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CAMEROONIAN TEACHERS' PERCEPTIONS OF CULTURE, EDUCATION, AND MATHEMATICS

A Dissertation APPROVED FOR THE
DEPARTMENT OF INSTRUCTIONAL LEADERSHIP AND ACADEMIC CURRICULUM

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ABSTRACT

This study is a critical ethnography of Cameroonian secondary school teachers, with the purpose of generating understandings of Cameroonian teachers' perceptions of and meanings for culture, education, and mathematics and the relationships among these ideas. As Cameroon is a recently-independent, post-colonial nation, a further focus is an analysis of continuing Western influence on Cameroonian teachers' perspectives, actions, and cultures. This study seeks to make sense of and provide insight into a group of Cameroonian educators' processes of educating in a non-Western setting from an inherited, Western educational situation. Colonization in Cameroon is described, drawing on Cameroonian historical and educational sources. Coming from a primarily Freirean critical perspective, this study then relates hegemonic structures of language, mathematics, modernism, and Westernism to interview and survey responses. The concept of cultural invasion is one explanatory notion which illuminates understandings of Cameroonian teachers' perspectives. The primary data source consists of in-depth interviews with Cameroonian mathematics teachers; a secondary data source includes surveys conducted with non-mathematics teachers. Findings indicate that the teachers in this study rarely articulate broad power relations with the West which constrain the teachers' actions and possibilities. Further, participants generally value Western influence as a means for more rapid development. Teachers also value practical, applicable, and concrete mathematical skills to abstract ideas; many teachers also express a value for increased access to vocational/technical education. One implication of this study is that the hidden nature of broad power relations serving Western interests helps to perpetuate asymmetrical material conditions.

Chapter 1

How this Project Came To Be

I was seven or eight years old, watching television. A commercial came on, showing glimpses of young men and women working with strange, exotic-looking people in far-away places. I looked at the young men and women and noticed how happy, how fulfilled they seemed. Then a deep, generous voice said that famous tag line, "The toughest job you'll ever love." Maybe I did not even realize it fully at that time, but I was hooked. One of the reasons I was so intrigued by the Peace Corps was that it was in my nature to be a helper—I always wanted life to run as smoothly as possible and did all I could to make that happen. Adults interpreted that as a desire to help, as generosity. So I had internalized that one of my characteristics was that I helped people and, further, that I was giving. Somehow I had gotten the idea that I had something to give and could make people happier (and, thus, life smoother) by helping them and being giving.

Apart from my social nature, there was also the particular economic situation of my family which influenced the way I felt about that Peace Corps commercial. There were six of us in all, four of us kids, and we were just poor enough to feel sorry for ourselves now and then (we did not have good or even many new clothes, good food, or fancy new cars, and sometimes we could not answer the phone because the bill collectors would be calling) but not so poor that we lost hope entirely (we always had a home, and we did eat, after all). When our whines and complaints would get especially vociferous, our mother would try to get us to stop feeling so sorry for ourselves by pointing out that no matter how bad we thought we had it, there were always plenty of people who were worse off. At first, this little bit of wisdom would make me appreciate the comforts that

my family did enjoy, but over the years I began to think increasingly about those who were worse off than us.

I started to wonder. How did people who were worse off than my family feel? In what ways were they worse off? How did they get that way, and why did they stay that way? How did they live? What were their cares and concerns? Did they have anything that made them happy? Eventually, I lost sight of the rationale behind my mother's words—how was knowing that other people were even worse off supposed to make me feel better? I began to feel greater urges to give things away, but all I really had of value was time. And most of the time I used that to try and improve my own chances. Simultaneously and, yes, hypocritically, I could not understand how some people could live very opulently knowing the daily struggle that others faced.

I also could not fathom the endless strength of those who faced their daily struggle to eek out the barest of livings. I wondered then about myself. Who would I be in their situation? What would I do, what would I be capable of? Did I have the kind of strength I would have needed to keep keeping on? A desire crept into me—I wanted to test myself, to push myself to my limits. Another bit of my mother's wisdom was that God never gave us more than we could handle. Well, I had my own questions about God, but what my mother was saying just did not seem fair. It did, however, seem to confirm my observations that the strongest people were those who faced the most struggles. I guessed that maybe God (or whatever supreme being may exist) figured I could not handle the kind of life the strugglers lived. Whatever the spiritual verdict of my strength, I wanted to find out for myself.

Since fate or destiny or perhaps just chance had not seen fit to place me in a situation where my limits would be challenged, I decided I would have to do it myself. The Peace Corps, always a presence in the back of my mind, was the perfect option. By the time I finished high school the Peace Corps was a part of my future plans. I thought becoming a Peace Corps volunteer (PCV) would allow me to satisfy my social need to help others while also giving me the chance to find out exactly how much adversity I could endure—and I would also get to travel to and live someplace far away. My parents did not try to talk me out of becoming a PCV—perhaps they could sense I was not going to be talked out of it—but my mother did put various scenarios before me to think about. What if you get hurt? What if you hate it? What if you don't like the food? What if something happens and you die? Those questions only reassured me that I was making the right decision for myself. Indeed, the thought of jeopardizing or sacrificing my life only fueled my instinct to give and my self-righteousness.

Cameroonian Megan

The time finally came, and everything fell into place. I was literally on my way. After three days of state-side training with the rest of the people in my group, we were set to leave for Cameroon the next day. I had absolutely no idea what to expect. Lying awake in bed that night, I tried and failed to imagine what the journey would be like. I had never been more terrified and I finally understood what all those people were talking about when they had asked me, upon being told that I was going to be a PCV, if I was scared. But I thought about the other 23 people who were going to go through this with me and, after all, I had been voted, along with one of the guys, as the most PCV-like in

our group. That had to mean something, I reassured myself. Africa, I told myself, I am going to Africa.

I had never seen the stars so close as that night we flew over the Atlantic. I *loved* that. It was like the stars were right there. Then our stop in Brussels, and we were soon flying over the Alps. Who would have thought—me flying over the Alps? And then the Sahara—my goodness, what a wonder. How do people live there? Next thing I knew, we were approaching the airport in Douala, Cameroon, and I saw a hut. Then, we got off the plane and stepped into the terminal—oh my gosh, how hot is it in here? And humid! And what the heck is that stench?

Sweat drenching our clothing, we got our luggage and were maneuvered through customs and security by our Peace Corps official, a Cameroonian named Dr. Sammy. His round face had such a bright smile that my apprehensions eased a bit. We were taken to what we were told was one of the best hotels in the country and my doubts came flooding back. The hotel room looked old and dirty to me. I did not want to touch the sheets or towels and the tile was chipped and there was just one station—in French, no less—on the T.V. I started thinking about the planes at the airport and how so many people would be going back this evening the same way we arrived. I felt envious. When I thought about home, it seemed like a dream. There was no way a place like home in the U.S. could exist at the same time as this stinking, hot, dirty third-world country. What was I going to do? I just had to last more than 24 hours.

I did not realize it at the time, but the person I was when I arrived in Cameroon could not last there. If I wanted to cling to that person, I would not make it—I would give up. I had a lot of learning to do and a lot of experiences to live through to help me

create myself as a PCV. This process began the following day when I, along with two other trainees, followed a veteran PCV to his post. This person taught in a village very near the ocean, the border with Gabon, and the rainforest. It was so incredibly hot and humid. We would go to all the trouble of hauling our water from a well to take a bath and then before we could even dry off, we would be sweating again. That really bothered me; I began to feel that I was never getting clean because I was constantly perspiring. It was so hot I had trouble sleeping at night. I was looking forward to our trek in the rainforest, but I was even disappointed in that. I was fatigued, and it seemed even more hot and humid in the forest, and I ended up wanting the trek to end way before it did.

I realized during this week-long stay at an actual PCV post that if my post had those same conditions, I was not sure I was up for the challenge. After that week was over, we met up with the rest of our training group in the capital city and took an overnight train ride up north to our training site. That night on the train I had my first taste of mango and I thought it was heaven. I just peeled the skin back and ate that mango down to the pit, while I leaned out the window so the juice would drip outside and not get the floor sticky. The air that washed over me was so refreshing. I liked the feel of the moving train and was starting to get my spirits back—I had already lasted a week and that was giving me a bit of confidence.

We arrived at the city where we were to be trained, and I liked it almost immediately. It was hot, but much drier than the southern parts of Cameroon. It was dusty and had far fewer trees, but for some reason I just liked it. It was just the right size—the capital and Douala were much too big and dirty, and the post I had visited with the PCV was much too small, but this city was big enough to hold my interest without

being overwhelming. We stayed the first night in a hotel near our training site, and how my perceptions of Cameroonian hotels had changed in one week! I thought the hotel was great and was glad to have a bed to rest on and who cared that there was no T.V.—I had plenty to do. Plus, I was excited about meeting my home-stay family the next day. These would be the Cameroonian family with whom I would be staying for the next six weeks as I underwent the Peace Corps training program.

I could not have been placed with a family better suited to my personality. I had the perfect home-stay family, and the perfect home-stay experience. It honestly could not have been better. My home-stay mother was a quiet-spoken, easy-going person who never made a fuss over me but showed me, matter-of-factly, the things I needed to know to be able to take care of myself: how to wash clothes by hand, how to cook without measuring (rice was tricky for me), how to speak French. She let me spend many evenings by myself in my room—solitary time which I desperately needed to reflect on my experiences and occasionally to escape in a novel. My home-stay sister was also quiet, but always seemed happy and smiling. By the end of my six weeks, we were having real conversations in French; she did not understand any English, and she was proud of my linguistic progress. I will never forget the evening she told me, towards the end of my stay, that cooking supper was my responsibility that night. I just stared at her. I had watched the strong and graceful way she cooked and cleaned and kept the household running, and here she thought I could cook dinner.

A few evenings before half of our group, including me, were scheduled to travel to a different city to complete our training, I came home (as I considered it by then) to an unusually excited home-stay sister. My home-stay mother also seemed more animated

than normal. I wondered what was going on, and noticed that my home-stay sister kept repeating some unfamiliar French word. Finally, she could not stand it any longer and went into the kitchen. I glanced at my home-stay mother but she was just smiling. Then my sister came back into the room, proudly bearing a cow-tail! Complete with hair and skin, the thing had apparently recently been hacked off of some steer's rear end. For the life of me, I wish I could change my reaction, but I was so shocked that the best I could manage was a grimace when I found out that the cow-tail was to be the delicacy at our supper. Evidently my home-stay family had planned this special dinner in honor of my stay—such a thoughtful and generous gesture. I am ashamed to say that I could not bring myself to eat the hunk of tail that was served in my plantain soup that night—I just could not stomach it, especially after the stench created from scorching the hair off in preparation for cooking. After I had struggled with the dish for a while, my home-stay mother quietly got up and removed the cow-tail from my bowl, without the least reproving look or gesture, and then I could eat.

During those first six weeks of training, a persona I affectionately call *Cameroonian Megan* began to emerge. The influence of my wonderful home-stay family, my excellent training group, along with my eager desire to learn, combined to help create this new person. In contrast to the Megan I had been before, this person could pick herself up after being sent flying into a ditch by a knock in the rear from a long-horned steer and, muddy and sore, walk the rest of the way to training, only a bit shaken and with no tears. This person could eat and actually liked tomatoes, onion, garlic, plantains and hot pepper. This person took delight in haggling with petty vendors. Eventually, this person would be able to literally yell at strangers who were trying to

handle her luggage, gripe at taxi drivers, and argue convincingly and intrepidly when she thought people were trying to take advantage of or fool her. Though this person came to dread the 'luxuries' of the bigger cities, she was able to travel unaccompanied from her post to the provincial capital, and from thence to the biggest cities, Younde or Douala. Cameroonian Megan loved the local, naturally alcoholic, drink, palm wine, and a few tiny bugs floating in it made her shudder only a bit and only inwardly. At the end of the dry seasons, she could go to the provincial capital and stock up on supplies and head for her post and stay, with no contact with other Americans, for weeks and *like it*. This was a person who refused to be intimidated and had little value for making life smooth—she realized that she had better stop focusing on the idea (now ludicrous) of helping these more-than-capable people and get on with learning how to live.

Finally, I was Cameroonian Megan, more aggressive, more blunt, stronger. Much less concerned with what people thought of me and how I looked to other people, and much more focused on who I was and who these people were that I was living with who were affecting me so profoundly. I had grown much less concerned with creating and maintaining peace at any cost and much more focused on resistance, transformation, and understanding oppression. I became personally invested in these people. The Megan who declared, in the first six weeks of training, that she would not ever be able to date a national (a Cameroonian) because the culture gap was just too great was clearly not the same Megan who, 18 months later, married a Cameroonian colleague.

Transformational Conversations

It is obvious that during my Peace Corps experience I grew to have an immense respect for the Cameroonians I met and worked with. I was mesmerized by the women,

in particular. So many of them were so strikingly beautiful and their strength was almost palpable. Most of the manual work fell to them—keeping up the garden, hauling goods to and from markets, cleaning in and around the house, and much more. I would stare at their graceful, strong hands wringing the wash or tearing leaves for dinner in the same way people stare at fire. Conversations about life in Cameroon and life in the States were frequent.

I remember a few discussions in particular—one was about democracy and society. I was talking with a fellow mathematics teacher about the political situation in Cameroon and how new, and in some ways phony, their democracy was. We talked about what makes a democracy do-able, viable. We were wondering about the prerequisites for the society of a democracy. What do they need to know, and how many of them need to know it? We talked about what education has to do with democracy and development, and the ways in which they wanted their society to develop. We discussed the hazards of Western-style development. We did not come up with conclusions, but that really was not what we were seeking.

Then there were conversations about the continuing French influence on their lives even after colonialism was to have ended. I was confused by these discussions because the people I was talking to lived in Anglophone Cameroon (the part settled by the British), while the majority of the people lived in Francophone Cameroon (the part colonized by the French), and my Cameroonian friends launched bitter diatribes against France but seemed pleased and proud to be part of the British Commonwealth. I thought there must surely be some residual influence on Cameroonian society from all of the

former colonial powers. It seemed to me that most of the Cameroonians I knew considered the leader of their country to be, basically, a puppet of the French.

Many of my assumptions were brought to light during the course of these on-going conversations, and I began to question my thinking. I had at first assumed that it is the responsibility and obligation of those 'better off' to help those in a more disadvantaged situation. Specifically, I thought it was necessary and good for Western, rich countries to lend financial and other support to transitional or developing countries. I had also assumed that education, of the Western style I knew, was a universal good to which everyone should have access. I figured, to the extent that I even thought about it, that more access to Western education would help people be able to 'raise' themselves to our level and thus eradicate the imbalances of material access to wealth. After all, taking learning and education seriously was probably one of the biggest factors in my sibling's and my relative success compared to my parents' or grandparents' situations, wasn't it?

However, as I started to increasingly value aspects of the Cameroonian life I was starting to know, I became more aware and critical of Western influence on their culture. When taxi drivers or people I met in the market would start to complain, as they habitually do to Westerners, about the difficulties of their lives, I would counter with my admiration of much of their lifestyle and I would talk in detail about what I envied about Cameroon and Cameroonians. There is a complexity inherent in this type of exchange, where a relatively privileged person attempts to illuminate what she considers to be amazing features of the culture of an under-privileged person. My admiration was at least honest, however, devoid of patronization, and eventually my admiration morphed into a more protectionist, defensive perspective.

Western influence seemed to have seeped into almost every aspect of Cameroonian culture so that, at times, it was difficult to distinguish the two. Coca-Cola was available even in most of the smallest villages (in plastic bottles, no less), where access to basic medicine was sorely lacking. The most expensive and reputable shops sold mainly goods imported from France. Many young people seemed to want to be identified with Western culture—they would wear Tupac and Nike t-shirts, American-style baseball caps and they would listen to Western music. Much of the Western goods Cameroonians purchased were imported, used, from Europe. Many of my colleagues would listen faithfully to the BBC on their shortwave radios every morning and evening, and they often knew about major events before I did (e.g., the Columbine shootings and the May tornadoes in Oklahoma in 1999). On the school campus where I taught, students were forbidden from speaking local languages and Pidgin English, and could only speak formal English, unless they were in French class.

I examined my assumptions. To what extent was Western influence, in the form of financial assistance or otherwise, harmful to Cameroonian culture? To what extent was access and exposure to Western education actually successful in leveling the playing field for diverse people, and to what extent did it perpetuate the status quo? I started to observe various forces at work to try to maintain the situation of Cameroonians desiring and envying Western life but hardly ever able to take measures to bring their desires to fruition. In what ways might it be possible or beneficial for Cameroonians to isolate themselves from Western interference? How could Cameroonians get out from under the thumb of Western forces? Would this even be desirable?

