participants how to cook *ugali* (a stiff porridge) and meat using the CooKit.

It was the development of the CooKit (a much smaller and lighter solar cooker than previous box cookers with glass or thick plastic lids) and a presentation by Bob and some of his graduate students on water pasteurization that led Mama Williams to think about transferring these technologies to Meatu:

[Mama Williams] said, "You need to come because I also need the water tests." And nobody knows how to do these tests. There still do the fecal coliform at 44 degrees and not these enzyme based tests that you can incubate on your body and get results (snaps finger) like that and I've been doing them ever since '88 in Djibouti and since '95 in Kenya … [B]ut this the first time, a year ago, to come out and really do some supplies. I've done hotel water supplies, and some other things, but here she [Mama Williams] had the opportunity and her interest was, you know, "the water is not safe. [And] here we have something like the CooKit that could do it that could heat the water and make it safe. We've got a water pasteurization indicator and maybe that could help improve the conditions out in the villages, so why don't you come out?" So I was just thrilled to get out and to have the access to people's water supplies in these villages. To see them and to go out there and to sample them and to give the tests to them. There is nothing like being out in the field, as you know. You could read all you wanted to about what AHEAD does and the village thing, but you've got to be there and experience it … [T]hen, when you read stuff you can understand it, but you can't until you've been there. It was very good here, and I was able to sort out what, what do I want. There were a couple of other tests that people had recommended to do for microbes that I did last year and decided they were useless.

In Meatu, Metcalf facilitated three workshops that were similar to the one held in Dar-Es-Salaam – he taught two groups of VHWs and Village Chairs at the Library in Mwanhuzi and a group of women in Mwakisandu village – but added a segment on making CooKits. CooKits are quite

simple, technologically speaking, requiring cardboard, aluminum foil, and clothespins in their construction. Unfortunately, aluminum foil is impossible to find in Meatu and cardboard is typically burned. Unwilling to let this diminish his enthusiasm, Metcalf acquired enough foil wrapping paper and cardboard in Dar-Es-Salaam to make 30-40 CooKits and transported the goods by train. Both Metcalf and Mama Williams hope to see CooKit production take off as a 'micro-enterprise' in Meatu:

> You can get some spare cardboard and do it and we've shipped to them with box clippers and the box clippers are really wonderful … and this is the first step and this is the step that one could envision that if a country got organized, or a region got organized, and if there were some resources to help out -- a modest amount of resources. You could envision some businesses starting to make these CooKits and people starting to sell them, you could envision, maybe, in five years or ten years that people would be in this region using the sun everyday. Instead of going out and collecting all that firewood, maybe, two out of three trips they wouldn't have to have. And if they're buying charcoal, my gosh that's a lot of money here if you buy. It was 2500 [Tsh] for the bag that we got.

As a microbiologist, environmentalist, and solar-cooking activist, Metcalf often phrased the CooKit's value in terms of environmental concerns. Collection of firewood in barren Meatu is difficult and charcoal is costly:

> It's gonna relieve a woman of her huge burden that she has if she's got the sunshine. Two hundred to three hundred days a year, any place in the world, where fuel load is an issue. You could if you learned how to get things as simple as a cardboard and a little aluminum foil, stick a pot out there, you know you could, that's what SCI did. You could see this being a sustainable thing that could transform how energy is used here…Over 90% of the energy in the country is traditional fuel. The charcoal they get here is coming from about 80-90 kilometers away. What about all these kids running around? What are those little girls going to do when they become the age of their moms and they start having kids? There is not enough wood in this whole country, there is not enough wood in the developing world and I've known that ever since '78 when I bought that solar cooker. With my background in biology I knew, that's not sustainable. They give a figure of two pounds of wood per person per day. In Dar-Es-Saalam they were saying that's not enough. You need more if you are using wood. If you are using charcoal that inefficiently converts the wood into charcoal and you lose a lot of the energy. It's about four pounds of wood to make one pound of charcoal, so they're losing. And there is not enough wood anyway.

In his scathing critique of WID (Women in Development) and sustainable development projects, Escobar argues that while WID and sustainable projects claim to be less hegemonic than traditional growth-oriented development, both alternatives merely refocus development's

objectifying gaze. Furthermore, texts often depict "dark and poor peasant masses destroying forests and mountainsides with axes and machetes, thus shifting visibility and blame away from the large industrial polluters in the North and South and from the predatory way of life fostered by capitalism and development (1995: 195)." For Escobar, objectification of "the Environment" is yet another way to problematize global survival. And while one can argue that AHEAD and Metcalf are fluent in the discourse of global poverty, neither the organization, nor the man seem hegemonic in their interests. As an environmentalist who prepares all of his meals in the solar cooker, Metcalf is interested in converting people of all ethnicities, cultural backgrounds, and nationalities to the energy-saving technique. At the same time, the hegemony that Escobar writes about is pervasive and subtle, rather than overt. The very notion that Metcalf's knowledge requires dissemination is a form of subtle hegemony, akin to the notion that *mzungo* means 'clever' in addition to 'white.' Metcalf's own good will and desire to promote solar cooking may be a result of the subtle workings of the development discourse on his body and mind.

For Metcalf, training village leaders, women, and health workers spreads knowledge about water-borne disease and a means to prevent it. However, the workshop process was not without complications. At Elisa's June 28th health briefing for Mama Williams and the volunteers, she explained that she (and the rest of the AHEAD staff) had developed a strategy for implementing water quality testing and pasteurization. She recommended that all thirty-four Village Health Workers be trained as well as women's groups from each of the three divisions (a geographic unit) covered by AHEAD. These women, she felt, could "disperse water contamination and pasteurization information to whole villages, going beyond the 17 [AHEAD] villages into the are awhere the cholera outbreak had occurred." Prior to leaving for Tanzania, Mama Williams and Dr. Metcalf had decided that the VHWs should be trained, as well as the Chair of each village – Metcalf had not brought enough UV lights, ColiAlert tubes, or Petrifilms for all of the people that Elisa wanted to train. In my fieldnotes, I wrote, "Mama Williams seems to be ignoring Elisa's work in identifying groups of women who have a *need* for pasteurized water." Mama Williams saw village chairs as a political means to the same end, by informing village leaders about the two technologies of testing and pasteurization, she hoped to reach a greater number of community members. Mama Williams then proceeded to dictate the training schedule for the upcoming workshops. The decision to train the women of Mwakisandu village was a

compromise between Mama Williams' strategy and that of Elisa and the AHEAD staff. Bob Metcalf acted as an intermediary between their competing interests.

In the Summer of 2000, Metcalf had trained the AHEAD staff, working especially closely with Mboje, the AHEAD Driver. Mboje now prides himself on his role as Water Specialist. On my many walks with Mboje, he would stop at dry streambeds, water holes, and the occasional active stream to collect samples for E. coli testing. During the cholera outbreak, he and Elisa tested water supplies in epidemic areas:

> [L]ast March and April when they had the cholera outbreak, Mboje and Elisa ran these tests and were finding that the water's unsafe in these places. And that was the Petrifilms they got [hanging] up in the AHEAD office and they're able to do that. They are trained well enough, Mboje was trained well enough that they had staff, they could do it, they could interpret these things. And see where there are problems. And so the workshop that we had in Dar for these people, that have never been able to test this supply, I think it is really fresh and uh, revolutionary. And cause nobody in the world, well there is no micro-biologist that really has access as I have had out to these supplies that would know what to do with them. If you are coming from the UK or other places you would want a fecal coliform test. You'd need a laboratory and they're still stuck on that, and back in '88 when I learned from the Djibouti experience, Djibouti, when CoilAlert first came out that's what I was looking for, because the previous projects that I had had in Guatemala and Mexico and Bolivia, I hadn't, I couldn't do microbiology there because all I could do was coliforms. With a membrane system that wasn't very good and I didn't even know if they were E. coli or not because I couldn't incubate it at 44.5. So I couldn't do it. Then this thing comes out and (snaps finger) I can do some samples like that (snaps fingers several times quickly in succession) and my gosh that is just really neat.

