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Gaining the Appropriate Technology State-Of-Mind

Colette Mininger
Independent Study Project

For the

School for International Training

11th May 1998

Acknowledgement

For helping make the final choice of my Independent Study Project topic, I must first thank my peers who encouraged me to follow a spontaneous gut feeling to change my topic one week before the allotted time began.

A thanks larger than can be given, is owed to the inspiration behind this decision. Dr. Kofi Sam's energy, persistence, ideas and honesty have led me to a greater understanding of Ghanaian culture, human nature, and myself.

I also hold a great deal of appreciation for the wonderful people working with Approtech. To Jemimah, Paa Kwesi, Baidoo and Forman, I owe special thanks. Their patience in teaching, and persistence in breaking language barriers, does not go unrecognized.

To Drs., Naana and Kwadwo Opoku-Agyemang I owe many thanks for hours of forethought and organization, far too many which have gone un-thanked but not unappreciated. A large and desperate thanks to Dr. Eric Quaye for making the written portion of this report possible through unlimited use of his office and computer.

To my parents I owe a thanks that I will continue to try to express through the way I live my life. Through their lives as examples, they have given me something to lean against, as well as something to learn from and to reach for.

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Abstract

The bulk of my Independent Study Project was to study and work with the Appropriate Technology project in Cape Coast, Ghana, under the direction of Dr. Kofi Sam. Through this program I learn how to construct an “Approtech”, house, meaning that the majority of the material form which it is made comes from Ghana and usually the immediate vicinity of the structure. During the course of related to the project, as well as Ghana, in general. From these combines and inseparable experiences, I began to understand the mode of thinking that is the basis of Appropriate Technology. Through researching for similar or related organizations I realized the uniqueness and potential of Approtech and the importance of spreading its basic mode of thinking, as well as its effects. The cultural and personal learning that I gained from this experience is something that will have great effect on my actions and decisions for the rest of my life.

Introduction

I began this program with the idea that I wanted to study Ghana's conflict resolution and arbitration processes. This area is something that I have studied previously and assumed would be peaceful. After beginning the research I abandoned the project when I gained the opportunity to learn about and do something that directly effects and welfare of the people of Ghana. It was important to me to synchronise my research with the needs of the people in who's culture I am studying. This project and its final report have become a journey in an attempt to do this.

This unique opportunity came when our School for International Training group visited Dr. Kofi Sam of one of his Appropriate Technology ("Approtech") sites. Dr. Sam's energy and excitement about what he does were evident the moment we met him. After working with the program for several weeks, I began to realize that Appropriate Technology is a state-of-mind. It is a mode of thinking that my lifestyle has laid the groundwork for but had not had previously taken the opportunity to put to use. I realized that Appropriate Technology has strong roots in the social sciences as well as peace and conflict studies, both of which are my areas of interest and study. As Dr. Sam pointed out, conflicts arise from the gap in a society's socio-economic level. When basic needs are not being met for many while others are living in obvious extravagance, it creates tension. Appropriate Technology is not only resolving conflicts, it is working at the sources of the problem and empowering people to solve them.

The ethics and philosophy behind Appropriate Technology are really quite simple, yet necessitate creative thought and analysis in every situation. It works against the easier, copycat habit that we so easily fall into. Once someone gets into the Appropriate Technology state-of-mind, however, it is difficult to abandon. The rewards are often immediate, not to mention, amazing. Appropriate Technology is unique in that materially and ideologically there is no waste. The whole idea is to use science and technology to find appropriate and efficient means to make use of what is available in one's area. It is an exciting way of thinking that does not come free with human nature but, I believe, can easily be acquired. The part that continues to attract and intrigue me is that when Appropriate Technology is put to use, each person's creative genius is challenged and needed in every situation. Appropriate Technology is a state-of-mind that is a beginning for every situation, area, and person who chooses to take it on.

This Independent Study Project has had a very tangible aspect. I produced obvious and material result with my own hands. At the same time, it also has a very personal and

subjective side that flavors its analysis and conclusions as well as, and more importantly, my life.

Methodology

When choosing to abandon my first Independent Study Project topic I also abandoned hours of research, planning and background knowledge. However, I do not believe I could have chosen a better learning experience. When I decided to make working with the Appropriate Technology program in Cape Coast my Independent Study Project I started with an open mind and an awareness that I was going into something that I knew interested me but that I had previously worked little with.

I spent the first two weeks of the independent study time period working everyday with Dr. Sam and the crew of young people he is currently training. I was able to learn most of the building stages for the housing aspect as well as visit the food processing sites.

Working with many of the same people everyday created very valuable, informal learning time. In addition to this, there were numerous hours of discussions of ideas, issues, success, and frustrations, with Dr. Sam.

While researching other organizations my methodology consisted of mostly more formal interviews. Had time permitted, I would like to have worked with other organizations as well. This is one of the limitations of my research. It is extremely difficult to learn what program is about by only talking to the directors and looking at what they have put on paper.

I consistently felt that time was very limiting to my research. When you do not know so much as the name of the taxi station you need to find to get where you are going it takes time to accomplish even little things. There were too many interests to explore in too little time.

Language was, of course, a large and often very frustrating obstacle in the research process. I appreciated the small amount of Fante that I have learned. I also gained a sense of how much more I could have gained and understood about Ghana if I were fluent in the local language.

Another factor that limited my research, to some extent, was my lack of knowledge and prior research on this topic. This fact left me with little idea which questions to ask and who to ask them of. We all, however, have to start somewhere and making my start here has been extremely rewarding. Often, the less one knows about a situation the more easy it is to look at it objectively. Coming into this area and this topic as an unknowing, outsider was a challenge but one well worth the extra effort.