I formed my own opinions of what Cameroonians should want and what they should do. It seemed to me they would have been better off if Westerners had never even had contact with them—if Cameroon had just been left alone. Having no time machine readily available, now it seemed the best action to take was to try to limit Western involvement in Cameroonian life. I thought Cameroonians should immediately, or as soon as possible, refuse all Western aid, close down their Western schools, and return to the traditional days of more naturalistic ways of educating and making a living. I saw road and building construction in Cameroon as evils that were tearing down the fabric of their culture, avenues which allowed Western influence to creep into ever more remote locations. I wanted to erase as much as possible of the stain that Western influence had already created on Cameroonian society and create an isolated bubble in which, separate from the sphere of Western influence, Cameroonians could return once again to their more highly evolved culture.

There are several fallacies in my ambitions for Cameroonian culture, and I recognized some of them even at that time. I fully realized that my words and thoughts simplified Cameroonian culture and character, and that I was bordering on glorifying Cameroonians as Noble Savages. I was aware that Cameroonians and their culture had flaws, although I attributed many of these flaws to Western hegemony. I felt uncomfortably pinched when I spoke of wanting to return Cameroonians to a more traditional era—no modern amenities like cars, planes, paved roads, medical care, or even an economy—when I had lived with such luxuries well within reach. I understood that, in some way, a return to such a time was not desirable, much less possible. It would be a backslide, and it would likely perpetuate unequal access to resources just as Western

hegemony did. I understood that my plans for Cameroonian society were impractical and unpalatable, but in my rage against Western destruction I could think of no feasible alternatives.

Emergence of this study and its questions

During the course of my doctoral studies, I continued to reflect on my ideas about Cameroon. Living in Cameroon has colored every experience I have had in these subsequent years. When I read about Freire's thoughts on oppression, I had specific examples to relate to—my husband's father working on a French plantation to earn barely enough for food, or my husband's descriptions of how people were physically forced to construct roads for German colonists. I began to realize that my perspective of the oppressive situation in Cameroon was not as meaningful as Cameroonians' thoughts about their society, culture, and future. I started to wonder if what I considered to be injustices, impositions, and indignities were what Cameroonians, in particular, my Cameroonian teacher colleagues, also perceived. I wondered what they thought about their culture and the transformations it was undergoing. I wondered what they wanted, in general, for their society in the future and if they had any ideas as to how to create the realities they envisioned. I wondered what kind of education they wanted for themselves and whether and how they saw education as related to their culture and their future goals. I wondered how they felt about their formal educational situation, which had been created and enforced by colonial powers.

As I thought about my dissertation project, I had come to feel a reluctance to impose my own views about people's relationships and positions in society, so I felt there was a need to better understand how Cameroonians understood and perceived their own

situations. I did not want to make assumptions about the extent to which Cameroonians might perceive their oppressed state and the influences behind that oppression. To better understand legacies of colonialism and post-colonial social processes, I felt that I needed to know to what extent and in what ways Cameroonians valued their cultures, to what extent they valued their (inherited and imposed) educational situation, and what possibilities they saw for their society. I also felt that understanding forces which, from a Cameroonian perspective, influenced cultural or educational transformations, would help to make sense of their post-colonial circumstances.

Even after my two years living in Cameroon, I still did not know enough about their ideas, opinions, and feelings to embark on an emancipatory mission. If emancipation is possible, it is only by attempting to see with their eyes and understand from their framework that I could contribute in any way. I did not know enough about living in their unique circumstances, about the extent to which some type of indigenous culture still survives, about their values and ambitions. I could not disregard my ignorance and commence a project that I felt was vital to the interests of Cameroonians and even, indirectly, Americans. I did not know what *they* consider to be vital and why.

This lack of knowledge and understanding is not merely on my part; voices directly from natives living in imposed educational frameworks are still largely silent in Western and American scholarship. Particularly in the areas of comparative and mathematics educational research, ethnographic studies and works conducted by and with sub-Saharan African, post-colonial societies are relatively scarce. This distance between Western and American scholarly focus and the situation of post-colonial societies creates difficulties in understanding consequences of imposing educational paradigms. Perhaps

many of us complicit in this continuing imposition are not interested in exploring our roles and natives' roles too deeply (Hase, 2001). However, one reason it is important for the educational community to try to understand what happens to cultures when subjected to artificial and potentially destructive educational and cultural practices is because the domestic educational situation in this country is analogous to the international scene. There are disenfranchised and oppressed groups in the U.S. to whom the culture of school is almost as foreign as it is to Cameroonians (Ogbu, 1994). As Cameroonian teachers challenge dominant culture assumptions about the appropriateness of educative experiences, they will be in a position to name and explore their own realities, and create their own visions for their futures. Ultimately, however, the focus of this study on cultural impositions in educational systems will inform practices in any country, including the United States, where a dominant culture determines what is most worth knowing and which experiences are most appropriate for students to have in schools. The 'achievement gaps' and perceived meaninglessness of education in the United States by students who do not belong to the dominant culture may be informed by results of this study, offering insights for future educational directions.

This study, then, challenges Cameroonian teachers to articulate their lived reality within an educational situation neither of their creation nor of their choosing, seeking the rough-grained texture of experience, of contradictions, of uncertainty, of struggle. Using critical theory as a framework through which to analyze and interpret my observations, this study seeks a better understanding of Cameroonian teachers' efforts to re-create their norms, values, and desires, and to create knowledge within their imposed, alien educational system; it seeks a better understanding of Cameroonian teacher's culture.

I seek, in this study, to take the light of critical theory—its values and questions—and shine it on the particular educational situation in Cameroon. I wonder what sense it makes to try to teach and learn in a system that was imposed on you. I wonder, in that situation, how you conceive of culture and whether you think your culture is related to your education. In order to try to make sense of and understand participants' reflections, I rely primarily on Freire's critical perspectives. Freire's discussions of a banking practice of education and of the process of cultural invasion, in particular, are pertinent both to the emergence of this study and to making sense of the data from this study.

Freire and Imposed Educational Systems

Concealing the powerful concept that students must create meaning in their own minds, the banking practice of education trains students to try to depend on others to give them ideas, knowledge, and understanding (Freire, 1970/2000). Students are trained to be passive, unquestioning, and respectful of authority. They receive information, file it away, and store it for future transactions. The banking practice of education, with its processes of deposits from knowing authorities into the relatively empty accounts of the learner, can stunt creativity and inquiry, inhibiting students' transformative power.

Atrophy of transformative potential, stemming from the banking practice of education, is precisely the basis for the endurance of this approach to education. As the system feeds back onto itself, these characteristic patterns of culture become reified. When more people forget how to question and transform reality, or even that transformation of reality is possible, the banking approach to education is more likely to become even more entrenched. As Freire showed, "The capability of banking education to minimize or annul the students' creative power and to stimulate their credulity serves

the interests of the oppressors, who care neither to have the world revealed nor to see it transformed" (1970/2000, p. 73). Oppressed people can lose consciousness of the fact that they are "re-creators" and assume the role instead of "spectator". They are merely "in" the world rather than "with" the world (Freire, 1970/2000, p. 75).

Learning to be "in" the world rather than "with" the world implicates very different approaches to education and cultures. The educator's role in banking education is to prepare students to enter the world, to make them a better fit for the world, to adapt them to the world they will find waiting for them, to prepare them for contributing to and working "in" the world as it is. The educated person has adapted; she has learned to play the game and then forced out of her consciousness that it is a game. Again, this apparently suits the purposes of the oppressors, "whose tranquility rests on how well people fit the world the oppressors have created, and how little they question it" (Freire, 1970/2000, p. 76).

Preparing students to work "in" the world, destruction of curiosity, creative potential, and transformative power through education or schooling is one means by which oppressors establish and maintain control. Turning again to Freire (1970/2000) and his descriptions of other methods by which oppressors protect the status quo:

> [T]he oppressors develop a series of methods precluding any presentation of the world as a problem and showing it rather as a fixed entity, as something given—something to which people, as mere spectators, must adapt … oppressors … approach the people in order, via subjugation, to keep them passive. [This] is accomplished by the oppressors' depositing myths indispensable to the preservation of the status quo: for example, the myth that the oppressive order is a

> ‘free society’; the myth that all persons are free to work where they wish…the myth that this order respects human rights and is therefore worthy of esteem… (p. 139).

Internalization of these and other myths is essential to the subjugation of the oppressed. It is a way of attempting to manipulate people for the purposes of the oppressors.

Manipulation has the effect of lulling the people to sleep with siren songs to distract them from thinking. Two other means of manipulation are especially pertinent to the questions of how an educational system is imposed on a people, what the consequences are of this imposition, and why so many of these very people are now crying for more access to this education. These manipulations are the myth of upward mobility of the people into the oppressor’s own class and the promise and nurturing an appetite for personal, material success (Freire, 1970/2000). These myths, when seeped into the consciousness of the oppressed, foster a lived reality of incongruity and contradiction.

It appeared to me, from my experience in Cameroon, that banking education was prevalent in the transplantation of Western education to colonial and post-colonial societies. Many of the most creative, talented minds of these societies are penetrated with wishes to live in the West, to buy Western goods; failing that, they want to acquire as much, materially, as they can. Greed, aroused by the seductive hope of success, of making it out, has bred corruption at every level of the culture, from the most prominent levels of public service to petty traders in the market selling fruits and vegetables. Freire (1970/2000) describes this process as cultural invasion, where “the invaders penetrate the cultural context of another group, in disrespect of the latter’s potentialities; they impose

their own view of the world upon those they invade and inhibit the creativity of the invaded by curbing their expression" (p. 152). One ramification of cultural invasion can be felt when those who have been invaded "begin to respond to the values, the standards, and the goals of the invaders" (p. 153).

Another consequence of cultural conquest is that the invaded see their reality through the eyes of the invaders; this happens because the invaded are dissociated from themselves: "The more invasion is accentuated and those invaded are alienated from the spirit of their own culture and from themselves, the more the latter want to be like the invaders: to walk like them, dress like them, talk like them" (Freire, 1970/2000, p. 153). Emulation of the invader culture and belief in the myth of eventual material success are two strong factors in the nearly universal demand for increased access to formal education by invaded societies. If the formal education they seek is the banking model of education, it is in the invader's immediate material interest to meet this demand. Attempting to provide this widespread access to banking education would also place an unbearable strain on the resources of the invaded state and thereby increase the dependence of the invaded state on the financial assistance of the invader.

In order to make sense of the complex situation of invaded peoples, it is important to understand the invader's or oppressor's world view and how the oppressor's actions anchor and strengthen the invader/invaded dichotomy. Oppressor consciousness cannot exist without "direct, concrete, material possession of the world and of people … oppressor consciousness tends to transform everything surrounding it into an object of its domination … Money is the measure of all things, and profit the primary goal" (Freire, 1970/2000, p. 58). This materialist focus is largely why oppressors conceive of

development in purely economic terms, and measure a person's wealth by her daily or yearly earnings. Objectifying all aspects of their environment also eases the path towards conquering and invading the earth and its inhabitants.

Relationships between oppressor and oppressed, and relationships between power, knowledge, culture, and education are themes in Freire's discussions and also in this study. Freire's ideas have not only helped me to make sense of my experiences in Cameroon, but they have helped me to better articulate the interests and questions driving this study. The broad research questions for this study are:

What do Cameroonian teachers think about their educational situation? How do Cameroonian teachers perceive the relationships between their educational situation and their culture? What relationships exist between mathematics, as it is taught, and their culture? What factors influence these perceptions?

To elaborate and contextualize, more specific questions that guide this study include:

In what ways do their educational processes influence local cultures? How do they conceive of culture? What, if any, role(s) does mathematics play in the sustenance or deprivation of culture? What needs do they perceive for their society and for their culture? How do their educative practices and, specifically, mathematics education, relate to these needs?

Dissertation Structure

This chapter has described many of the factors involved in the emergence of this study and its questions. The next chapter introduces three sets of ideas which provide lenses for understanding data from this study. These sets of ideas are mathematics,

language, and hegemony. Chapter 2 further provides a broad context for this study with a review of scholarly research focused on sub-Saharan African educational processes.

Chapter 3 continues the literature review with a more narrow and contextualized focus, drawing on two Cameroonian literature sources. Chapter 3 discusses Cameroonian history and its process of colonization and subsequent independence, and ways in which Western-style schooling came to be imposed on Cameroonians. The purpose of Chapter 3 is to provide the reader with Cameroonian contexts which will become important in making sense of participants' responses.

Chapter 4 outlines the methodology for the study, critical ethnography, and describes processes of data collection and analysis. Much of the data collected for this study are discussed in Chapter 5, focusing on patterns arising from data analysis. Chapter 5 is organized around three broad themes—Culture, Education, and Transformative Potential. These themes relate to the research questions of what Cameroonian teachers in this study think about their educational situation, what relationships they perceive between their culture and their educational situation, and what future directions they see for their society.

This study closes with Chapter 6, which is a discussion of the structures that run through all of the patterns in the data from Chapter 5. These structures consist of modernism and Westernism. Chapter 6 discusses the struggle of Cameroonian teachers to define and re-define their culture. Possibilities, not only for further research but also for Cameroonians and their society, are also considered in Chapter 6.

Chapter 2

General, non-Native Context

This chapter begins with a discussion of three lenses around which the ideas in this study can be situated—hegemony, language, and mathematics. Then, as an introduction to the context of sub-Saharan Africa, educational research focusing on the curricula and educational systems of this region is presented. The chapter closes with a consideration of transformational curricular attempts by sub-Saharan African nations and the extent of their success.

Hegemony, Language, and Mathematics

Gramsci's (1971) notions about hegemony have strongly influenced understandings of dominance and power. Gramsci (1971) sees hegemony as the process by which dominant groups establish the legitimacy of their version of reality throughout society. Hegemony includes ways in which a dominant group's values and ways of thinking become rewarded and prized in other societal groups. Hegemony is closely related to power, as a dominant group is by definition relatively powerful. Though many people use tangible metaphors for power (someone wields power or someone grabs power), it, of course, is not a thing. It cannot be seen or touched, but, like hegemony, it can be experienced. Power is essentially an asymmetric interaction; it can be thought of as a web of unequal nodes and threads (Foucault, 1980). Foucault (1982) later refines his ideas about power relationships, pointing out that when power is exercised, there is not merely a relationship, but that it is an action which influences other actions. In his own words,

> In effect, what defines a relationship of power is that it is a mode of action which does not act directly and immediately on others. Instead, it acts upon their actions: an action upon an action, on existing actions or on those which may arise in the present or in the future. (Foucault, 1982, p. 220)

Power relations are created in social (but not necessarily exclusively human) networks (DeWaal and Tyack, 2003). Foucault asserts, and I agree with him, that power relations are inherent to societies; "A society without power relations can only be an abstraction" (Foucault, 1982, p. 223).

Cultural reproduction and cultural production theories seek understandings of the ways in which cultural hegemony is established and perpetuated (Lubeck, 1994). These theories suggest processes by which power and privilege are involved in legitimizing the values and perspectives of a dominant group. Cultural reproduction theorists (Bourdieu and Ogbu, among others) focus on how class-based asymmetries are transmitted from generation to generation. Cultural production theorists (Giroux and Willis, among others) see those oppressed by hegemonic structures as having more agency than cultural reproduction theorists. Cultural production theorists perceive disadvantaged individuals not as passive, but as actively resisting oppression. Cultural production theorists take into consideration ways in which actions by those oppressed are related to perpetuation of hegemony (Lubeck, 1994). One area of interest of this study is the extent to which Cameroonian teachers perceive and act against hegemony manifesting itself in the form of imposed educational situations.

Hegemony manifests itself in various ways; two areas relevant to this study are considered next—language and mathematics.

Language. Hopson (2003), among others (for instance, Bourdieu and Ogbu), highlights ways in which language is used by people to reproduce class positions, both domestically and internationally. Domestically, the emotional debates over Ebonics and bilingualism for native speakers of Spanish are instances where preference for and privilege of English was made clear (Hopson, 2003). Internationally, Hopson (2003) points out, "The global spread of English as neutral, natural, and beneficial is just one direct application of linguistic hegemony" (p. 233). With respect to colonized peoples, Hopson (2003) argues that language is a crucial factor in either maintaining or challenging dominant ideologies. Drawing from Kenyan novelist and philosopher Ngugi wa Thiang'o, Hopson (2003) relates language use and choice to larger social, cultural, and economic issues in Africa.

For instance, some colonizers chose to impose European languages and suppress native languages; not only did this highlight esteem of European language and culture over colonized languages and cultures, but it also helped the process of what Freire (1970/2000) called cultural invasion. Imposing European languages and suppressing native tongues was part of the process of divorcing colonized from not only their language but from their culture and, ultimately, themselves (Hopson, 2003). On the other hand, some European missionaries chose to carry out educative practices in native tongues because they felt that native languages were the most direct routes to the people's ways of thinking, and thus a most effective means of manipulating these ways of thinking (Atayo, 2000).

Linguistic hegemony, whether practiced by imposing a foreign language or utilizing native languages, assumes and seeks to perpetuate a host of asymmetrical power

relations in which privileged peoples entrench and protect their positions. Similarly, mathematical hegemony has selective functions which help to maintain the status quo.