ColiAlert and Petrifilms allowed Metcalf to practice microbiology outside of the lab. Furthermore, these technologies are 'transferable.'

> And now you could do, you could do your microbiology, you can take your microbiology even out to these women that we were training in the villages. And I think that's just brilliant. You take it away from these experts. You take it away from them. It's called capacity building. It's a term, which SCI is using, and other things like that and we're building the capacity of these people to assess their situations and that's really thrilling.

Through 'capacity building' a now ubiquitous term in development, Bob attempts to undo the 'use-value' of Western technical experts, like himself. As a critique of the 'development business,' Metcalf is interested in repositioning expertise:

> [A]lso this year kind of helped to focus down on what I would be recommending to other people, what we are now trying to take to empower the village health workers with the ability to sample their water, if they find it's not safe. We are at the second phase here, which is trying to pass it on. And can you pass this information on to people who have not had a large [scientific] background, and I think you can. I think we honestly can do it. And this is, this is really a new approach. Instead of having your consultant, that's getting several hundred dollars a day, do some type of test!

So what does it mean to transfer technology? David Hess argues for a distinction between the introduction of macrotechnologies such as dams, factories, and transportation networks, which are controlled by bank, international agencies, governments or corporations and microtechnologies such as the CooKit. "The distinction between macro and micro technologies, therefore tends to coincide with nonlocal versus local control (1995: 214)." Hess warns us not to view this local-nonlocal distinction as technologically determinist and reminds us that artifacts are inherently political:

> [A]rtifacts of all sorts – microtechnologies, macrotechnologies, buildings, roads, etc. – have politics. I would add that big artifacts in the form of macrolevel development projects carry with them big political implications, especially for the relatively small-scale indigenous societies that are usually pushed out of their way. Thus, while in some cases it is possible to speak out of the interpretive flexibility of artifacts, particularly in the case of microtechnologies in situations of long-term contract and local control, those discussions should not ignore the large-scale structural constraints that limit interpretations and flexibility (1995: 222).

The appropriate technology movement has argued for greater focus on microtechnologies that fit into existing technological and cultural contexts. The CooKit with its simple design and low cost, coupled with the WAPI, and a black cooking pot may well meet the criterion of the movement. However, Metcalf's work in water quality testing can be understood as a black box. While Metcalf works (through AHEAD) to make water quality testing accessible to non-microbiologists and attempts to deconstruct notions of expertise, he still constructs a system of testing (using ColiAlerts, Petrifilms, the UV light) that is black-boxed. The intelligence behind the testing is left to Metcalf (and other scientists), while the mechanics are practiced by laypeople.

Conclusion

While my critique of post-development may seem acidic, I would argue that Escobar and others have contributed to a radical rethinking of many of the assumptions, inherent in growth-oriented economic development. At the same time, the transfer of technology that is so critical to my account seems to be less about the legitimation of western expertise as a discourse, and more centered on improving the lives of Meatu's people. This is not to say that Metcalf and the AHEAD project are not enacting discourse – they are, but this discourse need not be read as hegemonically as, say structural adjustment programs administered by the World Bank. At the same time, AHEAD's work subtly enacts an internalized hegemony. I believe that Escobar would actually approve of my project, concerned as it is with, connections between the local and the global:

> A more adequate political economy must bring to the fore the mediations effected by local cultures on translocal forms of capital. Seen from the local perspective, this means investigating how external forces – capital and modernity, generally speaking – are processed, expressed, and refashioned by local communities. Local-level ethnographies of development … and theories of hybrid culture … are one step in this direction, although they tend to fall short in their analysis of the capitalist dynamics that circumscribe the local cultural constructions (1995: 98).

So is AHEAD development and if so does development have to be a dirty word? Development is contested by practitioners and academics alike. Emphasis on economic growth from Rostow to modern structural adjustment have enacted hegemonic processes on the bodies of peripheral nation states and their constituents alike. Critiques from applied anthropologists within the development business and academics (such as Arturo Escobar) offer myriad reasons for development's failures. Development is often a dirty word, however AHEAD's work on water quality testing and pasteurization suggests one instance where alternative strategies are working to improve people's lives. This fix is met through transfer of both appropriate and black-boxed technologies. In his "Typology of Technology and Grassroots Development Projects" Hess (1995: 243-246) suggests that grassroots development is a valuable approach. In his model, there are two technology types -- low or local and high or nonlocal. Either type of technology can be employed in either a local or nonlocal use. As an example of low technology-local use, he describes the Ladkh Project of Nepal (See Norberg-Hodge 1991[21]) in which

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[21] Norberg-Hodge's work on Ladakh is appropriated by both the post-development critics and advocates of sustainable, grassroots, and alternative development strategies. An excerpt of *Learning from Ladakh*

mudbrick walls are layered with glass and made into to passive solar heaters. Western medical projects are characterized as high technology-local use. Thus Metcalf's work on water testing with its reliance on ColiAlert tubes and Petrifilms and the simplicity of the CooKit and WAPI for solar water pasteurization straddles the divide between "high and low" technology. In its low budget, simple technological transfer, and grassroots approach, the AHEAD project is a rarity in the multi-billion dollar development industry. AHEAD's water project is atypical, in its lack of well-paid consultants, volunteer focus, and commitment to training of laypeople.

AHEAD is, after all, an acronym for Adventures in Health, Education, and Agricultural Development. Yet by working on capacity-building and attempting to deconstruct expertise, AHEAD maintains its people-to-people approach. While AHEAD, as an organization, is certainly imperfect, its work, in conjunction with SCI and Metcalf, offers one small example of an alternative development strategy that to this participant-observer seemed neither hegemonic or objectifying.

Is there a dangerous flipside to grassroots development? Development anthropologists who both practice and theorize development suggest that focus on the extreme localities of development projects demonstrates a limited understanding of an increasingly global world. In "Anthropology and Development: Evil Twin or Moral Narrative," David D. Gow (2002) concludes that in spite of scathing critiques from post-development scholars and reports of development failures, development is an area where anthropology can contribute morally, provided that anthropologists appreciate the scope and complexity of the issues at hand:

> [Development anthropologists] … have chosen, for professional, personal, and perhaps emotional reasons, to be more concerned with the *rural* and the *indigenous* and more generally with the *marginalized*. But the present effects and future implications of globalization (however much contested), surely demonstrate once and for all the limitations of what is now ambiguously termed *localization* (2002, emphasis in original).

To be 'successful', development must then work at the local level through culturally and technologically appropriate means. At the same time, ignoring the world system risks

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(1991) appears in *The Post Development Reader* (Bawtree and Rahnema, eds. 1997.) Norberg-Hodge refers to the Ladakh Project as "counterdevelopment." I have significant problems with Norberg-Hodge's argument – she romanticizes a pre-capitalist Ladakh and introduces "appropriate technology" in an attempt to counter capitalist modernity.

objectifying the local, in lieu of the global. In Chapter 4, I turn to the global, examining AHEAD's volunteer program as an example of globalization.