Chapter One

Appropriate Technology

The Appropriate Technology program based in Cape Coast, Ghana was begun by Dr. Kofi Sam in 1973. The idea and philosophy behind Approtech are made visible in the symbol of a cross hanging by a chain, from the Adinkra symbol, Gye Nyame –signifying the Omnipotence of God (see figure 1) Dr. Sam explained to me that if the African traditional religion had not existed, Christianity believe that the son of God is also powerful. In the same way, he insists that technology must be made applicable and be based on what exists in the area where it is being used.

After years of research Approtech has created several work sites for both housing and food processing. Through the housing aspect, homes and other structures can effectively be built of material, of which over 80 percent is from Ghana (see model). This technique is surprisingly unusual in comparison to the more common usage of imported cement, alluminium, asbestos, and the like. The program has a number of long-term benefits. Because local material and labour are used, the local economy is boosted, young people are given marketable skills, and low-cost housing is produced.

The young people currently training in the housing aspect of Approtech have all been with the villages to pass on the skills they have acquired. All of the workers voluntarily chose to train with the program. While in training, each is provided with a place to stay as well as money for food and transportation to and from the work site when needed. Similarly to all of the funding for the project, Dr. Sam pays these “allowances” out of his own pocket.

The first Approtech house was built in Tema in 1977 and is now being lived in. The house now under construction in Yesunkwa, is a part of the model aspect of the Approtech project. The idea behind this aspect is to use the models as a sort of advertisement for the project. In addition to this, Dr. Sam has plans for a hotel, a clinic, and a restaurant that will interest and educate those who patronize the facilities. When people can see the idea behind Approtech and their effects, more support will be available to make further projects possible.

Dr. Sam is continually finding new projects, as well. In addition to the model house, the Approtech building crew helps construct and/ or repair small structures such as kiosks. In the two weeks I worked with the program we visited two future sites. One was a church in a small village near Jukwa. The pastor asked Dr. Sam for help building a new church equipped with a nursery as well as an orphanage near by. Dr. Same said he felt the pastor was a good man with good ideas so he wanted to help.

Another future site in Cape Coast is a partially finished boarding school. The headmistress had begun the building using the common cement block and steel rod method. Construction ceased months ago when she ran out to funding. Million of cedis were lost in the project, similarly to the hundreds of other partially-finished structures around Ghana. The headmistress knew the owner of an Approtech house and knowing he was not a wealthy man. She inquired how he could afford to build such a beautiful home. In this way she learned of the Approtech program. When we visited the site of the unfinished school, Dr. Same and the Headmistress made a plan of how the structure could be finished using local materials and with much of the labour being provided by the young women who will eventually live in the boarding school. Besides learning to be seamstresses (for which the school was formed) the young women will now also learn many of the skills involved in constructing a house.

Dr. Sam has many ideas and proposals for the future Approtech. One that he wants very much to make happen is to buy a large plot of land, divide it, and build Approtech houses on each individual plot. The plots would then be given to farmers on a loan system. A person could own a house and a small plot of land at a fairly young age and with it make enough money to live on when they are not longer able to be productive. Dr. Sam shared his belief that when a person owns a home and becomes self-sustaining, they can then be creative and ingenuitive, not to mention gain a sense of pride.

The Food Processing aspect of Approtech has two potentially productive sites. In Aboranse, near Komenda, a sugar cane processing site has been constructed. The site was constructed to process sugar cane into local gin (called akpetshire), syrup, brown sugar, and paper. Previously the site made akpeteshre, but is currently not producing because some of the equipment is not long in working condition. Dr. Same hopes to return the program's efforts to this project after the model house at Yesunkwa is completed. With some work, he hopes to repair and replace necessary machinery as well as acquire the technology to crystallize the syrup and make paper from the remaining sugar can pulp. The research and technology to these is available but will coast a great deal to acquire.

The second site is a palm nut-processing site in Jukwa. When Dr. Same found the already existing site, he donated a machine that eliminates the slow process of pounding the palm nuts by hand. The fuel-powered machine makes it possible to produce a much great quantity of oil in the same amount of time. Along with the machine a simple structure was provided to house and protect it. These were given by Dr. Sam on a loan basis so that when profits were make from the oil, the system could be self-sustaining and he would eventually repaid. The machine and building were given two and half years ago, however, neither are

currently working condition. The machine is broken and the structure has collapsed. The people running the processing site neglected to tell Dr. Sam what had happened because they had not made enough money to fix either, nor to begin repayment. During the time I worked with Approtech we began reconstruction of the building but the palm oil will continue to be produced by hand until better supervision of money and materials can be found.

A very disabling limitation for Approtech is its lack of people to fulfill the supervisory positions. As the program now runs, after training is complete the workers go back to their homes to train others. This creates an essential ripple effect, however, it leaves no experienced people to continue working with Approtech. This is the main reason for the temporary collapse of both of the food processing sites. The outcome of this is that Dr. Sam is the only experienced person in the program. Because supervisors are needed continually at each site, progress can only be made one place at a time.

One of the many consequences of the lack of experienced help is lack of immediate planning for each particular site. One person cannot foresee all the things needing planning and forethoughts for every project. Because of this work often must end early because a site runs out of water or some other necessary material. It also often means that work cannot start until late because Dr. Sam is busy dealing with one aspect of Approtech while another is awaiting transportation to the work site or directions to be given about what needs to be done.

A basic root of Approtech's limitations is that they have little outsider support. Dr. Sam is very interested in influencing young people. Particularly, he says from the United States because he hopes they will one day have the power to influence where US aid money goes. He explained that for the program to really effect a large number of people, more equipment such as a water tank, truck and tractor are needed. To acquire these items, the program would need another source of funding. Support and people interested in doing the actual labour are also sorely needed.