Mathematics. Secondary mathematics education in the United States typically consists of a routine in which homework is graded, a lecture is given to explain the day's topic, and then homework is assigned and students work individually on homework problems (TIMSS, 1995). Traditional mathematics teaching relies heavily on explain/practice procedures whereby teachers explain how to solve problems using specified algorithms and students practice these algorithms on sets of similar problems (Kamii, 1989; Wheatley, 1992; Wheatley & Abshire, 2002). When asked what they wanted their students to learn, American teachers generally spoke of wanting their students to know how to solve different types of problems (TIMSS, 1995). This focus on skill building by following illustrated procedures is a primary reason why much of mathematics education in the United States is a largely silent (on the part of students), individual, and competitive endeavor.

In a typical mathematics classroom environment, there is little curiosity, few suppositions, and precious little dialogue or discourse (Jacobson, 2000). There is not much space for caring for ideas (Noddings, 1992). Teachers are often more concerned with finding better explanations than exploring concepts and ideas with students through problem-posing. Since this explain/practice routine is widespread and begun extremely early in schooling, societal expectations of what it means to "do" mathematics, and to be a mathematics teacher or student, are strongly influenced by the explain/practice routine.

In my experience, there are widely shared expectations of teacher and student roles among mathematics educators, students, and parents. I faced intense resistance,

both on the part of many of my students and their parents, when I attempted a more problem-centered approach to teaching high school mathematics (Wheatley, 1992; Wheatley & Abshire, 2002). When I gave students problems whose solution strategies were not immediately apparent (and unrelated to some recent algorithm we may have been trying to memorize), they frequently and repeatedly complained that it was my job to tell them how to do the problems and their job to try to retain those procedures. They felt that I was betraying my professional duties as an educator (and their accepted and expected roles as traditional students) by encouraging them to create their own solution strategies and to make sense of problems themselves. The status quo in mathematics education is highly entrenched, with resistance to change on many levels, but it is also potentially stifling of students' reasoning and disempowering (Frankenstein, 1995; Jacobson, 2000; Wheatley & Abshire, 2002).

In the United States, hegemony is manifested through typical mathematics education in many ways. The traditional way of interacting with school mathematics, in which students practice procedures outlined by a teacher or other outside authority, and the view that mathematics is somehow pure, abstract, and value-free contribute to a perception of mathematics as objective (Jacobson, 2000). Mathematics, in turn, is often utilized for quantification, reduction, and objectification; this process helps to obscure the "socially-constructed nature of many phenomena studied via mathematics" (Jacobson, 2000, p. 57). In school mathematics, other social myths—like that of schools as meritocracies—converge with the high value placed on mastery of mathematics to construct a prestigious position of school mathematics as a prime weed-out or gatekeeper subject. Of course, school mathematics acts in this selective role differentially to

students, based largely on race, gender, and socio-economic status (Jacobson, 2000). Critical mathematics scholars and educators are vested in efforts to understand and make public these and other ways in which mathematics is used in asymmetrical power relations.

In contrast to traditional mathematics educators and academics, several scholars have critical orientations towards mathematics, and mathematics education (among these are Apple, Frankenstein, and Noddings). Connecting each of these different scholars is a perception of mathematics, not merely as a disembodied set of 'truths' or 'rules' to be transmitted through algorithms, but as an embodied way of making sense of patterns we observe in our surroundings (Lakoff & Nunez, 2000). Critical mathematics scholars understand knowledge as a human construct, and turn more to people and context for understanding than to an objective reality which holds mathematical truths somewhere 'out there' in a platonic fashion (von Glasersfeld, 1995). Discussion, dialogue, and discourse with others is crucial in developing mathematical understandings, from the perspective of a critical mathematician. Through interactions with ideas, the process of and understandings arising from attempting, sharing, and comparing solution strategies are at least as paramount as correctness of answers. Students become more empowered to think for themselves and to make their own decisions about the viability of various solutions and problem-solving strategies.

This chapter has thus far sketched notions of hegemony and ways hegemony acts through language and mathematics. The remainder of the chapter begins the process of providing context to this study by discussing how newly-independent, post-colonial sub-Saharan African nations' educational situations evolved.

Educational Context in Sub-Saharan Africa

The growing body of research exploring the educational systems and curricula of sub-Saharan Africa includes, among others, many studies of post-colonial curriculum evolution (Carasco, Clair, & Kanyike, 2001; Dorsey, 1989; Jansen, 1991; Lillis, 1985; Montero-Sieburth, 1992), discussions of the role of vocational training or practical education (Baker, 1989; Kraak, 1991; Psacharopoulos, 1985), investigations of policy and practice (Cleghorn, Merritt, & Abagi, 1989; Puchner, 2001), and explorations of curricular agendas (Benavot, 1992; Stites & Semali, 1991). Each of these foci of study is discussed in detail in this section.

Postcolonial Curriculum Evolution.

Postcolonial African states underwent a period of transition during which they struggled to define for themselves their ideals and goals. For many nations, this process of change included attempts to transform educational systems from elitist institutions to expanded educational systems that sought to provide mass education (Dorsey, 1989). Most African nations (though not, as we will see in Chapter 3, Cameroon) also tried to drastically revise the colonial curriculum (Jansen, 1991). Since the colonial curricular content has remained remarkably stable during the postcolonial era, these educational reformation attempts have succeeded to only limited degrees. More evidence exists of continuity of the colonial curriculum than of the radical change called for in official policy (Jansen, 1991).

Reasons for the continuity of postcolonial curriculum with colonial content include reliance of non-Western countries on Western curriculum models and the fact that these models are governed by Western assumptions. Jansen (1991) discusses a transition-state theory that investigates factors influencing educational transformation in

the light of three theses: 1. The state is the main force in shaping transition society, so that social change is dominated by politics and not by economics; 2. Historical structures also contribute to the transition state; 3. A struggle for political power ensues between forces of democratization and forces of reproduction. From a Freirean critical perspective, informed from my experiences in Cameroon, I would add to these reasons that of cultural invasion.

State as Prime Motivator for Change. The state is often a primary motivator for social transformation in postcolonial societies. In transition, many states communicate their ideology through their educational systems and curricula. At independence, Zimbabwe, for instance, articulated several specific curricular goals which can be seen as a response to the inherited colonial curriculum: the development of a socialist consciousness, the elimination of the distinction between manual and mental labor, the adaptation of subject-matter content to the Zimbabwean cultural context, the implementation of cooperative learning and productive development strategies, and an increase in opportunities for productive employment (Jansen, 1991). In practice, however, the state-led curriculum change was inconsistent in its ideological orientation to curriculum reconstruction. School history texts approved by the state, for example, include a range of ideologies and some 'innovations' are actually programs held over from the colonial era. Most recently, educational rhetoric has been dominated by debates about increasing efficiency, raising standards, and improving quality. The national, socialist objectives defined by the state have not been achieved by radical transformation of the curriculum (Jansen, 1991).

Historical Relationship. Historical factors also contribute to colonial curriculum continuity in transition states like Zimbabwe. Some of these factors are political and economic in nature and do not directly determine educational policy, but they can define the domain of possibilities for radical change. The economic system Zimbabwe inherited, for example, was an entrenched capitalist system, from which Zimbabwe attempted to initiate socialist development. Zimbabwe faced opposition from other capitalist nations and also some resistance from within the country to such change.

The historical nature of the independence itself can also hinder educational reforms—the independence agreement limited radical transformation of the state by retaining a white civil service and economic change was likewise stalled by land distribution arrangements stipulating a willing seller (Jansen, 1991). Since Zimbabwe and other African nations in transition are dependent on international (primarily Western) capital, radical policies are threatened by a hostile international capitalist environment which can impose sanctions on policies and can attach conditions to assistance programs.

Historical factors that more directly concern educational transformation include the nature of the inherited colonial education system and the social values and expectations of the parents (Jansen, 1991). In Zimbabwe, the colonial educational legacy included a largely academic curriculum, pedagogy that relied on rote learning of material taught by underprepared teachers, and evaluation controlled by the Cambridge Examination Syndicate. All of these factors were still active a decade after independence.

Struggle for Political Power. The third thesis Jansen (1991) investigates is the struggle for political power. One such struggle emerged as newly independent

Zimbabwe attempted to implement a curriculum called the Political Economy of Zimbabwe (PEZ), a course intended to familiarize students with scientific socialism and to be taught from a Marxist-Leninist perspective. PEZ created intense debate, led by the Catholic Church which perceived PEZ as anti-God and antireligion. The Zimbabwean Ministry of Education eventually withdrew the PEZ curriculum.

Postcolonial African countries face other challenges than guiding the ideology of the nation through education. Zimbabwe, for example, attempted universal access to primary and secondary education to a degree equaled by no other country in Africa. Shortages in trained teachers, lack of a system for training educators, and problems with financing the educational expansion have plagued these efforts (Dorsey, 1989). It seems virtually impossible for African countries to retain their self-reliance and still accomplish their goals of universal access to formal schooling. Dorsey notes a widespread problem in Africa—"an extremely high expenditure for education in proportion to the total state budget, thereby using up resources that might have been used to further the growth of the economy in order to generate employment for the products of the educational system" (p. 53, 1989).

Not all African countries attempted radical educational transformations following independence, however. Lillis (1985) examines the way in which "high-status" schools in Kenya were influential in articulating what constitutes valid school knowledge, transmission, and assessment, and how these assumptions were based on imported Western definitions of validity. The elite schools in Kenya adopted the norms and values of the U.K. to the extent that the East African Examinations Council rejected the introduction of African literature into the curriculum on the grounds that such "second-

class" literature "diluted" accepted standards and was not sufficiently rich to sustain a school literature curriculum (Lillis, 1985, p. 90). Lillis (1985) points out that key questions remain to be resolved or even adequately considered:

> What indigenous or local knowledge variables need to be taken into account in the construction of local curriculum systems? What contextual features of mathematics and literature are prerequisites for success? Are these areas culture free or context bound? Are there related, indigenous modes of learning or cognition that need also to be understood? Which processes of learning are common across cultures and which are unique to a particular culture? (p. 90)

Montero-Sieburth (1992) also discusses inadequacies in international educational curriculum research. She warns against viewing curriculum as a separate entity that operates in isolation. This focus, she contends, results in the exclusion of important features: quality as opposed to quantity, process as opposed to product, the activity of instruction, and the descriptive rather than the predictive function of curriculum change. She argues for a way of "seeing curriculum as a part of a larger process in which teachers, pupils, parents, and the community correct and supplement the experiences of each other" (p. 177). Often, an isolated focus on curriculum creates deficiencies because the curriculum is perceived as a product—a finished, stable, inert object rather than a process. Cognitive aspects of curriculum such as achievement scores, testing, and learning theory become the foci of discussion and study while noncognitive, sociocultural, and philosophical aspects of curriculum are hidden in the background.

Vocational Training and Practical Education

As newly independent African countries struggled to define their values and philosophies, an educational debate emerged concerning the relevance of a purely academic curriculum for students in 'developing' nations. The alternative to an academic curriculum that has been piloted in many African countries is called vocational or prevocational training (Kraak, 1991; Psacharopoulos, 1985), relevant education (Baker, 1989), and diversified education (Psacharopoulos, 1985). Reasons for diversification of curriculum to incorporate prevocational subjects include creating more continuity between skills learned in school and those required on the job, opening a broader range of possible career choices, and more equity in access to education (Psacharopoulos, 1985).

The debate about relevance education is interesting and important because it might help a community to examine its reasons for desiring widespread access to education. The issue can take on even more importance when the central question becomes whether countries should implement a single national curriculum or whether children in rural locales should receive a more vocational and relevant education. Splintering a national education system so that urban (usually higher-income) learners have the opportunity to study academic subjects and rural students have a diversified curriculum has a high potential to lead to segregation and oppression (Baker, 1989; Kraak, 1991).

Parents of rural students, Baker (1989) points out, want their children to have the opportunity to study academic subjects. Reasons why parents desire an academic education for their children range from social upward mobility to escaping the hardships of rural life to preparing children to "deal with" the world to helping students acquire

good manners and become good people (Baker, 1989, p. 514). Many parents in non-Western countries consider education worthwhile even if it does not lead to a higher income or a salaried position. They also feel that a relevant, agrarian-oriented curriculum is less desirable than an academic curriculum, partly because of the prestige associated with the study of academic subjects (Baker, 1989).

Independent African nations struggle for self-reliance and self-sufficiency, as India did in its postcolonial years. During the transition from colonialism to independence, Gandhi observed that India's educational system at the time was "meant for strengthening and perpetuating the imperialist power in India" (Gandhi, 1951, p. 86). In the same way, the imposed, purely academic curricula of many African countries perpetuates Western hegemony in these societies, even to the extent that Western values (i.e., acquisition of material wealth and valuing modernity) seep unexamined into the consciousness of indigenous people. However, proposing an entirely vocational education for African students is justly seen as reinforcement of the elitist, colonial society.

Issues of cultural differences, both researcher/policy maker and Western/non-Western, speak directly to the ethical questions that face any Western researcher attempting to help create "better" schools and "higher quality" education for African students. Carasco et al. (2001) discovered, when undertaking an educational venture for these purposes, that many cultural issues arose during the processes of curriculum development, implementation, and evaluation. These issues caused Carasco et al. (2001) to propose a series of thoughtful questions for consideration:

> How can power be understood in a way that promotes dialogue among researchers, policy makers, and community members? How can the teachers, pupils, and community members become more independent? What is the role of outsiders in promoting independence? How can researchers, policy makers, and community members learn to construct knowledge and work collectively in ways that are consistent with the culture? (p. 275-277)

There are no easy answers to these questions but reflection can lead to dialogue within the educational community. Amazingly enough, many Western researchers fail to investigate whether their interests coincide with those of Africans involved in the educational process. Western scholars look at a system from the outside and decide for themselves which problems are worthy of research and then commence a project with little or no input or interaction with those actually working in African educational systems. Eisemon (1989) cautions, "An effective strategy for educational reform in Africa must, at least to some extent, be based on an identification of problems and solutions that Africans perceive to be their own" (p. 111).

Curricular Agenda Evolution

In the decades since independence, the motivations of many African countries to implement mass schooling have changed as a result of a combination of pressures. Zimbabwe, for example, began its age of independence with a statement of commitment to socialist values and tried to create a curriculum that fit with these priorities. More recently, however, discussions of goals and education in Zimbabwe have focused on greater efficiency, better results on standardized tests, and more economic growth (Jansen, 1991).

Stites and Semali (1991) found similar reorientations in China and Tanzania. In a study comparing past and current state policies for adult literacy education for rural populations in these two countries, they found that in the first stages of transition to socialism, both countries viewed mass education and the eradication of illiteracy as vital to the struggle for social equity. In contrast to educational policy-makers in capitalist countries who give priority to economic growth, educational planners in many non-Western socialist states have given priority to the goal of social equity. Social equity rather than economic growth has been the rationale for mass public education campaigns in many newly independent African countries.

Following independence in Tanzania, the push for social equity began with the nationalization of banks, insurance, and major industries and farms (Stites & Semali, 1991). The inherited colonial education system was criticized as being elitist and meeting the needs of only a few students. Educational reforms that have been occurring since independence included a focus on 'Education for Self-Reliance' and the goals of these reforms were social rather than academic in nature. The commitment in Tanzania to equal access to social services and economic opportunities was so great that the president enacted a salary freeze beginning with himself. The state clearly articulated the objectives of the educational reforms as the building of a socialist state, the achievement of defined ideological goals, and the creation of the socialist person (Stites & Semali, 1991, p. 55).

As a result of the push for mass public education, especially in adult literacy, Tanzania's illiteracy rate declined in the decades following independence and the gap between very rich and very poor was substantially reduced by the extension of social

services such as health care, water, primary education and language skills, to rural areas (Stites & Semali, 1991). However, many of the programs enacted in the name of social equity neglected private enterprise and initiative; this severely limited Tanzania's ability to fund its own social programs like education. The government bureaucracy ballooned and agricultural production was undermined. Thus the economy in Tanzania reached a crisis state by the mid to late 1980's.

As a result of these internal pressures and external pressures from capitalist countries, Tanzania abandoned its focus on self-reliance and opened up to free trade. Dialogue about educational reform has been increasingly couched in terms of quality of education, the costs of education, and the training roles of school rather than an educational system for socialist construction, redistribution, or equity (Stites & Semali, 1991). Academic schooling is now preferred to socialist education, and parents are required to pay more for their children's education, a departure from the long-standing practice of free education from primary school to university.

Each of these issues, from education and development in the West to sub-Saharan educational and curricular processes, to the relationship between educational policy, curriculum transformation, and research, to the various influences on curricular evolution, speak from different angles to points raised in conversations with the participants of this study. The next chapter changes the focus of review from a more broad, sub-Saharan African frame of reference to a context specific to Cameroon.