Chapter 4: Volunteer Capital: Globalization on the Ground

Introduction

   2001 was the UN year of the volunteer, but that it not why I chose to volunteer with the AHEAD project, nor why I now try to critically rethink AHEAD's roles as a public health project, NGO, or volunteer-based organization. I chose to volunteer with AHEAD for both professional and personal reasons – I wanted to do research in Africa (on development and health issues) without the lengthy stay of traditional qualitative fieldwork. I was feeling out my future possibilities as an STS scholar, anthropologist, or medical practitioner. I was looking for a trajectory, adventure, and hoping to spread a bit of good will. I offer this moment of self-reflexivity as a way of prefacing this chapter. While volunteerism may be typically understood as an altruistic pursuit, research within the field of Non-Profit and Voluntary Action Research substantiates my claim that volunteers give their time, money, energy, and other resources for a variety of reasons.

   In this chapter, I offer theoretical accounts of both volunteerism and globalization as means to understanding international volunteerism. I then offer ethnographic data culled from interviews and fieldnotes to describe the particularities of the AHEAD volunteer experience. I conclude by entangling globalization and volunteerism together into one messy project – appropriate for both critique and praise.

Conceptualizing Volunteerism Theoretically

   International volunteerism typically appears in journals and monographs in three forms, as quantitative studies located in Nonprofit and Voluntary Action Research (NPVAR) a small, but growing interdisciplinary field that academically examines volunteerism, nonprofits, social movements, voluntarism, and the like; as guides preparing volunteers (particularly health workers) for their experience; or in testimonials of volunteerism. In addition, to this standard literature, I appropriate Bourdieu's forms of capital to posit 'volunteer capital' as a co-mingling of social and economic forms of capital.

   Since 1970, NPVAR has solidified into disciplinary status complete with a scholarly association, ARNOVA[22], and several academic journals[23]. In a 1999 article in *The American*

Sociologist, David Horton Smith predicted that NPVAR will be gradually institutionalized into academic study, such that there may one day be departments of Volunteer Studies, akin to departments of Labor Studies. Jeremy Rifkin's suggestion that globalization of markets and reduction of the governmental sector's influence in the twenty-first century will lead to a greater role for the voluntary organization, implies that NPVAR may become increasingly important. He proposes that "[c]ommunity-based organizations will increasingly act as arbiters and ombudsmen with the larger forces of the marketplace and government, serving as the primary advocates and agents for social and political reform" (Rifkin 1995: 249).

NPVAR has focused on the experience of volunteerism as a leisure activity (Henderson 1984), as an altruistic (Story 1992) or non-altruistic pursuit (Smith 1981), or in terms of volunteer efficacy (Pinkau 1980). When perceived as leisure, volunteerism is described as "an experience rather than as work" (Henderson 1984: 55, emphasis in original) – a definition that is appropriate to my analysis of AHEAD. Mama Williams consistently used the word "experience" to describe summer volunteerism with AHEAD.

Only a small subset of NPVAR deals with the relationship between volunteerism and international development. In this literature, volunteer groups are constructed as modernizing forces akin to the media or as a solution to international instability and inequity (Smith and Elkin 1980). In characterizing the roles of volunteer-based NGOs, Smith and Elkin write:

> Many of these transnational and development and assistance (TN-D/A) volunteer groups can be effective in the LDC [lesser developed countries] context because they work through international or regional organizations and thus through affiliated structures and liason personnel. …Depending on the topic of concern, these TN-D/A organizations may also work with or through governments and political structures either in their own nations or LDCs (1980: 157).

Describing a historical trajectory, the authors characterize a shift from missionary organizations, to assistance or relief NGOs, to "a development orientation" (1980: 157). Smith and Elkin remain committed to the use of bottom-up community development strategies.

In an attempt to quantify the role that American non-governmental organizations have in international development, Smith, Baldwin, and Chittick (1980) found that 20% of all

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[22]ARNOVA is the acronym for Association for Research on Nonprofit Organizations and Voluntary Action.

[23] ARNOVA publishes *Nonprofit and Voluntary Sector Quarterly* (formerly the *Journal of Voluntary Action Research*) and the International Society for Third Sector (ISTR) publishes *Voluntas*.

transnational NGOs or 3% of all NGOs claim to do this kind of work. While this study does begin to sift through the many NGOs that were established by 1980, the very narrow definition attributed to the NGOs is problematic. NGOs that defined themselves as Other-Helping Health were excluded from analysis. Given the constraints of the study, it is possible that an organization like AHEAD would not be counted as a development NGO, because its primary focus is healthcare, rather than development. Rooted in sociology, studies of the voluntary (or third) sector often deal with quantifiable variables and ask questions about the demographics of volunteers or the goals of volunteerism. It is rare, in the NPVAR literature, to read studies that use ethnographic technique as a mode for exploring volunteerism.

Outside of NPVAR, writings on international volunteerism are often self-reflexive pieces that romantically describe the joys and hardships of volunteering (Lassiter 1983, Metcalf 2000, Pellegrino 2001, Brown 1998) or guides to volunteerism such as *A Different Kind of Diplomacy: A Source Book for International Health Volunteers* (Fisher and Armstrong 1987). Baillie Brown, President and CEO of S.E.E. International writes in the *International Journal of Humanities and Peace*:

> For patients and their families, the benefits of restored eyesight are dramatic, but what about volunteers? After all, S.E.E. doctors and nurses spend their vacations working without compensation, pay for their own transportation, often make grueling journeys over rough terrain to isolated locales, endure harsh climates stay in primitive accommodations, and work with sub-optimal medical facilities. Why do they participate?
> The answer has been voiced on many occasions, but perhaps never more eloquently than by Dr. Albert Alley, a Pennsylvania ophthalmologist and veteran S.E.E. affiliate: "Few events can match the elation of watching a previously blind mother see her child for the first time. To have that kind of impact on a person's life is a humbling and joyful experience" (1998: 47).

As "a global volunteer network born out of a mix of international cooperation, altruism, and common sense" (Brown 1998:46). S.E.E. works to reverse preventable blindness. Like other texts in this category of volunteer literature, Brown emphasizes altruism and the dramatic good provided by volunteer surgeons. "Without S.E.E.'s intervention, they [patients] would spend many years, if not the rest of their lives in darkness" (Brown 1998: 46). Pellegrino's volunteer account, describes two journeys to Tanzania with Health Volunteers Overseas (HVO.) "We chose Tanzania because it is a relatively safe area with a great need for my particular specialty.

There were only three fully trained orthopedic surgeons in Tanzania in 1998 and one in Mwanz [sic], a city of approximately 250,000 people" (2001:10). Like other such accounts, Pellegrino oscillates between descriptions of 'primitive conditions' and the 'benefits' of international volunteerism:

> Although fear of food poisoning kept us from exploring local restaurants on our first trip, we tried to eat out at least once a week on our return trip and enjoyed excellent local and Indian cuisine.
> Most of the fractures and dislocations we treated failed to reach us within the ideal time period for a number of reasons, including poor means of transportation (i.e. no such thing as an ambulance or helicopter) and local customs which may involve treatment by the local witchdoctor (2001: 10).