Another limiting factor for Approtech is the lack of people who accept its way of thinking. I did not realize the extent to which this hinders the program until I had a discussion with a worker at the Yesunkwa site. This worker was not one of the Approtech trainees, rather someone contracted only to plumb the house. He began airing his doubts about the stability of the structure. With the little I knew about the design, I defended it and rather easily found his doubts unfounded. The plumber pointed to the laterite blocks and wooden frame and insisted that cement was stronger. I reminded him that the house was not yet finished and that both the supporting posts and the laterite blocks will eventually be covered with cement, producing a structure sufficiently sturdy at a much lower cost. I

pointed to the two unfinished cement block structures within view of the model house and made the point that their cost was unnecessarily high and the money already spent on them was wasted because they are unused. The plumber backed off his argument a bit but was obviously not won over. He made reference to the idea that the model house was fine for a village, but if he were building a house it would be made of solely cement blocks. From my perspective, this mode of thinking is caught up in having “better than” rather than realizing the amazing potential in the things that are easily at one’s disposal.

Approtech is a unique project that has many far reaching effects. It is, I believe, an essential part of the solution to many of the problems facing Ghana. Because it moves against the current in its philosophies, however, it frequently meets with oppositions. With more interest and support this program could have tremendous effects. Dr. Sam’s work and belief in this project have firmly convinced me of its potential. Approtech, the program here in Cape Coast, as well as the general meaning of the phrase, is something I would never be able to forget.

CHAPTER 2

Discussing with Dr. Sam

Separating Dr. Sam from Approtech and my experience with the project is nearly impossible. A large part of my learning experience, however, came from discussions with Dr. Sam, many of which were not directly related to Approtech. Acquiring these ideas and my reactions and analysis of them created a full-time learning experience. During the last month I have been exposed to a new way of thinking that is the basis of Approtech and a state-of-mind for Dr. Sam. During the discussion he told me that his family keeps urging him to settle down. He says he is settle down – he is married to his work. “I think it, I write it, I live it.” And from what I can tell, this seems to be true.

Dr. Sam gave up doing “paper work” long ago. He had stopped giving lectures and programs and teaching classes. He feels we spend money on these that could have much greater effect if put to direct use. He taught and lectured at universities for several years and was frustrated by people’s approval of, and interest in his ideas, but lack of commitment to making them a reality. I asked why he does not work with universities to get people to work at the supervisory level. He says that no one who had gone to the university is willing to do work like this. “They say there is unemployment, but really people are unemployable”, he insists. This situation and his attitude towards it breaks a very necessary link in passing on the Approtech state-of-mind.

I believe it is a struggle for universities everywhere to teach applied skills. In Ghana, specifically, the feebleness of this struggle creates a large problem because so much labour intensive work is necessary. Dr. Sam insists that many students go to universities and live away from their homes and most often study things that will land them a job in an office. This situation allows people to forget or neglect to learn very necessary skills such as farming, fishing, or constructing a home.

According to Dr. Sam in-school-learning, the way it exists today in this country, it nearly useless. People sit in classrooms and learn theories and equations from texts printed on some other continent. The truth of this is obvious in the depths of Ghana’s history and many problems. Yet schooling was necessary for Dr. Sam to learn the science and technology that he is now making use of with Approtech. He does not feel that young people should not be going to school, but rather being taught practical skills beginning at a young age. When students reach the university level he suggests that they be doing research

and theses on the science and technology used around them everyday such as farming practices or ways of producing energy or processing foods.

In my opinion it is the Approtech state-of-mind that needs so necessarily to be taught. The way of thinking is something that can be applied to every life skill, not only carpentry or science. To make something appropriate requires one to question its motives, uses, and alternatives. It is something that takes time and planning but has endless benefits. There is sort of an inherent set of values that comes along with this way of thinking, in my opinion. Making something function in an “Appropriate” sense invites creativity and fosters pride. The necessity of each individual that he trains acquiring this way of thinking, is something I am not sure Dr. Sam recognizes.

I explained to him that through our many conversations and my learning the Approtech techniques, I had begun to learn to question and think this way on my own. I asked if he also passed this on the other trainees. He explained his feeling was that they were not on the same academic level as I. I pushed further, for a better explanation but also to challenge him, and asked if he did not think after working with Approtech for a period of time, they could start thinking for themselves in this respect. “No, I don’t agree with you”, he answered,” they aren’t even able to argue about the things they learn.”

Dr. Sam’s opinion about this situation is something I feel holds back the Approtech program. If he would attempt to teach this Approtech state-of-mind he could make a huge impact on each individual and it would spread much more quickly, as well. It frustrates me that the trainees are not figure out alternatives to problems and find new ways of accomplishing tasks. I have no doubt that anyone could catch on, if only Dr. Sam took the time to talk with them about some of the things we have discussed. Even to mention how simple it would be to store water during the rainy season and the fact that it is not done. As a matter of fact, I do not doubt that through his comments and the things he questions that they pick up on what he is trying to accomplish. It is interesting to me how Dr. Sam talks about empowering the average Ghanaian and how the government and organizations do not do this, yet he has this negative frame of mind about them. I am not sure where his inspiration comes from if not form the “average Ghanaian”.