Chapter 3

Particular, Native Context

This chapter begins, by way of introducing the reader to Cameroon, with general information about Cameroon. The focus then becomes educational situations in Cameroon, beginning with precolonial education, followed by a discussion of British mission schools. The point at which Cameroon officially became a colony, the Berlin Conference, is then discussed. The chapter closes by presenting educational situations in Cameroon under their three colonial powers—Germany, France, and Britain.

Cameroon came to be called Cameroon when Portuguese traders landed on the coast in the 15th century. The present boundaries of Cameroon were not created until the 1960's, following Cameroonian independence from France and Britain. General histories of Cameroon are available from many sources, and they indicate that from the 1840's to 1960, Cameroon was colonized by British, German, and French forces. Since this study centers on education in Cameroon and its relationship to culture, I attempted to locate sources discussing educational evolution in Cameroon. I could not actually find information as detailed as I needed here in the U.S. When I traveled to Cameroon to conduct this study, however, I was able to find three books whose topic was the Cameroonian educational system.

Before discussing the contents of these books, it is important to provide a bit more context into the process of acquiring, writing, and printing books in Cameroon. I found the books at the most reputable book store I know of in Cameroon and two of them are from the same author, Asonganyi Joseph Atayo. The other is written by Jacob A. Ihims, and it is my understanding that both of these men are teachers as well as writers. Since

most people in Cameroon have very few, if any, new, printed books, I was surprised to find three devoted solely to Cameroonian education. The printing, from Western standards, is of poor quality, as is the grammar occasionally. There is very little attempt at objectivity in discussing educational issues; the authors' opinions are quite apparent. In the West, people would generally, in all likelihood, consider these works to be unprofessional and the writing would probably be subjected to several rounds of editing before being published, if it were published at all. Two of these books are intended as textbooks for teacher trainees, while the other has a more general audience. It seems that the authors entered into agreements with local printing companies (and, perhaps, teacher training colleges) to print their books, and I imagine that little significant external editing was done. However, the books give very detailed information about how education in Cameroon commenced and how it has evolved. These books, then, have greatly helped to further my understanding of Cameroonian education.

General Information

Some information about Cameroon in general will be helpful as we later try to make sense of complex issues like the relationship of education and Cameroonian culture. According to Atayo, (2000), Cameroon is a bilingual country (French and English are the official languages) of about 174,000 square miles (smaller than Texas, which has 267,000 square miles), with a population of about 12 million. These 12 million people come from over 200 tribes, the largest being the Hausas and the Bamelikis. Cameroon is situated just north of the equator, from 2 to 13 degrees North, and is an agricultural country. Cameroon produces cattle, goats, poultry, fish, and food and cash crops. Cameroon exports many goods, including cocoa, coffee, palm oil

products, peanuts, rubber, cotton, tobacco, and timber. Atayo (2000) describes the situation:

> Agriculture is the most important aspect of the Cameroonian economy, providing much to the national income and employing many people in the country. Among some minerals discovered in the country, only oil is being processed and, in a way, it has boosted the economy in recent years. Effort is being made in industry to reduce dependence of the country on foreign goods. By all means, economic independence should try to match up with political independence. That should be the thinking of every independent country in Africa. (p. 1)

Cameroon's national philosophy is "Self-Reliant Development", which, according to Atayo (2000), means "development of the people by the people" (p. 1). The national educational philosophy is

> …based in providing the citizen with the education required for his intellectual development, his responsiveness to national and international realities, and the training needed to make him productive and capable of satisfying his own needs and those of the society. (p. 1)

There are four national educational aims and objectives for Cameroon:

1) The inculcation of the right type of values and attitudes for the survival of the individual and the society;
2) The inculcation of national consciousness and national unity.
3) The training of the mind in the understanding of the world around; and

4) The acquisition of appropriate skills, abilities, and competencies, both mental and physical, as equipments for the individual to live in and contribute to the development of his society. (Atayo, 2000, p. 1)

Such national philosophies and objectives have been borne out of a unique educational history, beginning with precolonial education.

Precolonial Education in Cameroon

It is not easy to find native descriptions of precolonial education, so I feel it is more meaningful to capture as much of Atayo's own words as possible, without filtering through my own linguistic nuances:

> Traditional education was, above all, the sacred duty of the family. Until the age of six or seven, children lived among women, but from their eighth year the father became responsible for the education of boys and the mother for that of girls. The parents thus acted as the children's first teachers. The child…learned from his parents the experience of life by participating in their different activities. When the child reached adolescence the family education was then taken over by the group or community. The child learnt to submit to his elders who had been chosen for their knowledge and skills and also for their experiences and wisdom. He became aware of the need for discipline in the community, and for respect towards his elders, customs, and nature.
>
> All these were done by taking part in the different tasks of social life, by observing his seniors, by listening to and later by joining in discussions, the adolescent acquired a sense of solidarity and responsibility as he completed his physical, intellectual, and practical education…As it happened, intellectual

> training was not directed towards an encyclopaedic accumulation of knowledge, but by being present at discussions and listening to narrations, folk tales and legends, the adolescent learnt to master his language and by taking part in discussion and games such as riddles, mental arithmetic, proverbs and so on, he acquired the capacity for abstract thought and developed his critical spirit.
>
> Furthermore, at all ages, manual activities were always combined with intellectual ones…After observing and then imitating, the adolescent was able to act in order to create personally on the ideas learnt and to exercise trade or even his art…So, in this way, precolonial education by keeping the child in contact with his society and with life, it allowed him to discover his true capacities and limitations. It also helped the child in the course of time to grow into a fully developed adult, physically and mentally on both the intellectual and artistic levels. In this way, the system integrated the individual into his societal context and enabled him to become responsible and also interdependent with the other members of the society. (p. 12)

It is important to note here the respectful tone of this passage, which indicates to me that the author sees value and worth in precolonial educational processes.

British Mission Schools in Cameroon

This traditional education continued until around 1840, when Jamaican Baptist Christians of African origin began calling on the British Baptist Missionary Society in London for missionary work in Africa (Ihims, 2003). Evidently, the Jamaican Baptist Christians, who had been emancipated from slavery in 1838, wanted something to be done to "emancipate Africa from its sin and ignorance" (Ihims, 2003, p. 2). In 1844,

Revered Joseph Merrick, of the British Baptist Missionary Society, arrived in Bimbia, a coastal village, and established Cameroon's first primary school. The next year, a second primary school was opened, apparently with the consent of the local population, in Douala by Alfred Saker and Horton Johnson (Atayo, 2000; Ihims, 2003).

From 1845 to 1876, Alfred Saker began to create a system of missionary schools in Cameroon. According to Ihims (2003), Saker "saw education as the best means of helping indigenous people and of establishing a permanent Baptist Mission in Cameroon" (p. 4). As graduates of missionary schools began to emerge and serve as school and church leaders, demand for access to missionary schools among the local population began to increase. By the time of German annexation of Cameroon in 1884, there were three main Baptist primary schools along with eight feeder schools in the Cameroonian territory. One of the most significant contributions of these early Baptist missionaries was their belief that the gospel was best spread in the local language, and they thus made great efforts to teach in local languages and translate the Bible into the vernacular (Atayo, 2000; Ihims, 2003).

Berlin Conference

From 1884-1914, Cameroon was under German colonial rule. The process by which the transition from British to German rule occurred is described slightly differently by the two Cameroonian authors. According to Atayo (2000, p. 13), European countries were engaged in a "scramble" for African colonies by the last half of the 19th century. European countries desired the raw materials and resources that were abundant in Africa and, in turn, a novel market for European industrial goods. A meeting of European countries was convened to settle the African colonial issue, the Berlin Conference of

1884. Germany officially obtained Cameroon as a colony as a result of the Berlin Conference, and had custody of Cameroon from 1884 to 1914 (Atayo, 2000). According to Ihims (2003), however, German annexation of Cameroon in 1884 came as a complete surprise to all parties involved, including the British government, who was in the process of sending a representative to Cameroon for official annexation procedures.

According to my own findings (Forster et al., 1988), the Berlin West Africa Conference of 1884-1885 was significant in African history, in that it not only partitioned coastal, colonized areas into meaningless (from an African perspective), fragmented sections—an act that continues to fuel turmoil currently—but this conference also served as an inducement for European powers to forge further inland in a search for more territory. The conference met from November, 1884, until late February, 1885, and was convened at the request of Portugal, but hosted by Germany. Ihims (2003) dates German annexation of Cameroon from July, 1884, several months before the Berlin Conference. From this information, it seems to me that Germany's sudden annexation of the Cameroonian territory happened largely because Germany was likely aware of the possibility of a conference about Africa before Britain and thus hastened to gain control over areas where it had previously little involvement in the hope that mere possession would give them a stronger bargaining position at a conference. In any case, Germany gained control of Cameroon in 1884 and thus became responsible for formal educational programs there. This was the first time Cameroon was officially decreed a colony of another country; European involvement up to 1884 had been in the form of Christian mission, not governmental, influence. In a turn of events that would become significant

to Cameroon's later history, Britain obtained colonial control over Cameroon's neighbor to the west, Nigeria, at the Berlin Conference.

German Colonial Rule

During the approximately thirty years of German colonial administration in Cameroon, mission education continued to grow. The German Basel Mission took control of the British Baptist Mission schools, and other missionaries (the Presbyterian Mission from America, and the Roman Catholic Pallotine, the Baptist, and the Sacred Heart of Jesus missions from Germany) arrived during German rule. The Basel Mission sought and determined to "continue the good work in education whose foundation had been properly laid by their outgoing colleagues" (Ihims, 2003). By 1914, there were a total of 625 mission schools operating in German Cameroon, with an enrollment of just over 40,000 students. In contrast, the German colonial authorities had established 4 governmental primary schools by 1913, with an enrollment of 833 (Ihims, 2003). One of the reasons, according to Ihims (2003), that Germany was slow to become directly involved in education in Cameroon was a concern for fiscal responsibility. Germany did not want to become over-burdened by heavy financial colonial involvements. Atayo (2000) adds that Germany showed little interest in colonial education until the early 1900's because mission schools produced enough graduates to fulfill the needs of the German colonial authorities.

Though only directly involved in the administration of a small portion of schools, the German colonial authorities, specifically the governor of the territory, aimed for an official German educational policy for Cameroon. The first territorial curriculum was created at an educational conference held in Cameroon in 1907 and attended by both

governmental and mission educational representatives. The policies set at this conference were standards for all schools in the territory, and the emphasis was on teaching the German language. This particular decree, enforced a few years later by governmental grants awarded to only those mission schools teaching German, marked a shift from the prior missionary focus on vernacular or local languages. In fact, this decree allowed the use of local languages in schools, as long as German was also being taught, but forbad the teaching of any other European language. Besides German language, other curricular areas created at the educational conference included arithmetic, geography (Cameroon and the world), history (Germany after 1870), and general science (Ihims, 2003).

In 1913, Germany's final educational decree for Cameroon was issued, and it made school attendance mandatory and simultaneously introduced a system of school fees to be paid by parents of students. The decree also established a five-year primary education curriculum, the completion of which earned graduates a First School Leaving Certificate. By 1913, German colonial authorities had also established several technical-vocational schools in the Cameroonian territory. These schools focused on agricultural training, clerical studies, and woodworking (Atayo, 2000; Ihims, 2003).

Both Atayo (2000) and Ihims (2003) write favorably of German contributions to Cameroonian education during its colonial rule. Ihims thinks, "an outstanding contribution of the German educational policy to Cameroon was its dual approach which tried to strike a proper balance between the practical or vocational aspect of education and the purely academic aspect of it" (2003, p. 27). While admitting that German colonial rule was like an occupying force, Atayo still proclaims their achievements as

"noteworthy" (2000, p. 13). Though the Germans ruled Cameroon for a relatively short time, Atayo states:

> They have been more than favourably compared with the British who made such poor progress in West Cameroon during their forty years of rule. The German colonists were harsh, but they did push the colony forward by investing capital in the country and introducing many advantages from Europe. (2000, p. 13)

He adds further that, while Germans were even brutal, they were regarded by Cameroonians as just. Indeed, Atayo claims that brutalities committed by German colonists have "mostly" been forgotten, while their numerous achievements such as plantations, buildings, railways, roads and "other adjuncts of white civilization" are still remembered (2000, p. 13). Atayo contrasts this tangible German legacy with that of the years of British rule, when little remained of their heritage.

Atayo seems to have internalized values and norms of German colonizers; when he lauds the achievements of those who treated his people terribly inhumanely, who is speaking? It sounds more like cultural invaders than the Cameroonian who saw value in precolonial educational processes. Many of the participants in this study echoed similarly complex perspectives on the colonial era in general. On the one hand, Atayo seems to regret the end of German rule:

> We had many elderly people who worked with the Germans during the German colonization of Cameroon and who could speak German in Cameroon in the first half of the 20th century but now, they are no more…The lingua franca in Cameroon today would have been German if German colonization had had continuity. The Germans are believed to be not only resourceful but also

> industrious. Even though their stay for thirty years could be described as short-lived yet there are still so many historical monuments which were left behind by the Germans and had they remained much longer, their achievements would have been much more different to our great advantage today. (2000, p. 33)

On the other hand, Atayo details German brutality and fierce native resistance to colonization:

> As we appreciate how hard working the Germans were, we should admit that all that transcended during the German era was by the use of forced labour…Most of the men who went to do them, came from the hinterlands and each group took a turn for one year…The year's work was tedious and demanding and the unfortunate people died in the course of the year's forced labour which was popularly known and named in Cameroon even today as 'Njugmasi'. It is believed that Cameroonians who did 'Njugmasi' were paid meagre wages and even though they were fed, it is believed they ate insufficiently because of their huge numbers and that was why many of them died in the course of the one year duration. So if your relative went for 'Njugmasi', your heart was bound to be in your mouth, and you could heap (sic) a sigh of relief only when you saw him return. That policy of forced labour was a way of helping Cameroon to develop but then, the policy was never well explained to the Cameroonians at the time and that was why they hated and dreaded and resisted it. (2000, p. 33)

Atayo goes on to describe native resistance efforts, which universally ended in either exile, subjugation, or cooperation with German forces. He also points out that the forced laborers never understood that their experience was an education in itself and, even

though they would not be able to stay and directly benefit from their forced work, they "would have been" proud that their efforts were in Cameroon and not elsewhere, like "Bonn or Berlin" (2000, p. 34). Atayo further notes that the resistance against forced labor was, in itself, destructive to native society because it fueled tribal wars and witch hunts for men who could be handed over to the Germans. The implication seems, to me, that Cameroonians were in a no-win situation and were forced to adapt.

French Colonial Rule

Whatever the particular German legacy in Cameroon, the German windfall in the form of African colonies from the Berlin Conference helped to create mistrust, jealousy, and conflict with the other European powers which combined with other events and influences to culminate in the first world war (Atayo, 2000). When the League of Nations was created as a result of the Treaty of Versailles, Cameroon was mandated to France and Britain. French Cameroon comprised about four-fifths of the total area of the Cameroonian territory, with British Cameroon being the other one-fifth. Britain further split its Cameroonian territory in two, forming a Northern Cameroons and a Southern Cameroons. Both British Cameroons were administered as part of Britain's other neighboring territory, Nigeria until 1961. In 1961, Southern Cameroons ceded from Nigeria and re-united with French Cameroon. This formerly British-administered Southern Cameroons currently forms the two Anglophone provinces of Cameroon (Atayo, 2000; Ihims, 2003).

Since the territory was split between French and British forces, administration of educational programs followed suit. Thus, from about 1916 to 1960, two separate educational systems were created by the colonial powers in Cameroon. These separate

systems still exist and I will discuss the larger French system before following with a brief look at the British system.

The French colonial style of rule was generally highly centralized, with all important governmental decisions being made in France, and with highly standardized educational policies. For instance, school syllabi and schedules were the same as those in France. Atayo (2000) points out that "whenever a teacher of a given class was teaching French in France, his counterpart in Africa would be teaching the same subject at the same time" (p. 15). French officials thus put a premium on staffing their governmental agencies, including their educational system, with people from France.

The overarching emphasis of French colonial educational policy in Cameroon was the teaching of the French language to the masses. Not only would this facilitate French enculturation of Cameroonians and help to undermine local culture, but it would also facilitate communication between French administrators and indigenous people of Cameroon. In 1921, an Education Department was created in French Cameroon, with the following objectives:

1. To bring education in Cameroon in line with educational practices in France and other French colonies.
2. To teach, at least, the elementary notions of the French language in all schools in the Territory.
3. To undertake a civilizing mission of the people in stages since it was a slow and complicated task.

4. To undertake the physical, moral and intellectual education of the indigenous child, methodically, with the objective of making him a man, both useful and willing to be used. (Ihims, 2003, p. 99-100)

Though mission schools attempted to continue to instruct mainly in local languages to facilitate spreading their faith, French authorities soon made it clear that French was to be the first and foremost language in the colony. Other reasons for this stance, besides cultural assimilation, include the huge numbers of vernacular languages, none of which were common to all indigenous peoples. Further, all of these indigenous languages evidently lacked expressions for modern and scientific ideas which, from the perspective of the colonizer, were considered essential to the progressive, civilizing French objective (Ihims, 2003).