Mwanza, Pellegrino's worksite, is a major metropolitan area with ample tourist infrastructure, including posh hotels and a wide variety of restaurants. His fears about food poisoning suggest a western paranoia and his comments about 'witchdoctors' can be characterized as ethnocentric. While both the Mwanza and Shinyanga regions are known for witch-killings[24], Pellgrino is probably mischaracterizing traditional healing practice. His account is rife with such statements including the comment that his wife, a physical therapist working with children "brought toys with her from Wisconsin that she used in evaluation and treatment but also to help her make friends with the children who were often terrified of her because they lacked any previous contact with a white person" (2001: 12). Volunteer accounts such as these often describe peripheral nations in the starkest terms, positing international volunteerism as the great solution to crises in health infrastructure. Rhoades offers a dissenting view in his account of his Peace Corps experience in Nepal in the early 1960s:

> I contend that the "institutions and usages" of the host society pose less "puzzlement, confusion, and demoralization" for the inadequacies of the American development philosophy which volunteers bring with them and attempt to impose on alien circumstances. (Alverson 1977:233) In other words, underlying a great deal of volunteer frustration, and indifference on the part of host country nationals to PCV activity, is the lack of a proper fit between the

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[24] In Meatu, I met a government researcher who was researching Sukoma witch-killings. Returning to the United States, I learned that many old women are beaten and dismembered after being accused of witchcraft by diviners. Women with red eyes (which occur from cooking in smoky conditions, but are attributed to power salves) are said to be witches. The accusation of witchcraft may be levied after a child dies from illness. More than 500 women were killed in Northwest Tanzania in 1999 (Nkya 2000) and 800 in 1997-1998 (Mfumbusa 1999). Miguel 2003 offers an economic analysis linking poverty to witch killings.

America model of planned change and realities of the development situation (1978: 424).

The majority of Rhoades' account is self-reflexive, as he recounts USAID and Peace Corps errors with respect to culture and technology transfer. At the end of his paper, he calls for appropriate technology transfer, cultural sensitivity, and community development, all attributes found in current articulations of 'alternative development.' See Chapter 3.

Published by the Plastic Surgery Research Foundation, *A Different Kind of Diplomacy* provides chapters written by medical practitioners on subjects such as planning volunteer programs, team development, protection of volunteers, supplies and logistics, and fundraising. Short articles provide advice that support a top-down development agenda and (like many of the volunteer accounts) act to 'other' the residents of communities in underdeveloped nations. "Be sure the members of your team are selected for their adaptability to primitive, sometimes grossly inadequate living and working conditions. Forget everything you require in the way of sterility and efficiency back home. This is sometimes difficult for American who take such things for granted" (Gorney 1987: 11). Like the volunteer accounts above, *A Different Kind of Diplomacy* describes the benefits of health volunteerism for practitioners and patients alike:

> I have tried to analyze what we do, why we participate in programs of this nature, what flows in the other direction and what rewards we receive. While most will agree that there is a humanitarian component to our motivation, there is also a benefit that we reap for ourselves. Obviously there is the untold appreciation from the patients and their families, team spirit, and the opportunity to practice medicine in a different setting. Many nurses, doctors, and other health provider fulfill the spectrum of their training, which can enhance future practice. Lifelong friendships are gained. There is the very important exchange of knowledge and all should be open to this. One is also enriched culturally. Seeing the dignity of these people and what they have is very important for us.
> What can we possibly get from a village with no technology and no money? It is shown in the people; they are happy without money and technology. They have no ulcers, back aches [sic], asthma, or psychiatric disease. This can be threatening to us at first, but it is also one of the great things we can obtain from allowing ourselves to sample another culture (Laub 1987: 28-29).

The extensive quote from the essay above was written by a twenty-year participant in international health volunteer programs. While his account is more willing to think through volunteerism as exchange, he still essentializes the people his organizations serve.

Several of the accounts in *A Different Kind of Diplomacy* offer more relativistic notions of health in an international context. Pust et al. describe and advocate an orientation process for health professionals and anthropologists that "is built around a basis bottom-up community development, problem-solving cycle; assessment of locally perceived problems, development of programs or projects as solutions to the identified problems"(1987: 51) with a strong assessment and reassessment component. Volunteers are encouraged to go without "preconceived idea, but instead to work with the realities of the situation – when we get there – in terms of people, beliefs, available technology (or lack of it)" (Pust et al 1987: 51). Gerber's (1987) discussion of the African Medical & Research Foundation (AMREF) describes a rural health project that trains Community Health Workers (CHWs) in nutrition, agricultural techniques, and water issues and upgrades the skills of traditional birth attendants. Pust et al. and Gerber describe community-based projects, rather than the short-visit modeled employed by many health volunteer organizations. Community initiatives and adequate orientation may prevent practitioners from characterizing health and culture in other nations as 'primitive.'

One method to rethink international volunteerism is to posit volunteer 'expertise' as a form of capital. Social theorist Pierre Bourdieu argues that capital "is accumulated labor (in its materialized form or its 'incorporated,' embodied form) which when appropriated on a private, i.e. exclusive basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labor" (1986: 242). Capital in Bourdieu's account can take three forms:

> As *economic capital*, which is immediately and directly convertible to money and may be institutionalized in the form of property right; as *cultural capital*, which is convertible, on certain conditions, into economic capital and may be institutionalized in the form of educational qualifications; and as *social capital*, made up of social obligations ("connections"), which is convertible, in certain conditions, into economic capital and maybe institutionalized in the form of a title of nobility (1986: 243).

In addition to these forms, I would argue that 'volunteer capital' supercedes all three forms, while incorporating aspects of each. International volunteers, typically, hold high amounts of economic capital in relation to the people whom they purport 'to serve.' They may have institutional forms of cultural capital, such as medical degrees and may trade on social capital to establish relationships within the communities where they do their work. However, volunteer capital is also materialized through cross-cultural exchange as western volunteers are constructed

as both technical experts and emissaries of global culture. Unlike other forms of capital, volunteer capital is not typically realizable as economic capital, although inclusion of an international volunteer experience on a resume may make a job applicant 'stand out.' Volunteerism is understood as labor without financial reward and yet volunteer capital can be accrued and traded like the other forms. In my ethnographic account of AHEAD's Summer 2001 volunteers, I attempt to situate their experience in terms of the NPVAR literature, my own notion of volunteer capital, and within the larger discussion of globalization.

Globalization as a Theory Set

Critics of globalization theory argue that the world has always been globally connected through international trade, diaspora, colonization; an argument not, dissimilar to Latour's (1993) argument that we have never "been modern." Yet as Appadurai has argued, "today's world involves interactions of a new order and intensity" (1996: 27). Rather than the occasional (and slow-going) flow of commodities, or cultural interaction via warfare or religious conversion, "in the past century, there has been a technological explosion largely in the domain of transportation and information that makes the interactions of a print-dominated world seem as hard-won and as easily erased as the print revolution made earlier forms of cultural traffic appear" (Appadurai 1996: 29). The suggestion is that there is something particular about the twentieth and twenty-first centuries in terms of both the speed and efficiency of global reach.

With this understanding, it is clear that globalization, volunteerism, and development are increasingly linked, particularly with respect to health inequality as a result of trade. International volunteerism interjects westerners into non-western settings simultaneously fragmenting social space and compressing space-time. Globalization, itself, has become a trendy and oft-used concept, discussed in two major ways:

1) Globalization "…affirms postmodernist negation of conventional concepts of space, time membership, identity, and bounded units – perhaps even the self" (Hackenberg 1999:213).
2) Globalization as a condition of political economy.