No one, including Dr. Sam, is born with the Approtech state-of-mind. Even he had to acquire it through time and experience. I have heard him talk of times before he began to use this way of thinking. And since he has, it has obviously transformed his life. When a person has a sense of pride about their own skills and achievements, the possibilities for their creativity are endless. Dr. Sam is an example in himself. He is overflowing with more plans and ideas then anyone could complete in a lifetime. Aside form inventing things for

Approtech housing and food processing, he is continually looking for ways to make things more efficient and appropriate. For example, he has developed a simple stove made of a metal cylinder that is fuelled by waste sawdust. When the sawdust is packed into the cylinder and lit it burns nearly smokelessly for over an hour – creating a great deal of energy at a low cost, with little pollution, as well as making use of a waste (see figure 2).

Sr. Sam has also designed a style of clothing that suites himself and the environment. It is a loose-fitting, short pants and shirt outfit. The pants reach just past his knees and the shirt is large with openings at the armpits to allow air to flow through. This also functions as a way to help clothing last longer because he says, this is usually the first area to wear out because of frequent washing.

In a similarly appropriate way, solar energy would make an incredible amount of sense for Ghana. Dr. Sam insists that even forty years after independence, Ghana waits for someone else to come out with technology that makes sense for Europe or America and then unquestioningly copies it. “We could be the masters of solar technology” he insists, frustratingly shaking his head. He explained that Ghana must learn from the birds, termites, ants and bees. They do not import suites to wear or materials to make their homes. Ghana’s economy, he is sure, will never be in equilibrium until this lesson is learned. The answers seem so simple it is difficult to understand why it almost seems people are fighting against them. I believe it has a lot to do with the lack of planning ahead, forethought, and an all-encompassing way of looking at things. The Approtech state-of-mind asks one of the interconnectedness of things, even history, present and future. By this I mean that analyzing the state of things begs remembering events in history and asking how they effect today. And working at improving things today is rarely done if one is not thinking of tomorrow.

Dr. Sam was a minister of state in the 1980s, during the middle of his research for the Approtech project. He said there was much pressure from his peers to wear a suite as well as questioning why he did not have an expensive car and other extravagances. He said it did not take long to realize his work there was a waste of time and he was not going to be able to do what he felt was truly important. He has many times expressed his frustrations with the workings of the government. Dr. Sam’s classmate, Kofi Annan, echoed many of the same sentiments in the article featured in The Daily Graphic, “In far too many cases, post-independence rule has been characterized by an acute form of ‘winner-takes-all’ politics while victory at the ballot box has translated into total control over a nations wealth and resources. With the absence of proper checks and balances, inadequate accountability and lack of respect for human rights and the rule of law, political power has too often become a

weapon for the few rather than the instrument of the many”¹. Dr. Sam made a conscious and admirable decision not to be a part of this weapon.

There is an interesting incoherence between who Dr. Sam has chosen to empower and where he sees himself in society. He holds a fairly unique position in society in that he is wealthy but does not use this wealth to keep himself in this position and others out of it. In a sense, he is a part of the class that controls and often oppresses the majority yet his personal work does not. He addressed this issue once when he said that he feels there are two classes of people in Ghana; the villagers, who find their own food and water and his class, which he called scavengers. He gave the example that the amount of money spent on the gas he uses in one day could pay for planting a farmers entire crop. Ye to keep Approtech going, at this point, he has to be part of the wealthy class because he is the program’s only source of funding.

One thing I am not sure Dr. Sam realizes is that, in the Approtech program, he also operates free of any checks and balances. There were several instances where I felt they would not have been un-called for. For example, many times, in his communication with the trainees where, even across languages, I could understand enough to not want to be on the receiving end of his tone of voice. If the scolding them like children defeats the purpose.

There were many times when I found myself wondering how the trainees see Dr. Sam. for me, the fact that he does not partake in any of the physical work, left a strong impression. I have always found it difficult to work for someone who gives directions but does not also join in the work. I have wondered if the trainees see this as a privileged position that they seek or despise. Both of these sentiments are quite possibly cultural assumptions that do not exist in any of their experiences, in this case. I however, find it difficult to hear to hear Dr. Sam judge Ghanaians who “refuse to do this kind of work”, yet he himself does not either. He, like so many of his peers, lets his money and influence to the work rather than his hands.

Something that surprised me in the positive sense was that Dr. Sam was sincerely concerned that I not only learn the Approtech theories and state-of-mind also the specifics of building an Approtech house. He specifically wanted me to learn the ratios and be able to make things without the assistance of the more trained workers. I spent hours just learning to make ridge caps. Yet by the end of the second day I had sufficiently taught myself with little guidance and become fairly efficient. The process made me realise the importance of hands-on-training that Dr. Sam feels is so important. The set of ridge caps I made also held a function besides my learning the skill. The sand that I used in the cement mix was not the

¹ Annan, Kofi, “An Africa that Africa deserves” The Daily Graphic. 29 April 1998, 13.

right kind that coagulates simply in the rain. Dr. Sam know this when I first made the cement mix. When I picked up the finished product after letting it dry for three days, it crumbled. Dr. Sam smiled and said he knew they would not be strong enough. He simply wanted to make the point that the technology involved is not simple. Many people who try to use his method, he explained, do not get the right sand or some other material or small detail and when it fails they blame it on the entire method and go back to the cement blocks. I was frustrated at the time and energy that I felt were wasted but through this he had succeed in making a point. Understanding that taking time and having patience with trial and error goes with discovering what is appropriate. This patience is something I can see keeps Dr. Sam sane and something I need a better grasp of.

After working with Approtech for several weeks, the confidence in the possibilities and successes of the project have been instilled in me. Dr. Sam has passed on to me the belief in Appropriate Technology here in Ghana, as well as anywhere. What he is doing here and its effect on my life, he need not worry that I will forget. The state-of-mind, as I have come to call it, is something that I believe will never let me cease to question and work to improve what ever I choose to put my energies into.