Apart from a few technical/vocational schools, the French Cameroonian educational system consisted of primary schools split into three levels. French Cameroon did not establish its first secondary school until 1945. Cameroonians who were sons of chiefs or notables were given preference in admission at all levels, and eventually, special schools for the education of future chiefs were created in the colony. This may appear to be a French attempt to honor and preserve some aspect of indigenous culture. Ihims (2003), however, quotes the French administrating authorities:

> …the political powers of the chiefs had no principle of authority useful to a European administration…the exercise of such powers being incompatible with the principles of our civilization…The authority of chiefs was to be reestablished on new bases which will permit them to work together with and for the Administration. (p. 107)

To enforce this philosophy, the French commissioner decreed an Order in 1933 which established the official status of chiefs in the colony:

1. From then henceforth, chiefs were to be appointed by the Commissioner on the recommendations of the Divisional officer of the Division concerned.
2. Chiefs were to serve merely as intermediaries between the administration and the indigenous people; with no autonomous powers of their own. They derived their authority from the administration to whom they were to be responsible.
3. Chiefs were to collect taxes from their people for the administration.
4. Chiefs were to maintain peace in their areas of jurisdiction.

Since the policies of French administrators strove to undermine and disempower local culture, gradually a broader sense of nationalism emerged in French West African territories, together with a diminished sense of tribalism, than in those African colonies under British rule (Atayo, 2000). Indeed, it seems that the French powers set a high premium on being French or French-like, and they were determined that their colonies would serve France's economic interests solely:

> No colony was allowed to engage in any foreign trade and all colonial products were sent to France by French transport. Little encouragement was given to the development of industries in the colonies for fear of competition. The colonies were made to pay heavy taxes, and high duties on imported and exported goods. The French introduced their currency in the colonies and used forced labour on farms and in mines. (Atayo, 2000, p. 16)

Though French educational authorities attempted to prevent the emergence of an educated elite for whom there would not be enough jobs, by 1961, the year of Cameroon's independence, there were a total of 977 government primary schools and 5 government secondary schools in the colony. More than 151,000 students attended these schools in 1961. The transition from predominantly mission to government schools had taken place, as less than 10% of the mission schools were ever officially recognized by the French government because of their struggles to find people qualified to teach French to the extent that the colonial authorities required (Ihims, 2003).

British Colonial Rule

By contrast, British authorities in Southern Cameroons relied on various missions to fill educational needs in the colony. In 1937, there were a total of 227 primary mission schools as opposed to 19 government schools. By the late 1950's, the vast majority of educational institutions in Southern Cameroons were still mission schools (Ihims, 2003). The British government did support these mission schools, both financially and administratively, but the decision of the British not to become very directly involved in educational affairs in Southern Cameroons helped to create an educational atmosphere strikingly different from than in French Cameroon.

One of the most important distinctions was the difference in perspectives on language of instruction. By the time British gained control of Southern Cameroons, the missions had a long-established sense that a child's own natural language was the best medium of instruction, at least for the earliest years of schooling. However, even in a relatively small colony like Southern Cameroons, there were more than enough indigenous languages to cause practical difficulties in the attempt to instruct in local

dialects. For a few years, educational committees debated about a course of action—some recommended instruction in English, along with limited use of Pidgin English; others recommended instructing in Pidgin English as an alternative to a multitude of vernacular languages; still others recommended the use of vernacular for the early years of instruction, followed by a transition to Pidgin or English. It was finally settled that, officially, English was to be the language of instruction, with limited use of Pidgin English. In practice, however, much of the instruction continued in the vernacular—until 1948 (Ihims, 2003).

The mission influence on educational administration in Southern Cameroons lacked the cultural fervor of French Cameroon objectives. The primary concern of mission educators was religious and moral instruction, and they often sought local examples to attempt to make their message more meaningful and effective. Thus, much of the education in Southern Cameroons was more focused on and adapted to local conditions than to overtly acculturating natives to British ways of life. Educational administration was clearly less centralized than in French Cameroon and this also created the impression of space for local contexts. Even today, there are far more missionary educational institutions in the Anglophone region of Cameroon than in the Francophone region.

There were, however, commonalities between the two educational systems. Neither had more than a handful of secondary schools by 1960, the eve of independence. In the secondary schools that did exist, however, graduates in both systems had to take and pass an exam—the Baccalaureate for the French and the General Certificate Examination (G.C.E.) for the British—that was created and graded in the respective

European country. Both systems had gradually become involved in a process of supporting the educational administration and infrastructure (although both levied school fees and taxes on native populations) in Cameroon in ways that created a huge burden for the newly independent Cameroonian economy (Ihims, 2003).

The culmination of French and British administration in Cameroon was the creation of an independent Cameroonian government in 1961, complete with the addition of Southern Cameroons. Atayo (2000) acknowledges that Cameroon has retained nearly all of its colonial educational structures, including the curriculum and languages of instruction, in part because a major shift might create difficulties for those students hoping to earn a French or British-approved diploma. However, Cameroonian history and geography have been officially added to more curricula than before.

Given this historical sketch of Cameroonian educational situations, the next chapter (Chapter 4) discusses the methodology for this study, critical ethnography. The processes by which data were collected and analyzed are also detailed in the next chapter.

Chapter 4

Methodology

It is likely already clear to the reader that I am the type of person who wants to know how and why events happen, or how and why people do what they do. I wonder why a few people seem to be able to transcend their particular circumstances while others apparently cannot. I wonder why inequities exist—is it just human nature?—and what perpetuates them and whether and which remedies are possible. Trying to understand underlying forces and motivations behind occurrences is important to me. From my current way of thinking, a study seeking understanding of events or relationships without also seeking to understand the reasons behind the events and relationships actually helps to thicken the cloak which covers and protects the sustenance of the status quo. I try to remain as conscious as possible that simple cause-effect relationships are rare and usually decontextualized; however, my character remains that of trying to understand the nest of relationships that are involved in oppression. I turn to critical theory to help me make sense of the questions and relationships that I consider to be important, and to continue challenging me to question my perspective, assumptions, and supposed answers.

This chapter discusses critical theory and critical ethnography, the methodology for this study. Specific processes of this project, including data collection and analysis of data, are described. This chapter closes with an articulation of several limitations of this research project.

Critical Theory

According to Yeaman et al. (1994), critical theory dates back to Socrates and the debates over reality of forms versus reality of appearances. The critical theory that arose

from the modern era has its roots in Marxism and the concerns about class (Anderson, 1989; Bowers, 1978; Quantz, 1992). Today there is no "unified" critical theory (Yeaman et al., 1994, p. 6), and there are at least a few different schools of critical theory. Habermas, with an emphasis on rationality (Peters, 1997), developed one school of thought and Freire seems to have taken a slightly different critical bent, with an emphasis on action and emancipation (Frankenstein, 1987). Horkheimer, Adorno, and Marcuse, a group of writers comprising the Frankfurt school have also contributed greatly to the development of critical theory, beginning with their analyses of how capitalism and domination are related (Kincheloe & McLaren, 1994).

There are many others (Foucault, Derrida, Giroux, etc.) who inform critical thought, and it is easy to try to package different criticalist schools since critical theorists often disagree even among themselves (Kincheloe & McLaren, 1994). However, critical theorists apparently have come to share some opinions—reality is socially constructed, positivism is not always viable, assumptions need to be challenged (Frankenstein, 1987; Yeaman et al., 1994). Kincheloe and McLaren (1994) describe characteristics of a criticalist as:

> A researcher or theorist who attempts to use her or his work as a form of social or cultural criticism and who accepts certain basic assumptions: that all thought is fundamentally mediated by power relations that are social and historically constituted; that facts can never be isolated from the domain of values or removed from some form of ideological inscription;…that language is central to the formation of subjectivity (conscious and unconscious awareness); that certain groups in any society are privileged over others…; that oppression has many faces

> and that focusing on only one at the expense of others…often elides the interconnections among them; and, finally, that mainstream research practices are generally, although most often unwittingly, implicated in the reproduction of systems of class, race, and gender oppression. (p. 140)

In short, critical theorists search for the ways in which oppression constrains action, choice, and knowledge in the quest for emancipation of the disempowered and transformation of reality.

One aspect of critical theory that is problematic for me is that of emancipation because the very word invokes, in my mind, the asymmetrical power relations that critical theorists attempt to expose and transform (Anderson, 1989; Quantz, 1992). Emancipation is subject to the emancipator's views. Who decides who the oppressed are? In what ways are they oppressed? What is the best way to liberate them? Judging by the long list of Western, advantaged, overwhelmingly white contributions to scholarly literature, these questions are decided to a great extent by the 'emancipator', regardless of how hard one tries to erase the researcher/participant dichotomy. However, the central commitments of critical theory to the exposition of power relations and their social and historical constitutions with the goal of transformation of reality make sense to me. I realize that I have at times conflated critical theory with critical research so far in my discussion; the relationship between the two will be discussed later.

Ethnography

Ethnography is the study of the cultures of people; it strives to describe aspects of social realities (LeCompte & Schensul, 1999; Rockwell, 1991). Created partly in response to the positivist research tradition, ethnography is concerned more with

descriptions and interpretations of social interactions rather than measurement, reliability, and prediction (Angus, 1986). LeCompte and Schensul (1999) describe seven characteristics of ethnography:

1. It is carried out in a natural setting, not in a laboratory.
2. It involves intimate, face-to-face interaction with participants.
3. It presents an accurate reflection of participants' perspectives and behaviors.
4. It uses inductive, interactive, and recursive data collection and analytic strategies to build local cultural theories.
5. It uses multiple data sources, including both quantitative and qualitative data.
6. It frames all human behavior and belief within a socio-political and historical context.
7. It uses the concept of culture as a lens through which to interpret results. (p.9)

There is definitely room within a characterization such as this for critique, and one of the most problematic aspects is the notion of culture.

In traditional ethnographic research, culture is generally conceived as a "single, unified set of patterns passed down from generation to generation which governs life within a community" (Quantz & O'Connor, 1988, p.95). The difficulties in trying to portray, describe, and ultimately write about such complex activities as the reproduction, from this perspective, of culture often leads to oversimplification and the tendency to depict these activities as timeless and homogeneous (Quantz & O'Connor, 1988). The

tendency to view culture as an entity rather than a process robs a people of their ability to alter or transform culture.

The ability of a researcher to accurately (implied objectively) reflect behaviors and cultures is also problematic; even the existence of such an ability is questioned by critical thinkers such as Rhoades (1983) and Luttrell (2000). It seems to me that ethnographies can never be mere reflections since the observations and experiences of a researcher must necessarily interact with her own unique values, history, and position. Also, the presence of a researcher, no matter how intimately connected to the participants, will alter the outward appearance of the culture. There is also the possibility that the researcher calls forth by the act of research the things she wishes to find (Rhoades, 1983).

Critical Ethnography

Two comprehensive studies of the field of critical ethnography are Quantz' (1992) and Anderson's (1989) contributions. While greatly informed by these and other works, I yet struggle with the task of pinning a definition on critical ethnography because of my understanding of the critical aspect of this methodology. Critical theorists are suspicious of rigid characterizations; rigidity and codification causes them to perk up their ears and sniff the air in an effort to root out the assumptions and values and sources of power lurking there (Quantz, 1992). It is almost against their nature to develop **A** definition that everyone, regardless of material, spatial, or temporal circumstance, will then use. It is more natural to describe those features and elements of a phenomenon that distinguish it from others and that help develop a contextualized understanding, one that

is open to critical questioning and to evolution. This is what I will do in my response: characterize and give a kind of 'working' definition for critical ethnography.

Many scholars describe critical ethnography as not merely describing lives of the oppressed or subordinated cultures, but also attempting to uncover the factors contributing to and causing oppression (Adkins & Gunzenhauser, 1999; Conquergood, 1991; Toohey, 1995). As I see it, however, this is only part of the critical project. To be complete, a critical ethnography must result in action and transformation of the concrete circumstances of the participants (Quantz, 1992). In Quantz' (1992) words,

> Whereas the traditional ethnographer understands the ethnographic project as either complete in itself or as a part of the idealist project of ethnology, the critical ethnographer sees the ethnographic project as an aspect of critical theory, which must eventually be completed in political and social action. (p. 467)

Critical ethnography is invested in more than a description or reproduction of culture; it seeks to uncover the asymmetrical power relations that show themselves in the material and cultural forms of a people and it seeks to bring about concrete transformation of these relations (Gordon, 2000; Pignatelli, 1998).

Historical Development of Critical Ethnography

According to Quantz (1992), deviance studies of the 1950s and 1960s challenged the accepted paradigm of the status quo by taking the opinions and views of "subordinated" people seriously (p. 451). Marginal groups came to be seen as victims rather than people who deserved scorn. The institutions supposedly created to help those with problems were seen, instead, to actually construct marginality. By the late 1960s, the prevailing opinion was that "the job of educational sociology should be to document

the way in which students are victims rather than to act as a mechanism for the improved efficiency of schools in their continued victimization of students" (Quantz, 1992, p. 451). Becker, president of the Society for the Study of Social Problems, called in 1966 for sociologists to side with the underdog and studies began to use participant observation to document the ways in which schools act to differentiate and polarize students (Quantz, 1992).

Budding aspects of critical ethnography can already be seen in these first challenges to the status quo, but it is not in the taking sides with the underdog. Critical ethnography is present in the attempt to uncover ways in which cultural institutions continually create asymmetrical relationships. Indeed, the call to side with the underdog came under criticism and led to a debate that marks fundamental differences between traditional and critical ethnography. Gouldner in 1968 pointed out the relativistic and romantic nature of siding with an "underdog" and raised the contradiction and conflict that would occur when sociologists make superordinates the object of their study. Their sentimental stance to take the side of the underdog would be opposed to their theoretical stance as ethnographers to take the viewpoint of whatever group happens to be under study. There is also the point that any given group is both subordinate to some and superordinate to others, so how does one identify the underdog? Gouldner called for grounding a group within a larger societal context in order to illuminate the broader social and political forces at work (Quantz, 1992).

Quantz (1992) gives examples of several symbolic interactionist ethnographies that verge on critical ethnographies (for more on symbolic interactionism, see Woods, 1992). Lacy's ethnography is the first to show how the process of a group's construction

of a world is situated in broader social and political factors. Paul Willis' work *Learning to Labour: How Working Class Kids Get Working Class Jobs* marked the transition from symbolic interactionist ethnographies to critical ethnographies. One scholar from a group at the Centre for Contemporary Cultural Studies at the University of Birmingham, Willis tied Marxist theory to ethnography and thus altered the way scholars thought about ethnography and schooling; through his work, "resistance theory became the primary orientation for critical ethnography" (Quantz, 1992, p. 457). Two other scholars from this group, Robins and Cohen, acted to change the conditions of their informants as they conducted their research, thus introducing a transformative aspect to critical ethnography.

After a strong beginning from the scholars in Britain in the 1970's, critical ethnography developed most strongly in North America in the 1980's with contributions from scholars at the University of Wisconsin at Madison such as Weis, Valli, and McNeil, and influenced by Apple and Giroux. All of these scholars helped to form critical ethnography—"a research method built on the various traditions of qualitative research, grounded in the critical social theory of continental philosophy and the growing influence of feminist theory, and committed to a libratory political project" (Quantz, 1992, p. 458). The emancipatory nature of critical ethnography should not be underestimated; according to critical ethnographers, either you are part of the solution or you are part of the problem. There is no neutral ground (Lu & Horner, 1998). Researchers are either for emancipation or they serve to perpetuate oppression (Adkins & Gunzenhauser, 1999; Quantz, 1992).

Knowledge, Power, and Culture in Critical Ethnography

In identifying critical ethnography as a distinct paradigm, scholars developed an epistemology that distinguished it from more conventional traditions such as positivism. The very project of critical ethnography is seen as knowledge construction rather than knowledge production, a distinction that emphasizes the ways in which "research participants affect the research and contribute to the construction of knowledge about them" rather than conceiving of knowledge as the product of an inquiry that is the sole responsibility of the researcher and under her control (Adkins & Gunzenhauser, 1999, p. 66).

Reflexivity, "the dialectical relationship between complimentary constructs," is crucial to the construction of knowledge in critical theory (Adkins & Gunzenhauser, 1999, p. 67). This is because, according to Adkins & Gunzenhauser (1999),

> critical ethnographers rely heavily on the distinctions that their work is transactional and politically driven to warrant the field as an alternative form of inquiry. Reflexivity is the means they use to organize the transactions, interpret their meanings, and focus them toward the political impact that research should serve. (p. 73)

Adkins & Gunzenhauser (1999) discuss six domains of reflexivity that complete the epistemological framework for critical ethnography— (1) the relationship between the researcher and the act of research, (2) the relationship between critical ethnography's theoretical-methodological components, critical social theory and ethnography, (3) the dialectic between micro and macro forces, (4) the relationship among social theories, including critical, feminist, and postmodernist perspectives, (5) reflexivity between the

act of research or knowledge construction and its transformative, emancipatory impact, and (6) the relationship between the researcher and the researched.