With respect to development, globalization is often viewed in purely economic terms focusing on the role of developing nations in international trade, placing little emphasis on other types of global exchange including flows of people and information. I prefer a definition of globalization, which encapsulates both senses as outlined above, where "[g]lobalization is the

flow of information, goods, capital and people across political and geographic boundaries"
(Daulaire 1999: 22). Through this definition, the AHEAD project can be examined as
globalizing through its commitment to volunteerism, its status as a western NGO, its movement
of capital (through volunteers) and more explicitly through fundraising, and its introduction of
technologies such as water pasteurization and testing (as discussed in Chapter 3.) Globalization,
in this case, is not viewed as explicitly problematic, but rather as an unnatural force moving
through people and things.

On the 'global cultural economy,' Appadurai writes, "[it] has to be seen as a complex and
disjunctive order that cannot any longer be understood in terms of center-periphery models (even
those that might account for multiple centers and peripheries)" (1996:32). These disjunctures, he
argues, can be understood through "five dimensions of global cultural flows that can be termed
(a) *ethnoscapes*, (b) *mediascapes*, (c) *technoscapes*, (d) *financescapes*, and (e) *ideoscapes*"
(1996: 33). This argument is similar to that of Frederic Jameson, where "globalization is a
communicational concept, which alternatively masks and transmits cultural or economic
meanings" (1998:55). While modernization has led to development of communication of
communicational networks, Jameson suggests that globalization is much more than a synonym
for modernity or technological 'progress.' Drawing upon Saussurean linguistics to describe the
slippages between technology, communication, and political economy, he writes:

> [T]his is to say that the surface concept, the communicational one, has suddenly
> acquired a whole cultural dimension: the communicational signifier has been
> endowed with a more properly cultural signified or signification. Now the
> positing of an enlargement of communicational nets has secretly been transformed
> into some kind of message about a new world culture.
> But the slippage can take another direction: the economic. Thus, in our attempt to
> think this new, still purely communicational concept, we begin to fill in the empty
> signifier with visions of financial transfers and investments all over the world, and
> the new networks begin to swell with the commerce of some and allegedly more
> flexible capitalism (Jameson 1998:57).

In short, Jameson suggests that communicational, cultural, and economic globalization cannot be
disentangled. Envisioning AHEAD as a globalizing enterprise, through which volunteers act as
agents of global culture and the NGO, itself, promotes the global agenda of HFA 2000 and offers
appropriate technology transfer, emphasizes flows, while maintaining the complexity of the
Jamesonian signifier-signified relationship.

Globalization and health are linked in a complex and often nefarious relationship. Daulaire argues that a world health revolution has taken place since the establishment of the World Health Organization (WHO). Globalization, at least in the economic sense, is often seen as contrary to health – after all free trade has led to poor working conditions for factory workers and agriculturalists alike and structural adjustment policies have led to significant cuts by the governments in developing nations in healthcare expenditures. Perhaps health can be improved and globalized at the same time:

> Yet globalization is not synonymous with a lack of regulations directed at protecting human health and well-being. Many responsible business associations would welcome a transparent and universally applied regulatory regime. Economic benefits of globalization are likely to hit a glass ceiling if the parts of human society currently outside the global economy become progressively poorer and unhealthier (Daulaire 1999: 24).

Public health practice, in particular, can address globalization through a comprehensive and multi-disciplinary approach by looking at global economic and environmental changes. Beaglehole and McMichael (1999) suggest that the international public health research community address the relationship of international trade, including processes of unregulated financial flows to health before looking at other types of globalization issues. Yet globalization need not be read in purely economic terms, or necessarily as the hegemonic project of corporate interest. Craig et al. advocate the hijacking of globalization by community development scholars and practitioners. "If it [*Community Development Journal*] is to play a vital, forward-looking role in the context of contemporary globalization, it needs to focus upon how it can facilitate community development approaches globally – in effect, challenging globalization from above through 'globalization from below (2000: 331).The authors suggest use of the Internet, collaborative video making, and other new technologies as means for people in LDCs to globalize from below. AHEAD's work intersects in many ways with all of the theories that I've outlined. By encouraging VHWs, the AHEAD staff, and their clients to collaborate at Health Outreach and requesting that Jayne, a volunteer and film student document Outreach, workshops, and other AHEAD activities, the NGO appropriates "globalization from below." In attempting to undo the health marginalization of post-Socialist, indebted Tanzania, AHEAD answers the challenges of critics of economic globalization. Yet in its introduction of economic and volunteer capital, technology, healthcare, and aid, AHEAD reinforces global flows of

information, goods, capital and people. In the following sections, I integrate my theoretical accounts of volunteerism and globalization into discussion of AHEAD's volunteer activities

From Work to Kutembea: The Volunteer Experience

Strictly speaking AHEAD is not a volunteer organization since it employs a local Tanzanian staff of seven. Smith (1981) defines volunteer organizations as organizations "in which goals are mainly accomplished through the efforts of volunteers rather than paid staff" (1981:29). Smith contrasts the volunteer organization with the "voluntary organization which accomplishes its goals mainly through the efforts of a paid staff rather than volunteers (1981: 28)" even though volunteers are usually involved. In the US, AHEAD may be understood as a volunteer organization in the US, but can be betted defined as a voluntary organization in Tanzania. Regardless of terminology, AHEAD has brought volunteers to Tanzania since 1987:

> [AHEAD] volunteers represent various areas of expertise including health, education, engineering, social work, and agriculture. The [Volunteer] Program involves mobilization of various professionals, graduates, and undergraduates who live and work in the villages with the people for periods ranging from one month to one year during which they provide the services in their area of expertise (Mpanju-Shumbusho et al. 1995: 20).

In practice, the expertise described in the quote above is not so explicit. While "volunteers," like Bob Metcalf (see Chapter 3) or Denise (a dentist who was only with us for the last two weeks in Meatu) have obvious roles; volunteer activities are typically much more ad hoc. For example, Jayne, Kaylie, and I were all assigned to write articles for the *AHEAD News-Update*, AHEAD's volunteer bulletin. I am still waiting for the 2001 issue to be published, so unfortunately I can't cite from any of our articles. After learning that I had experience with quantitative analysis, Mama Williams asked me to write surveys and later, reports based on the responses for each solar cooking workshop. This was quite an ordeal, because I would handwrite everything in my room at the guesthouse and then type the reports on Mama Williams' laptop at the AHEAD house where we had a power source. Several of us became active in schools throughout Meatu, teaching the occasional lesson or participating in informal cultural exchanges. Kaylie and I were asked by the AHEAD nursing staff to provide advanced English lessons. After Outreach was done for the month, we taught English grammar in the AHEAD house. We helped the nurses to write their annual reports in English – later, Carla rewrote these reports. At the same time, AHEAD did not always utilize the specific skill sets of the individual volunteers. Carla, a retired

podiatrist who still served elderly members of her "church family" by providing podiatric services never utilized these skills in Meatu. Denise, a Caribbean dentist, spent just a few days in Meatu but provided little in the way of dental care to residents. During her visit, she accomplished two tasks: 1) she reorganized the Mwanhuzi Hospital dental office for the local dental assistant (who primarily performed extractions) and 2) gave a lecture to schoolchildren about the importance of dental hygiene, including gifts of toothbrushes. In a district desperately lacking dental care, Denise could perhaps have benefited the community more through performance of dental services beyond the scope of the hospital dental assistant.

Each volunteer was expected to develop his or her own "special project," a form of inquiry into Meatu life or a solution to a Meatu problem. In some cases, these projects were defined in advance (i.e. this thesis or Jayne's documentaries of Outreach and Workshops) or developed in situ – Kaylie, who had experience in teen leadership, worked with the AHEAD nurses on the Teen Action Project. Despite this list of activities in addition to Outreach and assisting with the water testing and water pasteurization, my notes are full of discontent (from the whole group) – that we weren't working enough, doing enough, or being appreciated enough.