Chapter 3

Checking Out Other Organisations

In my life I have worked with several groups and organizations that work to improve the welfare of others. Service and volunteer work is, in fact, a common part of American life. We do “good deeds” so we can go on with our lives free of guilt about where our relatively easy way of life is leaving its refuse. I did not come to Ghana with the idea that I could do something beneficial for the people. I leave though with the hopes that my work with Dr. Sam and Approtech has had some positive effect. More importantly, I feel I now know that that the most beneficial thing I can do is to tell others about the program. Looking for other organizations was a beginning in searching out those who would also be willing to take on what Approtech is doing.

My search for other organizations in Cape Coast merely touched on a few that were most obvious to me. One organization that I looked into was the Cape Coast Women’s Centre. It was begun with the cooperative efforts of the Peace Corp, several churches, and other women’s organizations. Their mission statement is, “To help all women in the community to improve their way of life.”¹ The Women’s Centre welcomes anyone who is interested in becoming a member.² Their objectives seem to encompass the main areas that women may need assistance or support. Specifically, they include; to provide a place for women to meet and network, to “create entrepreneurial awareness...in the direction to become self supporting”, and to provide credit as well as vocational training.³ The Centre seems to have a well-rounded focus and, from the opinion of the employee I spoke with, a very positive effect. I would like to have spoken with some of th⁴ members, teachers and trainees as well. However, the Centre is currently not fully-functioning because of the water shortage. Like must of Ghana, they have taken for granted the very basic necessity of collecting water and have not provided themselves with any storage facilities. Because of this, many of their positive works and effects are on hold.

Another organization in the Cape Coast area that I looked into is Cedecom (Central Regional Development Commission). This organization was developed to reduce poverty in the Central Region which I was proudly told is labeled the “Heartbeat of Tourism”.⁴ Cedecom has four main units; the Investment Promotion Enterprise, Tourism Development,

¹ The Cape Coast Women’s Centre pamphlet. Section: Mission, P.O. Box 587 Cape Coast, Ghana.

² Monica, Women’s Centre employee, interview by author, 29 April 1998.

³ The Cape Coast Women’s Centre pamphlet. Section: Aims and Objectives, P.O. Box 587 Cape Coast, Ghana

⁴ Anistina, Cedecom employee, interview by author, 28 April 1998.

Community and Environmental Management and Protection, and Administration. I was given the opportunity to speak with the director of the Community and Environmental Management and Protection Unit and learned that Dr. Sam is the technical advisor for their rural housing program. The director, Mr. George Oforu, explained to me that they have three training sites in the region where young men and women are being trained to construct home from local materials. I told the director I had visited the one located in Elmina. I asked why it is currently empty and unused. He said that the political heads in the area were to launch the program to select young trainees but it had not been done yet.⁵ Considering the number of young people in the area, eligible to work, especially now that school is postponed because of the water shortage, “launching” this program would seem to me to be a top priority. From Dr. Sam I learned that Cedecom had received a four-wheel-drive vehicle from United Nations Development Project (UNDP) to transport workers and material to the training sites. Dr. Sam, however, has never seen this vehicle.

After hearing so much talk about development, I decided to visit the Centre for Development Studies at the University of Cape Coast. The Centre was started in 1967. Under the name ‘Social Studies Project’. In 1973 the project was upgraded to a department in the Faculty of Social Sciences. The aims of the department are “To take part in the national efforts to identify and understand the processes and mechanisms of sustainable development. To contribute to the stock of information needed by policy makers and administrators in solving development problems.” Their list of activities include research, teaching and training at the masters and doctorate levels, teaching and training in the Social Science and other faculties at the University, specialized training programs and outreach activities.⁶ I was interested in learning more about the outreach activities though at the time of my visit all of the faculty were out, the library was closed, and the next day was a holiday. This department, however, has the potential to be a great avenue for the spread of the Appropriate Technology way of thinking. The outreach programs were explained as ‘seminars, workshops and conferences for development-based governmental and non-governmental agencies and organizations.’⁷ Further research on and through this department could be very useful in knowing if universities are, in fact, teaching people to work at the basis of Ghana’s problems or just simply to fix the immediate crises.

⁵ George Oforu, Cedecom employee – director of Community and Environmental Management and Protection, interview by author, 29 April 1998.

⁶ Centre for Development Studies (CSD) pamphlet, Sections: Background and objectives, P.O. Box 01, University of Cape Coast, Cape Coast, Ghana.

⁷ Centre for Development Studies (CSD) pamphlet, Sections: Activities, P.O. Box 01, University of Cape Coast, Cape Coast, Ghana.

The Peace Corp is a route that many Americans take to fulfill their need to do good. From my perspective most Americans feels Peace Corp is effective and to have this experience on one's resume is very beneficial. When I visited a Peace Corp volunteer in the Volta region of Ghana, I gained a new and interesting perspective of the program. This perspective of Peace Corp comes from participating informants rather than from a pamphlet. It is, however, a perspective gained in short matter of time and from only two sources.

When I first came to Ghana, at the beginning of this semester, I considered joining the Peace Corp after finishing undergraduate schooling. After visiting with the two volunteers here I have almost certainly changed my mind. The overwhelming impression that I got was that the Peace Corp workers were unaware of, or uninterested in, dealing with the repercussions of their work and presence in Ghana. They are given relatively high salaries as well as more than adequate accommodations. The first worker I spoke to said he could feed a family of five on his salary. After seeing his home, I am sure he could also house them. The state-of-mind that these extravagances gives them was obvious. Instead of being immersed in their village and surroundings they are held aloof and become comfortable with this position. One of the volunteers, in discussing the many of the money-wasting and ineffective organizations in Ghana, admitted that he felt Peace Corp was not above this. He called himself and the other workers "a walking Public Relations team for the United States government".