Adkins & Gunzenhauser (1999) discuss five other epistemological distinctions which, in addition to the notion of reflexivity, justify the presence of critical ethnography as an alternative to conventional epistemology:

> the explicit combination of critical social theory and ethnography; the capacity to attend to both macro- and micro-levels of reality; its inherently politically-driven and value-laden nature; an orientation to a common core set of beliefs (though other, additional beliefs may also influence); and the fundamentally transactional basis of knowledge construction. (p. 68)

Knowledge and power, to a critical ethnographer, are related so intimately that it becomes impossible to discuss one without the other. As Kincheloe & McLaren (1994) put it, "(c)ritical research traditions have arrived at the point where they recognize that claims to truth are always discursively situated and implicated in relations of power" (p. 153). Or, in Quantz' (1992) words, "knowledge is always formed through power and power is always located in knowledge" (p. 466).

Critical ethnographers generally tend to approach social reality through historical power structures and concrete life. Quantz (1992) suggests that poststructural conceptions of power can inform the project of critical ethnography. Foucault's description of power as being produced everywhere, in every interaction, rather than as some thing or structure or force that a particular person wields at some time opens possible future directions for critical ethnography. Quantz (1992) quotes from Foucault, "power is not an institution, and not a structure; neither is it a certain strength we are

endowed with; it is the name that one attributes to a complex strategical situation in a particular society" and posits that, although the possibilities have not yet been fully explored, "the description and analysis of these 'complex strategical situations' may be the greatest contribution that critical ethnography could make to critical theory" (p. 481).

Culture in traditional ethnography is generally viewed as a thing, an entity consisting of a shared set of patterns of bounded groups of people (Quantz, 1992; LeCompte & Schensul, 1999). According to Quantz (1992), however, "critical discourse suggests that *culture is an ongoing political struggle around the meaning given to actions of people located within unbounded asymetrical power relations*" (p. 483). From his perspective, culture is a consequence of the struggles of various groups of people to name and create their reality. Culture is the struggle and conflict of attempting to understand; it is not just passed down the generations but is constructed by people as they make sense of their lives. This culture is situated in historical and material relations that constrain cultural constructions; culture is not created at random but is affected by particular historical and material forms through which power acts (Quantz, 1992).

Tensions in Critical Ethnography

Critical ethnography is unapologetically value-laden and has been criticized as being too theory driven (Anderson, 1989; Quantz, 1992). A tension underlying critical ethnography is that between theory and experience. Critical theorists conducting research in education have viewed ethnographers as too atheoretical and neutral; ethnographers have contended that critical theorists are too biased (Anderson, 1989). Both traditions have been bolstered by the incorporation of the lacking element. According to Quantz (1992),

> ethnography without theory grounded in the material relationships of history can too easily become a romantic display of the exotic life-styles of the marginal, a voyaristic travel log through the subcultures of society…At the same time, theory without empirical knowledge of lived cultures is too easily reduced to mere formalism; it remains an elitist exercise in academic conversations, which does more to advance the careers of university professors than it contributes to the empowerment of ordinary people. (p. 461-462)

Critical theory attempts a resolution of this tension by realizing that empirical study and theorizing are not separate; empirical study, the re-construction of experience, and theory are connected. The way in which a researcher approaches an empirical study, the experiences she focuses on, even the construction of interview questions, all reflect a theoretical orientation (Canen, 1999). Theory and material experience are inseparable since the experience one has is influenced, in part, by her theoretical position (Luttrell, 2000; Rhoades, 1983). In Foley's (1990) words, "In the end, ethnographic portraits may say as much about the author as they do about the people being studied" (p. xix).

Another tension apparent in critical ethnography is between human agency and material condition. As I struggled to make sense of this particular aspect of critical ethnography, it helped me to think of Thomas Hardy's *Tess of the d'Urbervilles,* a common high school text. I remember that my class' discussion of the work centered on the question of whether Tess was a victim of circumstance (external forces) or whether, through her choices, she controlled her destiny. This dialectic or tension between material conditions and human agency, or the ability of a person to act according to her perceptions, influences the construction of culture (Quantz, 1992). It is also in this

tension that hope can arise. To the extent to which one emphasizes human agency, one can be hopeful about the capacity of people to bring about transformations.

Criticisms of Critical Ethnography and Future Directions

The criticism of critical ethnography as being too theory-laden has already been discussed, as well as the possibility for critical ethnography to move towards a more poststructural conception of power. Critical ethnography is also criticized for being too impractical and removed from the everyday (Anderson, 1989; Quantz, 1992). The ability of critical ethnography to capture major, broad changes in social institutions has been questioned as well as its reliance primarily on one research method, the participant observer method (Anderson, 1989). The ways in which critical researchers write about culture is also seen as problematic; this aspect is further discussed in the following sections.

Critical scholars address these criticisms by urging critical ethnographers to produce practical results and to involve the particular participants in not only the research study but also in the transformation of their material conditions (Quantz, 1992). Alternative or additional research methods to participant observer are suggested and made available for critical ethnographers, concerned about empowerment—these methods include oral history, informant narratives, and collaborative research (Anderson, 1989). As a result of the influence of postmodern thinkers, critical theory struggles to grasp the "particularity of oppression more adequately…At the same time, the concept of totality, which locates the particularity of experience in wider totalities such as patriarchy and capitalism, must not be forsaken…Whereas larger social forces clearly exert a

profound impact on society at large, their impact on individuals and localities is ambiguous and idiosyncratic" (Kincheloe & McLaren, 1994, p. 146).

The discussion of this chapter thus far has outlined a critical theorist perspective and a critical ethnographic methodology, which influenced the decision-making and protocol options of this study. More specific descriptions of data collection and data analysis processes are detailed in the next sections.

Data Collection

To better understand the situation of Cameroonian teachers and how they perceive their educational situation and the relationship between education and culture, my husband, Philip, and I traveled to Cameroon for four weeks in the spring of 2004 to talk with teachers about these ideas. Since my husband had also taught in the Presbyterian school system in Cameroon, we chose four secondary schools in the Northwest Province, including the school where I taught as a volunteer and where I met my husband (I will call this school Village Secondary School) and another school where my husband had earlier taught (this school will be referred to as Urban Secondary School). The other two schools were chosen for their historical importance in the Presbyterian school system, and because my husband had personal relationships with many of the teachers in these schools (these schools are Mission Secondary and Town Secondary schools). For this study, Philip and I decided not to include government schools or teachers since neither of us had experience in that environment in Cameroon and we would not have understood the context as well or been as familiar with the participants.

The grade-level and administrative structures of these schools coincide with those of schools in Britain. Before students are admitted to secondary schools like the four in

this study, they complete schooling at the primary level, which involves attending school from Class One to Class Seven (roughly the American equivalent of Kindergarten to Sixth Grade). Once students reach the secondary level, the grade-levels are called Forms instead of Classes, and there are two levels of secondary study, the Lower and the Upper levels. The Lower Secondary schooling process includes completing Forms One through Five (similar to the American grades seven through eleven), and then taking the Ordinary Level (O-Level) G.C.E. Students who pass the O-Level G.C.E. can, depending on which subjects they passed, specialize in either Arts or Science at the Advanced Level (A-Level) of secondary school, which includes Lower Sixth forms and Upper Sixth forms (like the American 12th grade year and first year of post-secondary study). The entire process of completing both Upper and Lower levels of secondary study usually takes at least 7 years. When a student has completed the Upper Forms of study, they take the Advanced-Level G.C.E.; the outcome of this exam strongly influences post-secondary prospects such as whether students can be admitted to a university, and which employment opportunities might be available to them.

The administrative structure of the schools consists of a principal, a vice-principal, a discipline-master (people in each of these positions also teach one or more classes), and various other posts which depend on the school situation (boarding schools, for example, will have house masters and mistresses). The students also have a governing structure in the form of class prefects. These are elected by students of the respective grades, from a selection of nominees chosen by the faculty.

Usually accompanied by my husband, I spent a week visiting each school. This study involved several data collection methods: individual, semi-structured interviews

with mathematics teachers, open response surveys of non-mathematics teachers, reviews of classroom materials and school mission statements, and classroom observations (see Appendix A for survey and interview questions). In my mind, the essence of this project is critical ethnography, which could conceivably consist of 10 or so in-depth interviews with mathematics teachers. However, since undertaking this project has numerous, resource-consuming logistical challenges, I wanted to collect more data than I thought I would need as a way of providing additional context, which is why I included a survey of non-mathematics teachers. I wanted to avoid a situation in which the interview responses were intriguing and I wondered whether the rest of the teachers share the opinions of the mathematics teachers, but had no way of knowing and great difficulty in finding out.

I also reviewed classroom materials and school mission statements to find out what the explicit expectations are and to identify the underlying ideas about the purpose of schooling. I was also able to observe the mathematics teachers from one school (Urban Secondary School) during classes to see what goals they have for their students and to see how closely the classroom environment matches the banking practice of education as described by Freire (1970/2000) and as experienced generally in the West. Since, at the time of my visit to Cameroon, teachers were beginning to prepare their students for the end-of-year exams, I was not able to observe teachers at the other three schools during classes. By the time I visited those three schools, formal classes were no longer meeting. The teachers I was able to observe were the same teachers who participated in an interview; I made field notes of my observations but no audio or visual recordings.

Surveys. To begin the process of data collection, my husband and I met with the Education Secretary (similar to a superintendent) for the Northwest Province to explain the project, its purpose, and our proposed procedures. The Education Secretary expressed his interest in and support of this project, and facilitated data collection by contacting many of the principals of the schools we had chosen for participation. In addition, before traveling to the schools sites, my husband and I frequently met with key school figures like principals, vice-principals, or heads of departments in non-school settings to discuss this project and its purpose. Upon arriving at a school, I (usually accompanied by my husband) met with either the principal or vice-principal (if the principal was not present) to remind them of why I was there, how long I planned to visit, what I would be doing, and to express my appreciation for their participation. I also presented the principals and vice-principals with fountain pens as a tangible token of my appreciation.

After consulting with principals and/or vice-principals, I met with the faculty and explained the study. At this time, I would request that any faculty desiring to participate but who did not teach mathematics pick up a survey. I would also request a further meeting with just the mathematics teachers. I gave instructions to teachers willing to participate in the survey to please not include names or identifying data, and to return the surveys to the mathematics department head when they had it completed. I informed the faculty of the last date I would be available to collect surveys from the department head, and requested that, if they wanted to participate, they should return the survey by that date. I also made available mechanical pencils and ball-point pens for faculty members,

in order to facilitate completion of surveys and also to express my appreciation for their participation.

A few circumstances arose in the course of trying to distribute and collect surveys which I had not anticipated. I had planned to distribute surveys myself, as I would be resident in staff-rooms for the week of my visit; and I had planned to collect surveys by having teachers return them to a container at their convenience. When I met with heads of mathematics departments and, in one case, the vice-principal, however, they wanted to be more involved in survey distribution and collection. Some of the department heads suggested that I allow them to both distribute and collect surveys; one department head allowed me to distribute surveys but asked that faculty return them to him. For the Town Secondary School, the vice-principal simply asked me to leave a sufficient quantity of surveys and he would distribute and collect them. I stressed the importance of anonymity and choice on the part of survey participants, but I felt that adhering too strongly to my plans might create animosity and contention.

For three of the four schools in this study, I have the necessary figures to calculate survey response rates. At Urban Secondary School, 27 surveys were distributed and 18 returned, which gives a 67% response rate. At Village Secondary School, 23 surveys were distributed and 13 received, which gives a 57% response rate. At Mission Secondary School, 20 surveys were distributed and 17 returned, an 85% response rate. For Town Secondary School, I was asked to leave 30 surveys with the vice-principal. I received 15 completed surveys, but I do not know how many surveys were actually distributed since the vice-principal did not return blank surveys. At minimum, there was

a 50% response rate at Town Secondary School. In all, 63 completed surveys were returned to me.

The survey (Appendix A) I created for the non-mathematics teachers is an open-response survey rather than a Likert-type scale primarily because of the potential cultural differences in interpreting such scales. Even within my Western culture, these types of survey questions do not provide much meaningful information for me because I am never sure if one person's 'sometimes disagree' is really the same as another's 'disagree' and I was uncertain as to how these ranks would be interpreted by Cameroonians. I did not want to impose pre-determined categories on the respondents. Using pre-determined survey categories would also have been a constraint on the type of question that I could include on the survey.

Interview Participants. After beginning the process of distributing and collecting surveys, I met at each school with either the entire mathematics department (three to five people) or with the mathematics teachers individually to further explain the project and ask consent for an interview. Each teacher I asked to interview consented to do so, and over the course of four weeks, 14 teachers who were either teaching mathematics at that time or had done so in the past engaged in semi-structured, audio-recorded interviews which lasted from 45 minutes to an hour and a half. The interview participants were all male.

Many of the teachers at these schools were known personally either to myself or to my husband. The interviewees, mathematics teachers, were especially well-known to myself or Philip. One of the interviewees was a teacher I had taught with five years ago, and most of the others were either former colleagues, supervisors, or students of Philip.

Most (9 out of 14) of the interviewees (see Table 1) had no formal schooling in education, and had not anticipated becoming teachers. Only five of the interviewees had wanted and planned to become teachers, and many of the interviewees still hope to study further and eventually change their employment. It is common practice in mission and private school systems in Cameroon to hire university graduates to teach who have no educational training or schooling. However, each of the interviewees had participated in professional development seminars sponsored by a German corporation.

I decided to use Western pseudonyms for interviewees (survey respondents are not named) for purposes of anonymity.

Participant Table

Pseudonym	Background	Experience	Why Teaching?	Future Plans
Tim	B.S. Mathematics	6 years	Lack of jobs	Further study
Ian	Teacher Training College	6 years	Chose to teach	
Stephen	B.S. Engineering	14 years	Lack of jobs	
Theo	B.S. Mathematics/Chem	33 years	Chose to teach	
Donald	B.S. Mathematics	6 years	Lack of jobs	Further study
Paul	Teacher Training College	7 years	Chose to teach	
David	Teacher Training College	15 years	Couldn't attend medical school	Further study
Ernest	B.S. Geography	8 years	Lack of jobs	Keep teaching
Mark	B.S. Mathematics	9 years	Lack of jobs	
Bradley	B.S. Mathematics	7 years	Lack of jobs	Further study
Charles	B.S. Mathematics	6 years	Lack of options	Further study
Robert	Teacher Training College	11 years	Love of job	Further study
Lucas	B.S. Mathematics	7 years	Chose to teach/inspired	
Ray	B.S. Microbiology	4 years	Couldn't attend medical school	Keep teaching

The practice of choosing names for Cameroonian children is almost always related to their region of origin. For example, my husband refuses to accept a name—which I happen to be fond of—for any of his children because this name does not come from the Northwest province of Cameroon. If I had decided to use Cameroonian names for this study, in order to avoid offending the interviewees, I would have been limited in my options. Further, I was concerned that the risk of inadvertently revealing interviewees' identities through region-specific pseudonym choices was too high. Therefore, I decided to choose names from the other end of the spectrum; rather than using context-specific Cameroonian names, I chose Western pseudonyms.

One way of stating the purpose of this study is to say that this study seeks a better understanding, through conversation with Cameroonian teachers, of their educational situation and their awareness of that situation—"the various levels of perception of themselves and of the world in which and with which they exist" (Freire, 1970/2000, p. 95). This project, then, is a type of educational process, not least for myself. Analysis of data for this study is centered around interview conversations, or "dialogue" in Freire's sense of "encounter[s]…mediated by the world, in order to name the world" (Freire, 1970/2000, p. 88). However, interview data is triangulated with survey responses, my personal experiences (both before this project when I was in the Peace Corps and during the conduct of this project), and my husband's perspectives.

Analysis

Analysis of the data collected in this study is a search for themes—concrete manifestations of ideas, values, hopes, and obstacles. I draw heavily from Freire

(1970/2000); he discusses in depth the process of investigating generative themes and how this investigation relates to problem-posing education:

> In the way [people] think about and face the world—fatalistically, dynamically, or statically—their generative themes may be found…To investigate the generative theme is to investigate people's thinking about reality and people's action upon reality… (p. 106).
>
> From the investigator's point of view, the important thing is to detect the starting point at which the people visualize the 'given' and to verify whether or not during the process of investigation any transformation has occurred in their way of perceiving reality…Thematic investigation thus becomes a common striving towards awareness of reality and towards self-awareness, which makes this investigation a starting point for the educational process or for cultural action of a liberating character (p. 107).

Analysis of the data collected in this study is a search for themes, people's awareness of these themes, and the historical and material constraints on the themes. Such analysis would be impossible without the ongoing and substantial participation of the interviewees. This process of analysis will help generate an understanding of how Cameroonian teachers live within and their awareness of their educational situation, and the factors that contribute to their reality and their awareness of that reality.