On 28 June, I wrote, "What is volunteerism?: frustration, anguish, hurt feelings, struggles with different/difficult conditions, guestbooks and addresses[25]." A series of miscommunications produced anxiety and an unwieldy group dynamic – we arrived in Dar-Es-Salaam on June 18th, but did not reach Meatu until June 28th. These ten days were spent getting acquainted in Dar-Es-Salaam, workshops in Dar, a 2 and a half day train ride from Dar to Shinyanga Town, and 2 days in Shinyanga Town. We were ready to work and were frustrated by the time it took us to get to the field. Once we got to the field, there didn't seem to be that much work for us to do. The previous year, only two volunteers had accompanied Mama Williams and Bob Metcalf. There was always room for them in the AHEAD vehicle and they were able to integrate more quickly into Outreach. As a group of seven, we presented quite a challenge in terms of seating in the AHEAD Land Cruiser, and were jarring to Meatu as a (relatively) large group of outsiders. We were upset when Agnes characterized our purpose in Tanzania as *kutambea* (literally to walk around, to do tourism.) "No we aren't tourists, we came to work!," Jayne vocalized. Of course, many weeks later, Jayne, Kaylie, and I jumped at the

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[25] At every village, at every government office, we each signed guestbooks with our names and addresses. This was one way of transferring our volunteer capital.

opportunity to take an extended weekend visit to Mwanza, a large city eight hours away, just to be tourists. At the end of our travels, we went on a safari the Serengeti, visited Arusha, and re-entered Dar-Es-Salaam, we traded on our accumulated volunteer capital, differentiating ourselves from the regular western tourists staying in luxurious hotels, who knew nothing of the 'authenticity' of village life.

The phenomena of voluntourism, by which volunteerism and tourism are mingled in cultural exchange programs proliferates, as more and more people choose to 'give their time while seeing the world.' Our reasons for volunteering were complex and inconsistent. Because volunteers paid $4000 for the AHEAD experience including airfare, lodging, meals, and a two-day Serengeti Safari, I imagined this money, the one to two month time commitment, and the choice to go without plumbing and telephones to be a demonstration of altruism. Volunteerism is often linked to altruism since work is often unpaid or sometimes (as in the case of AHEAD) requires a program fee or donation. Volunteers often give their unpaid time for such "non-altruistic" reasons as getting out of the house, retooling their skills, to interact interpersonally, and to earn "shadow wages"[26] (Smith 1981). Smith's argues that even humanitarian service volunteerism is not altruistic[27], but benefits the volunteer in some self-oriented way. Self-orientation can be as simple as meeting a root level need. For example, helping others makes one feel good. Not all scholars agree with Smith. In order to get away from Smith's technical definition of altruism, Story (1992) suggests that volunteer activity has both self and other-regarding attributes. I would argue that ultimately this amounts to the same thing – volunteerism is not by definition an altruistic pursuit. In describing the somewhat altruistic ethos of volunteerism, Ehrichs writes:

> While missionaries had a vocation with a clear religious agenda – to proselytize,
> convert and provide salvation – this is distinct from the spirit of civil service, to

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[26] Shadow wages are defined as indirect remuneration, such as tax savings. In my own volunteer work at Planned Parenthood of the Blue Ridge, I earned "shadow wages" by taking advantage of employee's prices for medical services.
[27] Smith very technically defines altruism as " … an aspect of human motivation that is present to the degree that the individual derives intrinsic satisfaction or psychic rewards from attempting to optimize the intrinsic satisfaction or one or more persons without the conscious expectation of participating in an exchange relationship whereby the 'others' would be obligated to make similar/related satisfaction optimization efforts in return" (1981: 23).

serve the needs of those in need which gave rise to a range of NGOs some of which still have religious-sounding names (2000: 2).

While Ehrich may believe that she is describing the volunteer ethos, she is actually characterizing the nature of the organization itself. A volunteer organization may however be altruistic "if and only if its operative purposes and goals (irrespective of official or purported purposes and goals) direct the allocation of organizational resources toward the optimization of the satisfaction of non-members without expectation of a <u>quid pro quo</u> exchange of any sort" (Smith 1981: 30). What Smith suggests is the occasional paradox of an altruistic organization staffed by people who have non-altruistic reasons for donating their time.

AHEAD represents this type of situation – its organizational goals and agenda may be read as altruistic, while the Summer 2001 volunteers had myriad reasons for volunteering. From my interviews and discussions with the volunteers, I began to understand their reasons for coming to Tanzania with AHEAD. While all of the volunteers voiced the desire to provide assistance to the organization and to "do-good," each person had their own "non-altruistic" reasons for participating in the Summer program[28]:

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[28] Denise was only in Tanzania for our final two weeks, one of which was spent as tourists. Therefore, she is excluded from much of my analysis. I have also excluded the Williams' from this table as their reasons for working in Africa have probably changed over the last two decades.

Table 4.1: Non-Altruistic Reasons for Volunteering With AHEAD

Volunteer	"Non-Altruistic" Reasons for Volunteering
Kaylie	Wanted to gain hands-on experience in medicine, travel, and build her resume
Jayne	Return to East Africa and continue her documentaries with women
Maria	Experience the world of the traveling nurse
Karen	Visit Africa to see the animals, practice and demonstrate public health skills
Carla	Do missionary work and visit Africa
Bob	Promote solar cooking, teach laypeople to do water testing and pasteurization
Boniphace	Meet foreign people, learn about other cultures, practice speaking English

Kaylie explains her own non-altruistic reasons, by saying:

> Personally, the selfish part of it was that I was interested in medicine. And this was honestly the best hands-on experience in medicine I was going to get, I felt. If I was to volunteer in a hospital, I would be emptying bedpans or checking people in as a secretary. You know in a hospital. I mean there was no way for me to get the kind of hands-on health work I could get here. I wasn't expecting to give vaccinations or give shots or any kind of any serious medical stuff, but in terms of being very close with providing health services to people, I felt like this was going to be an excellent opportunity.

While we all had our reasons for doing volunteer work with AHEAD, as a group, there was a general sense of confusion about AHEAD and our roles before arriving in Mwanhuzi. When I first learned that I had been accepted as an AHEAD volunteer, I reacted with both excitement and panic. I knew very little about the organization beyond the information published on its website. When friends and family asked simple questions like, "Where will you be sleeping?" I was unable to answer. Despite a brief orientation in Rockville, MD prior to the trip, I was utterly unable to conceive of what my Tanzanian experience would look like. My concerns were echoed by Kaylie, an AHEAD volunteer:

> Honestly, I had no idea. I had no clue. I didn't know how big. When I first applied, I wasn't sure how large they were, how large the group of volunteers were. I didn't know, maybe they were bringing 50 volunteers and maybe breaking them up into groups of ten in each village. The more I spoke to them, spoke to them on the phone and interacted with them, I realized that they were much much smaller. And they weren't very organized (laughing.)