I do not doubt that it is possible to do many positive things through the Peace Corp program and I would even go as far as to say that the vast majority of the volunteers to have positive impacts through their projects. The program overall, however, seems to have some major pitfalls that, if addressed, could create a much more effective program for the host communities as well as the workers. I would suggest that if in their training and orientation they were asked to think about their personal goals and reasons for being here as well as given a sense of the influence and effect their actions have they would be much more aware and therefore, more culturally sensitive. It was obvious that the volunteers I met were not encouraged to do this type of thinking and analysis.

Reading the papers and looking for other organizations attempting to improve the state-of-life for Ghanaians convinced me that there is an overwhelming number of organizations in this country attempting to do just that. I decided then to go to the Ministry of Employment and Social Welfare which is responsible for registering all non-governmental organizations (NGOs). There are in fact 211 NGOs now registered in Ghana. Each is put into a general category listing. (for list of categories see figure 3). I was interested in finding how an organization becomes an NGO and what its purposes and benefits are. An NGO is

“an organization which is voluntary, independent, non-self-serving, not for profit, and which aims at improving the quality of life of people”.⁸ The benefits available to an NGO include exemption and reduction in taxes and duties on foreign items, tax relief for donators, and governmental support.⁹ The benefits to be gained by becoming an NGO have the potential to be quite substantial. I would like to have been able to spend time researching and working with a number of NGOs to see what they are accomplishing. It could be very beneficial to study and document the work of NGOs for several reasons. Publicizing their work through these means could expose organizations to new support and could also expose deficiencies and provide new ideas for improvement.

This aspect of my research was a process of skimming the top layer of what could be an entire study project in itself. It did, however, provide me with a helpful perspective of Approtech and the uniqueness of what it is accomplishing.

⁸ Pamphlet on REGISTRATION PROCEDURES OF NON-GOVERNMENTAL ORGANISATIONS IN GHANA. Produced by the Ministry of Employment and Social Welfare (MESW), Section: What is an NGO? P.O. Box M.230, Accra, Ghana.

⁹ Pamphlet on REGISTRATION PROCEDURES OF NON-GOVERNMENTAL ORGANISATIONS IN GHANA. Produced by the Ministry of Employment and Social Welfare (MESW), Section: Benefits Granted NGOs After Registration, P.O. Box M.230, Accra, Ghana.

Chapter 4

Cultural and Personal Learning

This Independent Study Project reaffirmed, for me, the tremendous effects of experiential learning. It is, after this semester, difficult for me to understand why so much of the world's schooling is done in small, contained rooms with only one instructor and the expectation that only that person will impart knowledge to the rest. An essential part of in-the-field learning is gaining knowledge from the entirety of one's surroundings. It allows mistakes to be made and learned from rather than merely read about, in addition to inviting personal creativity in coming up with solutions.

Analyzing and thinking about the effects I had as a participant observer has been necessary and rewarding. There were several instances when I quite certainly felt my presence effecting the flow of things. An outsider in any situation effects its atmosphere. I felt that my being both white and female, however, created the potential for substantial disturbance. Separating my experience as female and white is impossible as is judging which lead to certain responses or treatment that I received. Considering this, I will attempt only to explain my perspective of the effect my being on the Approtech crew, had.

At first I found that most of the Approtech workers expressed surprise at my interest in joining in the training. The language barrier kept me from explaining, in depth, to them the purpose of my work. The fact that I neglected to do this my have lead to confusion as to what my role was and what was expected of me. I was often not allowed to do some of the more strenuous work. This was somewhat frustrating but could be explained by a norm of this society. Being an outsider earns one the status of guest. Guests or visitors, in Ghanaian society, are most certainly treated with honour.

Challenging stereotypes of oneself and others is a given when living in a different culture. I knew I had begun to do this when Dr. Sam told me that the trainees had told him I had carried so much cement the previous day that I ruined my "dress". I was proud to let them know that I was there to get my clothes dirty and I would, in fact, wash them myself. As far as my learning, assumptions about roles and hierarchy were continually being challenged while watching the workings and interactions of the trainees. These were when I felt Dr. Sam treated me differently then the other trainees. This was in some ways, inevitable, because my purpose there was different. There were many times, however, when I regretted having a reason to be kept aloof from the others.

During the time I worked with Approtech I became aware of a different work ethic than I have experienced at home. In comparison to working with my father, who is a builder, the work schedule is much more flexible. When I work for my father we have a fifteen minutes break at 10.00 and lunch is always at 12.30 until 1.00. Lunchtime with Approtech is whenever the workers get hungry. Each person is given “chop” money and can get something jointly or find food on their own. Break time often comes in the afternoon, during the hottest time of the day, or when a pineapple seller walks nearby. Quitting time is whenever the work is completed, a necessary material has run out (“is finished”) or at 5.00 which ever comes first.

The pace of work is also very different. This has a lot to do with the number of people who know what the final goal is and how to achieve it. When there are fewer skilled workers on the job it takes longer to accomplish things. My eagerness to finish each project “efficiently” was immediately made obvious to me. I was quickly reminded, though that most everyone else had a different frame. I accepted that it could only do me good to adapt to a more relaxed and appropriate pace of working. Because of the heat and other factors, a slower pace is necessary. To be on a rigid schedule with deadlines would be nearly impossible and would quickly frustrate everyone’s willingness to work.