To assist me with the process of making sense of the qualitative interview and research data I planned to collect, I kept a copy of LeCompte and Schensul's (1999) work Analyzing & Interpreting Ethnographic Data nearby; it was one of the few books I took with me to Cameroon. Their specific and detailed descriptions of coding data and

identifying patterns among responses were one of my primary guides in data analysis. Upon return from Cameroon, during the process of transcribing interviews, I began to notice that certain phrases and ideas were recurring in responses. LeCompte and Schensul (1999) call these types of initial observations processes of emergence which begin an analysis process, and they point out that ethnographers do not just happen to notice specific phrases or behaviors; ethnographers are "sensitized to specific items and ideas because of the conceptual frameworks within which they work" (p. 46). My sensitization, as discussed earlier, comes primarily from the perspective of Freirean critical theory.

After transcribing interviews, I began an "item" analysis of interviews and surveys, taking note of phrases or illustrations that were relevant to the research questions for this study. LeCompte and Schensul (1999) note that the analysis process is undertaken with the original research questions in mind. It was only after reading interviews and surveys numerous times that I had enough of an idea of the relevant items to be able to start grouping items into categories and patterns; this is the second level of analysis outlined by LeCompte and Schensul (1999).

LeCompte and Scheunsul (1999) discuss in detail eight ways in which patterns emerge: declaration, frequency, omission, similarity, co-occurrence, corroboration, sequence, and a priori hypothesizing. The patterns I noticed in the data for this study emerged primarily through frequency (many or all participants referred to a phrase or item), similarity (participants spoke of ideas using similar phrases or illustrations), corroboration (interview responses were supported in survey responses), and omission/a priori hypothesizing (I asked questions hoping and expecting to hear certain ideas; these

were often not present in responses). After identifying seven patterns in interview and survey responses (outside influence/development, culture, mathematics education, practical/technical education, instructional methods, Cameroonian educational systems, and avenues for transformation), I color-coded transcripts and surveys according to these patterns, in order to facilitate the presentation of findings.

For purposes of providing space for participants' voices (a purpose articulated to interviewees), I have provided the results from my pattern-level analysis in Chapter 5. The final level of analysis, the structural level, which consists of overarching relationships among patterns that help to explain cultural phenomena, is the focus of Chapter 6 (LeCompte & Schensul, 1999). The seven patterns outlined above are organized into three central themes in Chapter 5: Culture, Education, and Transformative Potential. These themes are directly related to the research questions for this study. Before discussing data patterns, several limitations of this study need to be articulated.

Study Limitations

One important limitation of this study is that the interviewees were all male. Further, since I did not ask for demographic data like gender on the survey, there is no way of knowing how many females participated at all. While I hesitate to use a loaded and Western term like misogynist to interpret this situation, the simple fact that there were no female mathematics teachers in any of the four schools might indicate a gendered differential in access to higher mathematical studies. Likewise, of course, had I been interested in interviewing the Food & Nutrition teachers (this is similar to our home economics), I would have found no or few males to participate in my study. Women generally, in Cameroon, perhaps are not interested in or have less access to mathematical

studies at the higher level than men. Men, on the other hand, are perhaps not interested in or have fewer opportunities to teach Food & Nutrition. The relevant point is, fascinating as, in my personal experience, I found Cameroonian females and as much as I valued and admired their strength and labor, I was not as interested, in this study, in talking with the Food & Nutrition (female) teachers. I am sure I did not fully appreciate this gender equity issue at the outset of this study. Being female myself, and having been a teacher in one of these very schools, it never occurred to me that I might not have even one female interviewee. Indeed, I was not even conscious of the gender bias in this study until I had returned to the U.S. and was analyzing the data; I am clearly not as aware as one might hope of gendered power relations.

Another limitation for this project was its scope. Focusing on interviews with teachers who are all in mission, private secondary schools has advantages for more contextual understandings, but there are disadvantages in that other, perhaps alternative and meaningful, viewpoints are absent. As several of the teachers in this study pointed out, educators in the government schools in Cameroon would possibly have different perspectives from most of those in the private schools, since the government educators have all gone through a teacher training process. A few of the interviewees even went to the point of asking me to make extra copies of the survey, which they would then take to people they knew in government schools to distribute and collect. That, however, was beyond the scope of this study, but their point still stands. I would not recommend exclusive use of surveys to try to better understand post-colonial educational situations, but the idea of including perspectives of government or trained teachers is valid.

Lastly, this project is limited in one of its sources of triangulation data, survey responses. Establishing shared meanings for words and phrases was more problematic in surveys than I had anticipated. During semi-structured interviews, I at least had space to follow up with other questions until participants and I had a shared understanding of what was being asked. Further, I had flexibility to ask questions that emerged from participants' responses. For example, as interviewees were talking, they often mentioned development or progress. Eventually I was aware enough to notice this and thereafter I took the opportunity of asking interviewees what they meant by development. Surveys offered no such opportunities of exploring meaning and understanding.

Another reason meaning and understanding was inhibited in the surveys is that some respondents gave very brief answers to questions like how they felt about their educational system and whether they thought the educational system was addressing their needs. During interviews, I asked participants to elaborate on such responses, but on a survey it is not easy for me to understand or place in context very short responses that have no stated reasoning or rationale. Indeed, it was challenging for me to understand, generally, the survey responses in context. Interviewees often spontaneously offered examples, illustrations, and metaphors for the ideas they were discussing. This rarely happened on a survey.

An example of why elaborations and illustrations were important in making sense of responses arises from a cluster of participants who expressed dissatisfaction with their educational system but felt that education was related to culture. When I first noticed this response, I wondered why those teachers were so disgruntled with their system if it corresponded well with their culture. Then I realized that I was not asking the question I

thought I was asking—I had assumed that, once I asked specifically about their educational system, then that would be the default context for the rest of the questions. During interviews, I adapted to this issue by following up a question about whether and how education related to culture with one about whether they felt their particular educational system related to culture or not. Often responses to these questions were very different; many felt that education in general was very closely related to culture, or at least should be, while they also felt that their particular educational system did not correspond with their local realities. Clearly, it was not feasible for the surveys to evolve in a similar way as the interviews. Thus, I was able to get information and reach understandings from the interviews that were not accessible to me from survey responses.

It is important to point out that, though the survey responses were generally decontextualized and constrained relative to interview responses, conducting the surveys was indeed useful to my study for more than triangulation purposes. By involving the full teaching staffs at the schools I visited, rather than just the few in the mathematics departments, I was giving all of the teachers the opportunity to understand why I was there and what I was doing. Distributing surveys to everyone also helped to indicate how seriously I took the study; the teachers generally responded to this by being accommodating to me, discussing the study with me individually, expressing a desire to be interviewed, and even by offering suggestions about how to extend the study. As my husband pointed out, the study and my presence would likely have been viewed in a much different light had I not made the effort to include all of the teachers. This was a consideration I did not think of when I was first designing the study.

Having outlined the critical perspective of this study, and its processes of data collection and analysis, as well as several limitations of this project, the next chapter discusses the pattern-level of analysis as a way to address the guiding questions for this study.

Chapter 5

Discussion of Data

This study is a search for a better understanding of Cameroonian teachers' efforts to make sense of their post-colonial, recently-independent situation within the context of inherited Western educational systems. This study attempts to understand more about what people do, think, and feel in the aftermath of a cultural and societal imposition the likes of which most people who share my Western European ancestry have great difficulty conceiving.

The focus of this study is a better understanding of a postcolonial nation's educative culture and process. Guiding questions for this study are:

- What do Cameroonian teachers think about their educational situation?
- How do Cameroonian teachers perceive the relationships between their educational situation and their culture?
- What relationships, from the perspective of Cameroonian teachers, exist between mathematics, as it is taught, and their culture?
- What influences these perceptions?

Drawing from interview and survey responses, this chapter focuses primarily on the first three research questions; however, one experience common to many participants and all interviewees which influences their responses to the first three questions is teacher training provided by the German DED corporation. Though most of the interviewees were not trained teachers, each person had been through at least one in-service training seminar which was constructed and run by Germans working for the German

Cameroonian Corporation (DED). What was taught at these seminars influenced the teachers' instructional methods and what they valued mathematically.

German Cameroonian Corporation (DED)

During the time I was a teacher in Cameroon, the DED was just beginning its educational programs in my vicinity. I myself attended a few training sessions and seminars conducted by DED workers and even gave permission to be observed in the classroom, but the DED teacher in-service program has apparently widened its sphere of influence in the five years since I left Cameroon. When I started to realize the extent to which the interviewees had experience with seminars hosted by DED employees, I contacted a person—who happened to be Cameroonian—who was involved at that time with training teachers for the DED and running seminars. Greg had been a mathematics teacher in the Presbyterian school system in Cameroon for 13 years, and, at the time of this interview, he worked full time with the DED.

According to Greg, the goal of the DED In-Service Training Program, funded from Germany, is to provide on-the-job training for teachers in the Presbyterian and Baptist school systems, since few of those teachers have been educated as educators. The orientation of the DED training program is to encourage teachers to use learner-centered and/or participatory approaches to education. Greg's rationale for this approach was that it is more democratic than a traditional method, and it brings the learner and the teacher closer together. Since the program began in 1997, the DED has been training mathematics, science, and food & nutrition teachers. They have recently begun training in the subjects of English, French, English literature, history, geography, HIV/AIDS, and environmental education as well. In addition to expanding into various subject areas, the

DED has also begun to replace many of the original German trainers with Cameroonian counterparts.

The process of DED In-Service Training involves 3-day seminars during the 3rd term holiday (this corresponds to a typical U.S. summer break). During these seminars, teaching strategies are discussed and participants often engage in activities which they can use in their classrooms. There is a focus on actively engaging students in the learning process, and on using local materials to do so. DED teacher trainers also visit each school during the academic year to observe and give feedback on educative practices. In order to increase the number of available teacher trainers, directors in the DED select practicing teachers to undergo a 2-year training course, after which the teachers are sent back into schools, where they are expected to train colleagues through workshops. My husband was selected for one of these training courses, and had gone through the first year of training when we moved to the U.S.

Greg's survey responses might illuminate in more detail some of the philosophies underlying the DED In-Service Program. First, Greg discussed his thoughts about education, culture, and their relationship:

> Education simply means acquiring the necessary knowledge, skills and abilities to fit properly in the society…Culture refers in the simplest terms [to] the way a given (set of people) society sees and does or the way a society sums its affairs, the pattern of life of a collection of people, rules, mores, folkway of a people…Generally, from the etymology, education should be related to culture. Educere, the way you unfold is related to your culture, the way you are trained is related to your culture, consequently culture is the basis of each education system.

> If Education is making one fit for the society, then the society should have its cultural aspects which form the content area for education.

Thinking about mathematics, Greg valued practicality. In response to the question of what mathematics he thought was important to learn, he said:

> Developmental mathematics, mathematics for daily life, that mathematics which will leave the daily life problems of the learner with more appropriate solutions. In short, concrete mathematics not abstract space vectors. The content area for mathematics should be first of all cultural oriented before broadening up.

Greg's discussion of education as skill acquisition or training, and valuing practical, applicable mathematics is more modernist than relational in its logic (Fleener, 2002). Greg hopes through "learner-oriented instructional methods" to "introduce a democratic culture in [his] country." He wanted to change the way people reason, and "to promote principles of education for liberation and hence intercultural communication." He was not optimistic about his chances for enacting such changes through education, because his system is "confused."

Greg's responses are important to consider because such sentiments as education as learning skills or acquiring knowledge, culture as a way of life of a people, value of concrete, practical mathematical topics, and faith in education as a means of social transformation are echoed in the responses of many other participants. Such striking similarities in so many of the responses made me pause. I kept wondering whether so many of the participants had taken the same courses or read the same textbooks, but then I remembered that most of them did not have any formal teacher education. Most of the teachers have only been trained (in the field of education) through the DED program, so I

consider it likely that this program, among other interactions with the West, has influenced many of the perspectives and ideas of participants and thus is an important aspect of the context of this study. As participants' responses to the first three guiding questions are considered in the rest of this chapter, it is important to keep in mind their common teacher training experience, especially since it was provided and funded by a Western development organization.

Response Structures

In order to more fully understand teachers' responses to the questions of how they feel about their educational system and what relationships they see between education, culture, and mathematics, it is helpful to know what meanings participants gave to culture, education, and mathematics. The next section discusses participants' meanings for each of these ideas. The following section presents participants' perspectives about their educational system and culture, education, and mathematics. The final section in this chapter discusses teachers' goals and hopes for the future of their culture and society.

Meanings for culture, education, and mathematics

Meanings for culture.

One of the questions I asked each participant, whether in an interview or on a survey, was: What is culture? Or: What does culture mean to you? Responses fell along a spectrum of more concrete, practical, observable meanings for culture to more abstract, transformative, and relational notions of culture. Most of the participants referred to culture as a way of life of a people or the identity of a people. Charles gave several examples to illustrate his point:

> To me, I look at culture as…the way people of a particular origin live. And, in the particular social…environment where they live, what they do, their mode of

> life, and how it influences their behavioral pattern. That's how I look at culture…Culture, also to me, could also depend on maybe the tongue that you will speak. Like for example, if I want to take Cameroon as a society, I would say Cameroon has a bilingual culture, that is two language culture, and things like that. But, if you take for an African context, wherein you may have a nation like Cameroon having so many tribes, you will see now that culture also is going to vary. It is going to go now into the aspect of the different way, mode of living of the different tribes. The indigents of the different tribes. Like, for us, we have our way, our special kind of meal, our special kind of dialect, our special kind of dances, and things like that.

Seven other interviewees gave similar responses; these teachers spoke about the ways of life of people, people's behavior—specifically languages, style of dress, eating habits—people's beliefs and folklore. Two interviewees spoke about culture more abstractly as an identity. For example, Mark considered cultural identity:

> To have something that you can identify with…that distinguishes you from other places. The culture in Cameroon, you do not share it with the culture in Britain.

Mark went on to give examples like the age at which children start attending school, or the rate at which females attend school as aspects of culture that vary with location. Ian also spoke about a facet of identity in culture:

> Given this Cameroonian context…culture is the make-up of the people. I look at it as the make-up of the people. What they eat, their way of life, their way of doing things and so on. That is the way I look at it.

Four other interviewees also considered more abstract possibilities like ways of thinking, education, and expression. Paul illustrated the connection he saw between education and culture:

> To me, I feel that culture is still a kind of informal part of education. Culture is educating…It changes the mind, as well. Informally. Like, a child who is just growing up in the society will come up to behave following a certain norm or particular norms of that society because that child has been changed. The mind, before the child is coming up, there is nothing in the head, but at one moment, the child will tend to be behaving like anyone in that society. Therefore, that culture is orientating that child, or building up that child's mind to suit in that society. So, to me, I feel culture is an informal part of education.

Paul saw culture as part of an educational process that fill's a child's "empty mind" with values, norms, and behaviors. From a slightly different perspective, Lucas considered culture to be the medium within which education occurs:

> Well, to me, culture…refers to the customs, the beliefs, the intellectual development of the mind and the spirit for a particular milieu, within a particular milieu…If I want to look at it, it is broad.

Ernest, while discussing his view of culture as a form of education, also hinted at the relationship between culture and urban or rural life experience:

> Culture, culture, culture. Well…you know with us in Cameroon here, I come from [a relatively large town]. Yes, my mother is from [a different, fairly large suburb], and my father is from [the same town as Ernest]. So unfortunately I never grew in any of the villages. I just grew around [two of the largest cities].

> But, however, I have a little knowledge about what culture is. Culture are those norms that are planted onto us by our parents as we grow up…So, in the African context, culture, that is some form of education. Some form of education.

Survey responses were strikingly similar to interview responses. Half of those who participated in surveys used the phrases "way of life" or "behavioral patterns" or "lifestyle" as they discussed their ideas about culture. Further, twelve additional surveys spoke of culture as a form of identity, as a way of distinguishing one group from another. The specific examples participants gave to illustrate their ideas were nearly uniform: language, dress, food, dance.

Aside from their actual articulations of meanings for culture, most interviewees also expressed, either directly in words or indirectly through long pauses, difficulties in attempting to define culture. This indicates to me that these participants tried to make sense of the question of what culture is and they acknowledged articulation of their thoughts as a difficult endeavor. Mark expressed these ideas when asked what culture is:

> [Long pause.] It's somehow difficult to really define it. You know, there are certain things you know when you see, but to actually give you the precise words, it becomes, ahhh, difficult…Culture here could be, if you look at [pause]. It's a difficult question…yes, because they are terms which you use. You just call culture, culture, culture. But then, all of a sudden, somebody asks you what is culture.

Mark then described gender relations and how, in spite of the fact that females are becoming more empowered, there are those who still insist that men will always be at the top. He described how, in families, the children know growing up that "it's the father

who has the last word…If you go to question why it has to be that way, some will just tell you it is African culture."