Maria, who received all of her pre-trip information from her fellow nursing student Karen originally thought that she would be volunteering with HEADSTART, a much larger organization:

> Right so I thought it was some kind of healthcare, obviously for Peds, for children, because HEADSTART basically is for, I mean it has different parts, but basically it is for education. Yeah, so I am like "Oh, Great" Being with such a well known organization and it's huge and when I say organization, then maybe that's why my definition of organization, maybe it comes out of that, in terms of what I was thinking of this and then. Karen and I were telling everyone about HEADSTART, and then it was AHEAD, a different organization. Okay, but that's how it started, I was thinking big, and then we started finding out that it was a lot smaller, but you know I had heard that they had been coming for 25 years. I don't know my perception of it, from what I understood because, you have to remember I always got second-hand information.

In many ways, our expectations were realized – we settled into Outreach, worked in classrooms, provided back-up for nurses and VHWs alike, but in many ways, we remained outsiders or tourists. We impacted both the way that the nurses practiced medicine and the ways that villages and patients responded to that care. Welcoming volunteers to Mwanhuzi meant making some adjustments, such as speaking English and losing office space:

> When you guys are here, our AHEAD office is smaller. Our staff is of 6 so when you guys come we have to move from the AHEAD house to the AHEAD office, which doesn't fit all of us because it is small. Another difference is that our coordinator doesn't have an office, and I think it would be good if she had an office of her own. But we are all there and the office is small so we are all cramped up in there and the coordinator cannot coordinate everything that she needs to because they are all mixed together. She cannot work properly. When the volunteers are not here we remain at the AHEAD house and the coordinator remains in the AHEAD office. (Fatima, AHEAD nurse-midwife)

After Outreach, each village would provide us with a feast of beans, rice, *mchicha* (similar to spinach), and occasionally a freshly slaughtered chicken or cow. Occasionally, the village chairman or the VHWs would offer us *chai* and *chappati* in the morning as well. Naively, the volunteers assumed that this was the typical response to the monthly visit by the AHEAD nurses. I learned on one of our last outreach days that these feasts were in honor of Mama Williams and the AHEAD volunteers and that the rest of the year the nurses brought their own lunches from home. Not only were villages slaughtering precious cows and chickens, but they did this

specifically as a gesture of goodwill towards us as foreigners. In turn, we photographed and videotaped those that asked us to, tried to respect the boundaries of others, and signed guestbook after guestbook. Our accrual of volunteer capital came with these interactions, and the knowledge by the Meatu community, that unlike the other westerners in town, we had paid our own ways.

> [W]e walk around this town and everybody knows we are different. But the people that interact with us find out, that we aren't different. We may have different color skin and we might dress a little bit differently, but then we enjoy soda pops, we enjoy good food, we like to laugh, we like to say hello and do things like that. And that is what Elvira also values, bringing people here so that these people in this isolated place of Mwanhuzi – the only people that they are ever going to see are the people who are paid to come here – the staff, those Dutch guys who come in and a few others like them. And here you are as volunteers, and they know and that you paid your own way and that's also kind of useful. And I think it is wonderful the way you work with the nurses and when you talk to them you have them rolling with laughter. (Bob Metcalf)

Like all cultural neophytes, we made blunders. In one particularly salient moment, I failed to follow Mama Williams's instructions and was forced to turn over a roll of my film. I had been told not to take photographs in a particularly distant village, but following coaxing on Mboje's part had taken pictures of him on a walk on the outskirts of the village, as well as some pictures of scenery and animals. In my attempt to 'follow the rules,' I had avoided photographing people, but not the village and its periphery. A District Hospital employee saw my flash from the distance, returned to Mwanhuzi, and described me to Mama Williams. When I returned to Mwanhuzi hours later, she shouted at me for crossing this boundary, risking AHEAD's work, and ignoring "protection of both people and places." I was confused, after all Mboje had encouraged me. I spent two days away from the AHEAD house, comforted by members of the AHEAD staff and fellow volunteers. Some weeks later, after I realized that my "cultural error" had the potential to increase tension in an already tense relationship between AHEAD and the District Hospital.

Most invaluably, we served as a public relations tool for the AHEAD nurses. As Violet explains, women often came to see the *wazungu* and this dramatically increased attendance at Health Outreach:

> When the volunteers are coming, many women come to see the volunteers. The women like to come and see the white people…We don't tell the women you are leaving, so many of them come to see the volunteers the next month and discover

they are gone and are shocked, so not many of them come back the next month … The only difference [when the volunteers are in town] is that the women come flocking in when the volunteers are here therefore helping us do our work more efficiently. Also our report is good because there are many women coming (Fatima, AHEAD nurse-midwife).

Pointing out our differences, Metcalf explained,

Part of this people-to-people action, that's why you came to AHEAD, because you're a person who wants to experience what its like to be a person out in the village and you're kind of looking at how useful you are, but you're also looking for perspective there, seeing how important it is to go through this, how important it is to the nurses, how important it is to Mboje. *We're celebrities here!* (laughing) Well, we also have more money than anyone else in town.

Both Fatima and Metcalf's points about difference are salient. In Mwanhuzi and its environs, our 'otherness' was constructed as a form of capital. Having our names in a guestbook was a valuable contribution to the village record. Inviting us to classrooms offered teachers and students a chance to interrogate another culture without leaving Meatu. Our 'whiteness' (even for those of us that were not phenotypically white) was a source of curiosity. I would go to Kalandos, the bar across from our guesthouse, and be informed that I had spent too much on a piece of fabric at market or the braiding of my hair. The nurses traded on this 'volunteer capital', recognizing that the *wazungu* increased their numbers, increasing their access to patients. Unlike the other people living in Mwanhuzi, we had what seemed like a limitless amount of cash. We bought boxes of bottled water, while everyone else purchased contaminated water brought by water carriers. Even as young women, we drank beer in the evenings with the men at the Kalandos Bar, a luxury that many married women cannot afford (economically and socially.) We purchased toilet paper at a kiosk in such volumes, that one man commented, "What do the *wazungu* do with all of that – they must have a lot of diarrhea." Our volunteer fees contributed AHEAD's economics, allowing for the higher salaries of AHEAD staff. In short, while we participated in the exchange of volunteer capital, our economic transactions were highly valuable in cash-poor Mwanhuzi.

Our difference constituted a sort of 'reverse-safari.' International volunteer programs are often critiqued for their objectification of the people they serve. Voluntourism has been articulated as a way to 'slum' in a developing nation. In Mwanhuzi, the gaze (Foucault 1977) was turned on us. We were in the panopticon, utterly visible representations of the global world.

It is this aspect – the cultural exchange of our volunteer capital for the experience of rural Tanzanian life – that suggests that volunteerism is about globalization.

<i>Conclusions -- Volunteers as Agents of Globalization</i>

Many of the AHEAD volunteers often felt under-utilized and unable to contribute, but I argue that we made a valuable contribution, albeit a different one than the 'good will' imagined prior to travel. As non-Tanzanians we served as vectors of globalization in a rural district that had little contact with the outside world. We brought changes in power relations, economics, and differing knowledge systems and were, in turn, subtly changed as we learned news way of doing in Meatu. While this is certainly not a new phenomenon, Meatu rarely experiences these 'outside' forces.

> The shift to an increasingly integrated world, involving accelerated processes of communication and economic exchange, with associated risks for health, has therefore been developing for centuries. So has the fact that globalization has primarily involved the outwards mobilization from Europe of various forms of power – economic, cultural, military (Carpenter, 2000: 337).