An interesting parallel that I found was that Dr. Sam’s research and effort in Appropriate Technology reflect his willingness to look for, and ability to find, several ways of making things work. This is a quality that few people seem to have in any culture. It requires looking at things from several perspectives and questioning the norm. This skill is something I have also seen in my father. Many times I have been surprised when he finds a way to make something work even when the right tools or equipment are not available. This ability is so valuable in all aspects of life because there is no one, right tool for most jobs. It is a creativity and open-mindedness that I was not sure how to acquire. My experience with Approtech and living in another culture has opened my eyes to the numerous things we assume have to be the way they are, when they are in fact, only cultural. There is almost always another more than one right way of doing things.

Because I was, in sense, a student of each of the more skilled Approtech workers, I had the opportunity of experiencing several different teaching techniques. Some were very directive. Others let me make mistakes. No matter who the teacher though, my efforts were always met with, “You are trying,” which meant that both of us, student and teacher, were accomplishing something.

The fact that myself and the Approtech trainees spoke different first languages necessitated a large amount of non-verbal communication. Because gestures and body

language are different across cultures, this took a lot of patience on both our parts. Thankfully there were many instances, usually funny ones, where there was no language needed for perfect communication. I found my own clumsiness to be rewarding because it provided a source of humor we could all understand. There were also times when obviously amusing discussions were going on in Fante that I could not indulge in. Times like these were frustrating because I wanted so much to belong to this group of young people I came to call friends. Yet language was often an obstacle that neither myself nor they could overcome.

When I first was intrigued by Approtech I did not realize how related it is to political and governmental issues. These are things I have previously shied away from. My interest in these remains in their outer, less-complicated spheres. However, I now find myself looking for ways that politics affect every day life. In the course of my research I found numerous newspaper articles that founded the many doubts and frustrations that Dr. Sam has expressed about Ghanaian politics and government. I continually came across articles that were little more than advertisements for political parties masked by success stories about reducing the energy crises or assisting rural areas. One that I found particularly amusing was an article covering a meeting president, Jerry John Rawlings has recently with the Global Board of Directors of the Hunger Project. The article reported that, “President Rawlings said research findings which were lying idle at the Ministry of Food and Agriculture could have been utilized for increased agricultural activities to avoid the recurrence of food shortages in certain parts of the country”¹ A recap of the article was featured under a picture of the President with the Board. It read, “President Rawlings was at a loss as to why in spite of appreciable degree of research finding on agriculture, the desired impact on the food situation has not yet been registered.”² It takes a great deal more than simply doing research to improve a nation of people’s way of living. A country with a government that is not aware of this or concerned with more than their re-election is bound to remain underdeveloped.

Ayi Kwei Armah, an author from Takoradi, Ghana, expressed many similarly negative sentiments. One of the characters in his book, Fragments, speaking of Ghanaian officials, explains that, “They know things don’t work, but they are happy to sit up on top of the mess all the same... The machinery doesn’t work, except as a special favour for special cases... But they know what they’re doing in the long run.”³ There is an obvious feeling of hopelessness in the language and plot of Armah’s book. Yet, reading both Fragments as well as Osiris Rising left me with some hope that there are people who are fighting for the right

¹ Tsen, Kweku. ‘Accept criticisms in good faith’, The Daily Graphic. 25 April, 1998, 1.

² Recap under photo, ‘President receives Hunger Project members.’ The Daily Graphic, 25 April, 1998. 5

³ Armah, Ayi Kwei. Fragments. Houghton Mifflin Co., 1970, 83.

things. They desperately need one another's support but are unfortunately, few and far between.

Armah also directly addresses and challenges organizations whose purpose is to help others. Another character in *Fragments* complained that "Nothing works in this country...This place is run by organizations, supposed to take care of this and that. But if you want anything done you have to go running all around these stupid organizations themselves."⁴ This utterly wasteful problem is something not only occurring in Ghana. I have had similar experiences at home with any type of organization. I am often tempted to allow my frustration and anger to let me give up attempts to change or improve them. But this is stooping to the same level as those who are maintaining the dysfunctional system.

This scramble to pull oneself out of poverty using any means necessary is something I have been struggling with. I have been quick to judge the Ghanaian with many expensive material things, yet, I myself am looking forward to going back to the conveniences of home. I cannot blame a person for wanting to make life easier. I have always said that I simply want to live comfortably. Now I can see that 'comfortably' is relative extravagance. It is average, and looked well upon not to mention, within reach for the majority of people living in the United States.

This situation has repercussions in politics and government that I have only vaguely begun to understand. Poverty causes unrest, to say the least. When a person moves out of poverty they have power and influence over those who remain there. This power is seen by those at the top as a threat to the structure that keeps them there. It is for this reason that Dr. Sam and Approtech struggle with opposition. They are empowering the many.

There are several interesting similarities, in the realm of politics, between Ghana and West Virginia, where I am from. Both places have been, and continue to be taken advantage of by more powerful governments and companies. Ghana was raped of its people, and its mineral resources still are producing profit for those outside the country. West Virginia has been essentially robbed of its vast wealth of coal and timber. The difference in the degree of severity with which Ghana has been exploited is unspeakable. My point is simply to say I believe this small point of similarity has produced visible parallels in governmental structure and control as well as people's attitudes towards it. In both places I have found those who will die of exceedingly large wallets and bellies at the expense of the many, those who will die of working too hard for the fat-walleted few, and those who will die of frustration working for change.

⁴ Armah, Ayi kwei. *Fragments*. Houghton Mifflin Co., 1970, 81.

The things I have learned this semester about culture and society have convinced me that Sociology and Anthropology are the right fields for me to be in. I am curious to see how my learning as far as culture is concerned, continues when I step back into my own. With a new perspective and sense of self-confidence I will attempt to spread some of what I have learned here, to a society that also has much to learn.