While Mwanhuzi now has electricity and thus a few satellite televisions, Meatu residents rarely interact with native English-speakers and non-Tanzanians in general. We provided a significant economic boost to the town of Mwanhuzi – our inexpensive guesthouse at $2 per day/each for a month, our occasional meals at the local restaurants, our purchase of such western "necessities" as bottled water and toilet paper, our evening beers at the local watering hole, and our souvenir dollars at the local market were a significant source of income for a town with little formal sector employment. As Metcalf once said, "we are the richest people in town [able to] throw money around on soda pops and chips. I can buy 20,000 [about $24] worth of stamps at the post office and letters." As it turned out our program fees also contributed to AHEAD Tanzania's expenses.

Global exchanges, including discussions of George W. Bush's foreign policy towards Africa at the Kalandos Bar, answering questions on the history of the St. Lawrence Seaway at Meatu Secondary School, as well as constant discussion about the differences in place between our homes and Meatu, were one of the most valuable aspects of the entire summer. The bar conversations, which had not been part of the previous year's volunteers more isolated existence, provoked Metcalf to bring up globalization:

By having these conversations, you've done something that J and R [Summer 2000 volunteers] couldn't do – each group of volunteers is different. When you kind of write your report [this thesis] about all this, that's one thing to write about, about bringing globalization to Mwanhuzi and to some of these villages, as well as you getting a feel for some of these villages. Whenever you talk about development work, you've been to places that I bet you a lot of your teachers have never been to, maybe to Shinyanga, and maybe once a little foray out there, but they haven't gotten to Mwakisandu and some of these other places and seen them from the African perspective: how they get organized, how the nurses get them going (clapping rhythmically), clapping, things like that, trying to work together in these difficult circumstances.

In this chapter, I argue that international volunteerism acts to make Tanzania rural life global. Viewing international volunteerism as mere altruistic action or 'cultural safari' limits an understanding of volunteerism as one of many 'flows' across transnational boundaries. Western volunteers may come to Tanzania to practice or learn medicine, do mission work, learn about a new culture, or work on a Master's thesis and may in turn be studied and analyzed by the people they meet. Volunteers assimilate into Sukoma culture, AHEAD culture, and may learn something about their own culture on the way. Volunteering may not directly contribute to public health, at least not in the way that I imagined, but it does contribute directly to the overall health of the community in terms of economics and cultural exchange. Volunteers accumulate and trade in volunteer capital, while villagers appropriate volunteer capital as a means to glimpse 'the other.' "In Principles of Successful Medical Expeditions to Developing Nations, one of the essays in *A Different Kind of Diplomacy* (1987), Gorney advises, "Do not allow yourself to used. Make sure you are wanted and are not just a 'showpiece' of someone's prestige." Gorney misses the point, you may be wanted for more than just your skills or potential labor, but also for your volunteer capital as a 'showpiece of prestige.'

Chapter 5: Conclusion

The Argument

In this thesis, I have approached AHEAD from the perspective of a scholar with one foot in science and technology studies and the other in anthropology. I interrogate the NGO itself and the role of western volunteers within the organization by taking three snapshots of AHEAD's work in Summer 2001.

First, I conceptualize AHEAD as a public health care project. I situate AHEAD within the larger complex of the Tanzanian healthcare system and as an organization acting in the Meatu District peopled by the Sukoma people. I discuss AHEAD's healthcare practices of babyweighing, nutritional counseling, antenatal care, and family planning as a means to understanding the medical pluralism of the AHEAD project. I conclude that AHEAD is more than just a public health project and turn to development.

International development is a contested field within anthropology and STS, constructing westerners as experts and neoliberal economic growth as necessary for world 'success.' Before analyzing AHEAD as a development project, I provide a detailed examination of the history of development and current perspectives on development theory. I unpack the 'black box' of technology transfer arguing that Bob Metcalf's water pasteurization and testing work moves away from the hegemonic imposition of development writ large. Examining the localization of such development programs, I turn to volunteerism, itself, as a global process.

In examining volunteerism, I reflect upon the contributions of Non-profit and Voluntary Action Research, volunteer narratives, and volunteer guidebooks to the literature of international volunteerism. Drawing upon the work of Bourdiu, I offer 'volunteer capital' as a non-quantitative means to examine the process of volunteerism. Describing the activities and stresses of AHEAD volunteers, I attempt to relocate these individuals (from discussions of altruistic intent, cultural commodification, tourism, etc.) in the larger process of globalization. As outsiders, participating in both the projects of public health and development, AHEAD volunteers act as agents of globalization transmitting culture, technology, and economic capital through their communication. Accumulating and trading volunteer capital enhances both the prestige of the individuals themselves, but the AHEAD project as well. Volunteer capital is proffered, as part of the larger global exchange process, in return for a few months of village life.

Application of the framework of globalization to the AHEAD project can be seen throughout the thesis, but I choose to introduce this framework in Chapter Four as a means to overlay the concept on the preceding chapters. AHEAD's health outreach represents globalization on the ground in several key ways. At the outset, an American NGO has grassroots in the Meatu District, half way around the world. At the same time, beginning in 1974, Tanzania firmly gripped her claws into the Williams family, drawing them back for three decades. On the ground, medicine is practiced pluralistically as different global influences are reproduced into Health Outreach. Thus we see Tanzanian nurses, paid with funds raised in the US, trained in biomedicine, but incorporating aspects of ancient Chinese medical lore and traditional birthing practice into their health outreach. We see the Depo shot, oral contraceptives, and vaccinations offered with Sukoma culture in mind. In Chapter 2, I read these actions within the context of health; globalization offers another way to understand the information, ideas, money that flow mutlidirectionally through Health Outreach.

The institutionalization of 'modern' contraceptives in Outreach points to the global reach of development. Development can be analyzed in terms of economic models, critiques, and alternative frameworks, but regardless of the theoretical positioning or mode of inquiry, development hinges on global exchange. Most explicitly, cash flows from one large donor nation or agency as aid, loans, or in the form of technology transfer. The development discourse is dependent on global movements of people, goods, money, and information through and between the developed and underdeveloped worlds. In the case of solar water pasteurization and water quality testing, these flows may seem more subtle. After all, AHEAD's water work in Meatu is not connected to large monies or financial institutions and occurs largely through the work of one man, Bob Metcalf. Yet, in at least one key way, Metcalf's water work in Meatu encapsulates the concept of multidirectional flow more clearly than that of large scale development. Metcalf's 'water quality testing without the lab" has developed as a result of both his experiences at fieldsites like Meatu, but also in conjunction with people on the ground. As Mboje becomes more globalized, more skillful, and more of a water expert, Bob's expertise in Meatu diminishes and he can turn his newly globalized self to other areas in need of waterborne disease relief. This project, then, operates through the cross flow of information, the movement of goods (like Cookits), and the potential enterprise associated with Cookit production in Meatu.

In short, I argue that it would be short-sighted to analyze AHEAD as a public health project, or as development, or as a volunteer opportunity. Application of globalization theory to an ethnographic methodology suggests that AHEAD is more than the sum of its parts, it is a means for the flow of people, information, technology, culture, and capital.

Avenues for Future Research

My analysis of AHEAD is just one attempt at rethinking questions of health, development, and volunteerism. Fieldwork with another NGO might unveil completely different relationships, practices, and concepts. In an ideal world, I would have returned to Mwanhuzi to view AHEAD in action in summer 2002, tracing global flows through the bodies of a new group of volunteers.

Yet Buroway's (2000) call for global fieldwork suggests that projects like mine which interrogate organizations across boundaries may be more desirable in the future. It is my hope that in attempting to (re)think development, globalization, volunteerism that theories of world systems might be made distinct from activities 'on the ground.' My hope is that I will continue to contest categories like 'healthcare,' 'development,' and 'volunteerism' and that others will do the same.