Conclusion / Suggestions for Further Study

The completion of this adventure has turned out to be an important beginning. Before studying in Ghana I had no idea where my studies and interests would lead me. Now that I have been introduced to Approtech Technology I have feel I have been pointed in the right direction and have had an infinite number options opened up to me. During the Independent Study Project I became interested in studying so many things. I continually felt the strain of the approaching deadline. If I had more time, or were to suggest where to go from here, I would encourage getting involved in organizations of interest and challenging them to evaluate and analyze what they are doing. No person, group, or organization is above improvement and an outsiders perspective is often quite helpful. I would also encourage, if further work were to be done, that the researcher do more than remain an outsider. Getting your hands dirty is the only way I believe a person can truly have lasting effects.

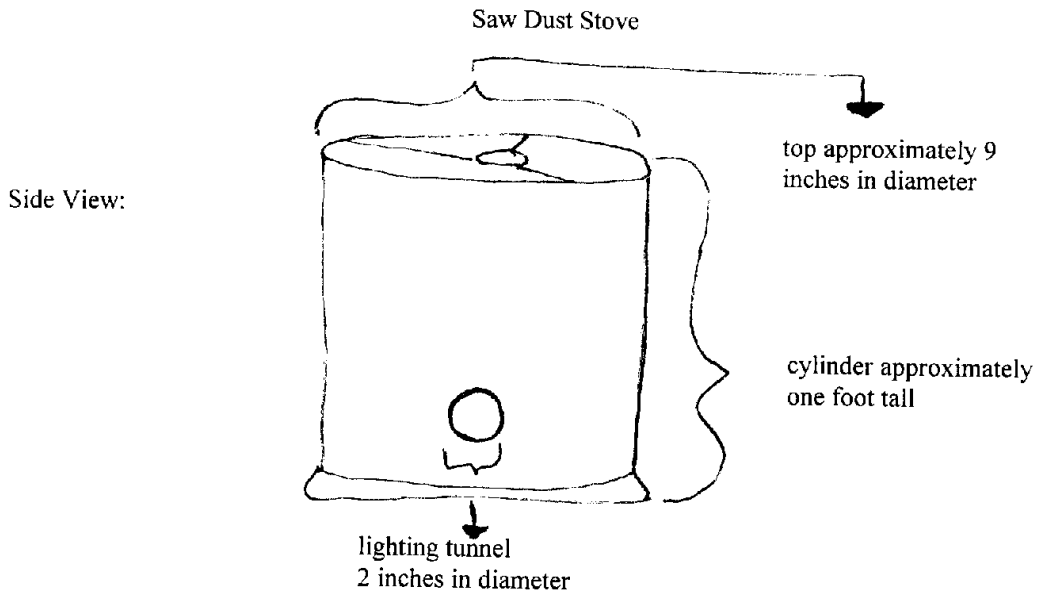
In addition to looking at aid organizations I think it would be important to study places such as the Centre for Development Studies, at the University of Cape Coast. Finding what is being taught in the department of development could provide many clues into the solutions for problems as well as their sources. Appropriate Technology is very connected to education, politics, government, economics, science, philosophy – nearly every field imaginable. Any aspect of life could be looked at through the Appropriate Technology lens.

This new lens is one that I have proudly and anxiously taken on. It has equipped me with questions to lie on every organization and system. I am eager to test them on any group or person who has settle into the comfortable rut of using inappropriate means to get by. This experience has given me the confidence to challenge others to grasp the Appropriate Technology state-of-mind and the morals I believe come with it. My work here has brought me to realize that I can make the most difference working with the organizations and people in West Virginia, where I grew up. I recently heard someone say, “You can’t tell someone else to sweep their backyard if your own is dirty. Deciding to follow this proverb has pointed me in the direction of home where is plenty of sweeping to be done.

Figure 1

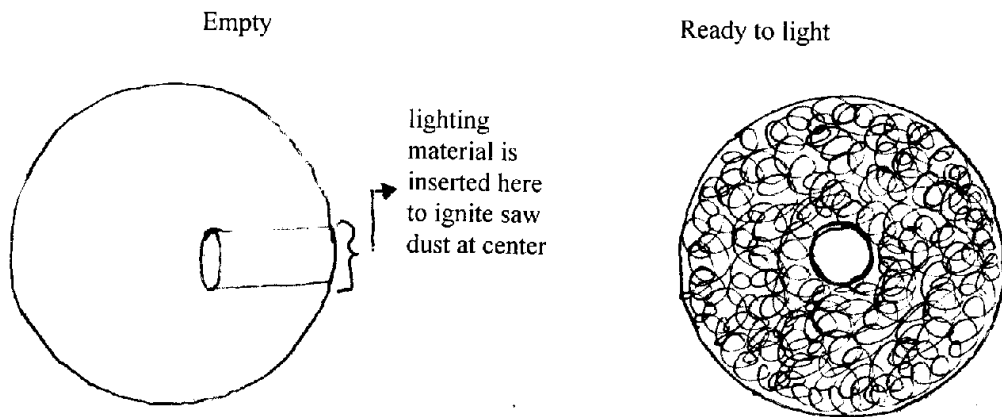


Figure 2



Top View:

(pot holding rack removed)



*Sawdust is tightly packed around a stick (approximately 1 and a half inches in diameter) that is first placed in empty cylinder. Stick is removed which creates tunnel for smoke and oxygen.

Figure 3

NGO Chart

	Category	Number of Registered NGOs
1.	Relief Group	49
2.	Educational	36
3.	Community /Rural Development	26
4.	Health / Medical	21
5.	Agricultural	19
6.	Environmental	17
7.	Vocational Skills	13
8.	Water Development	9
9.	Managerial Assistance	6
10.	Physical Rehabilitation	6
11.	Housing Project	5
12.	Drug Abuse	4

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