Robert also struggled with the question of what culture means but worked through it:

> I am not able to give a definition of culture, but culture is what the people's association is, what are they devising, what brings them together. The common factor. Because, if you talk about the culture of, let's say, the Batibo man. It is what is common to the Batibo people. That is what I will understand by culture.

Seven other interviewees either paused substantially before answering or repeated the word culture several times before answering. The attempt to name culture, to give it meaning, evoked thoughtful, if practical, responses.

Meanings for education and mathematics. Ernest's discussion of education was typical of most other participants: "From my point of view, not based on any dictionary, I happen to look at education to be the acquisition of knowledge, skills—or knowledge to better oneself, first, and [then] one's society." This perspective of education corresponds well with Freire's (1970/2000) description of banking education. In addition to seeing education as transmission or acquisition of knowledge, many participants also felt that, for education to be successful or effective, it must cause observable changes in behavior. The purpose of education, for most participants, was to help a person fit into society wherever he may find himself. Stephen, however, was one exception who spoke of education more critically as a process of "creating some awareness in a society."

Survey responses mainly echoed the mechanistic, technical perspective of education from interviewees. Thirty-three survey responses included the phrases

acquiring, transmitting, imparting, transferring or training in knowledge or skills. However, as in interviews, there were a few exceptions. Two survey responses described education as what was left after all that was learned in school was forgotten. Further, one survey response discussed education as "education for all (liberation from mental slavery)."

When asked about what they think mathematics is, most interviewees considered mathematics from a mechanistic, quantitative standpoint of numbers, figures, and a kind of pervasive science—this view is consistent with their generally modernist perspectives of education and culture. For example, Ray's perspective of mathematics was based in a value for observable progress. He described mathematics as, "The science subject which has to do with figures. Mathematics is helping you how to be able to go about the numerical situations in life." He felt algebra and statistics were important because they were "applicable in every little situation." Most other interviewees also spoke about mathematics as either a science or art (depending on how abstract or applied it was), or a language.

Survey responses also focused on practical applications of mathematics for daily life. Thirty-eight survey responses felt that mathematics should be useful in daily life or to adapt to a changing world; many of them recommended basic, general, or business mathematics for educational study. In both interview and survey responses, there was little value for ideas which were seen as purely abstract and for which there were no immediate applications.

Relationships between Cameroonian teachers' culture and educational situation

To this point, the discussion in this chapter has given space for Cameroonian teachers' ideas about culture and education, specifically, their meanings for culture, education, and mathematics. Participants' responses to the first three guiding questions are presented in this section. I asked participants how they felt about their educational system, whether they felt education in general and their educational system in particular related to culture, and whether and how they felt mathematics related to their culture. Teachers expressed a continuum of opinions about their educational system, ranging from basically satisfied to dissatisfied to so unsatisfied that suggestions for change were offered. Those teachers who felt that their educational situation related well with their culture tended to be more satisfied with their educational system than did teachers who perceived a disconnect between education and their culture. In the realm of mathematics, most teachers discussed informal examples (usually involving counting) related to their cultures but felt that formal schooling needed to be more adapted to local contexts.

Basically satisfied. Ernest felt that an advantage of his educational system was its breadth:

> …Look around at the educational system. It is more or less a broad educational system. From the lower level, you do not specialize in any particular field. You acquire general education, very broad. And that gives you a strong foundation or a good background for further studies because the further now you go, you will discover that you have many ideas that you can easily fit yourself with…[The breadth of the educational system] is an advantage because you will have many opportunities to fit yourself.

This opinion contrasts with others we will hear from later, who feel that space for specialization is important. Many responses, both in interviews and surveys, touched on a tension between broad, general, academic education and practical, technical, specialized education; this tension, common to many sub-Saharan African nations, was discussed in Chapter 2. There seems to be no consensus yet as to how to balance the two foci, or how to create an altogether alternative educational process.

Ray also expressed contentment with his current system and its relationship with his culture:

> [My educational system] is up to date. It is ok…For certain ethnic groups, you find their way of life being a little bit advanced to the way others' it is now. We have, for example, one, a group, we call them Pygmies. The way they reason, it's…still archaic. Well, even…their dressing. You give them modern dresses, they will not appreciate it. They will prefer some other thing. I think it is education that is lacking in such an ethnic group…The environment is rich and they have the resources in their environment. But they need to be educated to be able to exploit the environment in their favor.

Ray's discussion of Pygmies—an indigenous culture surviving still today, in spite of an oil pipeline recently constructed running through their lands—as archaic is a powerful example of the extent of cultural invasion of Westernism. Further, his opinion that the process of modernization includes exploiting natural resources is an example of a pervasive, unquestioned value for material advancement. As much as Ray values advancement, he felt strongly about preserving local languages as a means of preserving cultural identity. At first I thought this was contradictory, but Ray explained that

preservation of local languages will serve more as grounding or context for future generations rather than an intended insulation from Western influence:

> The language is going to serve as our identity, and it should be protected so that the younger generations will come up and see that this is where we passed through and this is where we are now and they will be able to draw a line between the two…[The children] come up to know French and English which are the two official languages of Cameroon. And, as such, the local languages are being pushed, gradually pushed behind…[This is] not just in languages, but ways of life…And let me quickly use the example of dressing. You will find that, from say videos and the like, many Cameroonians now do not dress the way they used to dress. Fashion is changing, it is tilted towards the West. Western culture is domineering in the Cameroonian society….Take for example, those of Cameroonians who studied out there. When they come back, when they return home, they would like to identify much more with the Western than with their local cultures…The [Western] influence is positive. The influence is positive. There is nothing bad about it…It is good. It is good. But you will have to start from somewhere. It is always good to look at references…where you started and where you are going to, you must be able to trace back.

I was intensely surprised to hear such unabashed enthusiasm for Western influence in the educational processes of a newly-independent, postcolonial teacher. Though I was familiar with Freire's (1970/2000) analysis of the process by which invaded, oppressed peoples begin to identify their values with those of the invaders, I was

still shocked by such an affinity with an influence which I had thought was disempowering.

Theo's response was similar to Ray's in that Theo felt his educational system, on the whole, was satisfactory. Theo gave reasons such as the challenging nature of the academic work, and the move away from theoretical and towards practical and "useful" education for his support of his educational system. Further, Theo felt that the educational system in Anglophone Cameroon is gradually evolving from the inherited colonial system because the G.C.E. exam questions are created in Cameroon, and the exam is printed and graded there. Theo further discussed the relationship between culture, education, and interactions with other cultures; he saw education as a way to transform culture:

> We have…our various cultures that may be primitive or whatever. That may be rudimentary. And when you are educated in various ways, and you are able to know other people's ways of reasoning, you adjust your culture to meet up with what, how to interact with the rest of the people. That is how I look at it. Culture and education, you must bring the two, if you are educated on other people's culture and especially your own, to be able to accept the adjustment…I look at it as a realistic approach to the occurrences of daily life. As you meet various types of people, it is not, like one is inferior to the other. You change your culture, if you are changing it, to survive, you can interact better with others. If there is need for positive change or negative change, it could be whatever. It will still be change.

Like Theo, Robert considered his educational system to be strong academically. He felt that his educational system was good, because from what he heard, candidates from Cameroon who go abroad perform well. He also pointed out the high dropout rate at universities and theorized that one reason might be the challenging nature of the studies and courses. He began to gently critique his educational system when he talked about relationships between education and culture:

> I cannot really see the link, because Cameroon is a country with diverse culture. They have different ethnic groups. So I think when they are designing the educational policy—I wouldn't—but there must be a small relation because you cannot actually separate the two. You cannot actually separate a culture from education. There is a relation. But I cannot really point out the relationship between the culture and the educational system…
>
> You see, my ambitions for my culture, or the culture of my people, is that it should be maintained. Because the culture is what identifies somebody to a particular group of people. But, if, the cultures are all changed, after sometime, maybe, everybody now will become one. You will not be able to identify who is from Bali, who is from Batibo, who is from Cameroon, who is from Nigeria, which I will not like.

I asked Robert if he saw education as influencing preservation of cultures. He responded:

> No, it doesn't. It doesn't. It doesn't because, uh, what is taught in Batibo is the same thing that is taught in Yaounde, the same thing which is taught in Douala. So it seems as if, when you bring children together, they tend to maybe merge their cultures or even forget about some and then learn new ones. So education is

> not—it doesn't preserve culture. It doesn't. It can preserve the culture of, let's say, the entire nation, but not of the different ethnic groups. It can preserve some aspects of the culture of the entire nation, because there is something that is common to Cameroonians, for example, which I will call the culture of Cameroon. But to preserve the culture of the different ethnic groups is…possible, but, now that is not what is being done. It is possible, because, in the early days, in Bali, for example, they used to teach in their traditional language. So, children who grow there, or if you went to school in Bali, you must be able to speak the mother tongue. But now that is not the case because everybody speaks English or French.

Robert's strongest criticism of his educational system was its failure to preserve local cultures. In contrast with many interviewees, who value cultural change through education, Robert wanted the various local cultures to be "maintained" and he felt that education is not helping to preserve culture, since similar ideas are taught across Cameroon. Robert thought that when children of different cultures attend school together, their cultures "merge" or perhaps they learn about new cultures, and that affects their original culture. Robert wanted local languages to be preserved, but he had a more insular viewpoint than Ray, who also valued local languages, but more as a background or context for generational development. Robert acknowledged difficulties in trying to educate in a way so as to preserve all of the hundreds of local cultures of Cameroon, but felt it was a worthy and important endeavor, nonetheless.

At the start of the interview, Robert expressed what he valued about his current educational system, but as we talked further he began to point out some of the

disadvantages, as he sees them. This is similar to Tim's response. Tim felt that the generality of his educational system was beneficial because students have the opportunity to learn about "almost everything." Tim began to express some dissatisfaction with his educational system when he pointed out ways it was disconnected from culture.

> I don't think there is any relation… Any relation between our education system and our culture… I [also] don't seem to see any relationship between mathematics and culture…You know that one of the greatest mathematicians used to be from the north, around the Old Egypt empires. Because of their pyramids that they used to build involved a lot of mathematics and those types of things. I think it was really using mathematics in their culture. But, with us, here, I don't think I see any relationship…
>
> Because, when I look at, like the courses offered in our education system, it has nothing to do with our culture. Even the educational system itself, it relies mostly on imported Western ideas. We tend to just take everything from the West without looking at our own cultural set up…The culture we first had from the West was a culture of using the cane. So…at that time, we were used to the cane. And now culture has come, that of not using the cane. So we are just swinging between. So now that we have gone back to that culture of not using the cane, discipline has deteriorated severely. And it's affecting academics, too. So that is an example. If I want to really look specifically at how it is not related to my culture, it looked like at one time, there was a very—there were some seminars, lofty ideas about incorporating some local languages into the curriculum. But, up

to now, nothing. So I don't see any relationship between our education and our culture.

Tim suggested learning about local geography and history, as well as traditional healing and medicinal practices as ways in which education should be related to his culture. His frustration and confusion with different and sometimes contradictory educational practices from the West (to cane or not) is important because, in spite of his annoyance at the situation, he could not give examples of indigenous reform efforts that have influenced classroom practice.

So far, we have heard from five teachers—Ernest, Ray, Theo, Robert, and Tim. Each of them expressed some level of appreciation for their educational system; most of them liked the broad-based curricular nature of their system. However, the last two teachers (Robert and Tim) had concerns about the relationship between culture and education. The next subsection, Dissatisfied, includes three teachers who did not express appreciation for and offered strong critiques of their educational situation, founded on their perception of their culture as disembodied from their educational processes.

Dissatisfied. The three interviewees in this subsection (Ian, Charles, and Stephen) fell closer to the dissatisfied end of the continuum than those in the previous subsection. Ian outlined four points of dissatisfaction with his educational system: lack of access to instructional materials, inconsistent evaluation practices in the G.C.E., lack of support from administration in the field of mathematics, and education that is not situated to the environment and culture. For the purposes of this study, the focus will be his last criticism:

> And the fourth thing, let me not forget this, is that our education is not actually in situated to our culture, our surroundings, our environment, our way of life. Because, if you look at us, for example, let me just take first of all mathematics. So we are talking about two apples plus one mango. Back in the village our children don't know what is an apple. Then it is a problem for us the teachers…Since books come mostly from you, we are talking about apples, those are things around you and you know them and your children know them too well. We should be free to talk about the things we have. For example, if I talk about maize, my children understand maize. If I talk about leaves, they will understand. And so on. I could talk about monkey, they will easily understand what is a monkey. And so on. So those are some of the things, and this is very particular with mathematics. It is hardly associated. And I feel that [there should be] a push from the authorities in place to see that we have time to associate these things and even come out with books that suit our own context…

Ian did acknowledge difficulties in addressing the distance between the system and local cultures; for example, with so many local cultures, it would require enormous material support and infrastructure to exactly tailor educational systems to each culture. His dissatisfaction with the situation was evident, even though practical remedies were not clear to him at that time. His complaint about textbook context and focus is similar to those posed here in the U.S., where two or three states strongly influence textbook content (Apple, 2003).

Charles, another teacher of 6 years but not trained as an educator, also criticized similar educational circumstances as Ian; he mentioned lack of instructional materials and

dissatisfaction with the profession of teaching because teachers are not respected or compensated as Charles feels is suitable. Focusing on education and culture, Charles did feel that education in general helps his culture to improve:

> My grandfather didn't go to school. But I think he had some basic knowledge of education. I remember one time I went to the village to visit him and he said, "My grandson, you are going to school, yeah, but you should know that your going to school is not to come and change what you, me, your grandparents, have done to your society here, but is to come and modify it. Because what you are going to learn is going to improve on your level of thinking. You will no longer be thinking like us. And, so, even if you try to change, you will not change, but you can improve on what we have done."

Even an elder from a village hoped that Western-style education will modify his society. Charles continued:

> So, to me, I think education helps to improve our culture. It helps to see how those aspects of the culture that we were looking at to be poor, can improve on them. Those that maybe we thought they were improved, we can better them. And things like that. So, to me, I think culture and education is a real close link relation…we have what we used to call tribal meetings. If for once, because we have it once a week, if for once a week I don't go there, members are not happy. Because they always say, the way you talk, the way you reason, the way you coordinate your activities, make us feel like we have somebody living with us. So when you are not there, we feel that part of our culture is being tampered with.

> So I actually see that, me, for one, my studies in mathematics have actually led me to reason so many things.

Exposure to Western education has changed the way Charles reasons; he and the people in his culture viewed this as an improvement over traditional ways of reasoning. The last participant in this section, Stephen, like the other teachers in this section, felt that his educational system was "not quite up to the demands of the Cameroonian society." He felt that the educational system should be based on "the Cameroonian reality, that is, what obtains in Cameroon." Stephen, like most interviewees, seemed to think much more needs to be changed to relate their Anglophone system to local realities:

> There should be some relationship between culture and education. But, if I were to look at it on the surface, in the Cameroonian context, one may not really see the relationship. Well, I have looked at, I have studied in Nigeria and I saw it was something different. I saw that in some schools, there were actually schools where the local languages were taught, they had teachers who were of the locality, and they taught things about the way of life of their people, the things that they ought to do and ought not to do in respect of their culture and beliefs and so on. But in Cameroon, it is a bit different, in that there is no emphasis. We do not place a lot of emphasis on the cultural background. It is not done…[Education should be] creating a situation which can tell us [students'] own cultures and those of people around them…

Stephen felt that there are relationships between education and mathematics and culture, but he thought that his educational situation was not based in relationships specific to his own culture. Since Stephen's response corresponds so well to responses

we have heard already, it helps to synthesize what the respondents have said so far—there are perceived areas of disconnect between local culture and their particular educational situation. Many of the same people who believed that education should be contextualized to local cultures also felt that one of the purposes of education was to improve upon aspects of those cultures. Stephen is only differentiated from the respondents in the next section because he did not offer technical education as a specific remedy for this decontextualized educational situation.

Thus far, this section has traveled along a continuum of participant opinions about their educational system, from basically satisfied to dissatisfied. The next subsection, Technical Education, continues along this spectrum. The four respondents we will hear from next (Donald, Paul, Bradley, and Lucas) each not only expressed strong dissatisfaction for their educational system, but further spontaneously discussed their perceived need for more vocational or technical education as a way to make their educational system more responsive to local conditions such as culture and unemployment. Fourteen survey responses also advocated vocational or practical education. These responses go beyond mere criticism to envisioning alternatives.

Technical education. The interviewees in this subsection, like those in the previous subsection, were not happy with their educational system, but they followed this discontent with a suggestion for change—increased access to vocational/technical education. The reader will hear first from Donald, whose critiques of his educational situation are typical of other interviewees: lack of instructional materials, low pay, and lack of support from administration. Donald also discussed another problem, though, that

of his educational system creating people who, upon graduation, have great difficulties finding employment.

> Yes, I think looking at the educational system, what we lack actually, you know, we don't have, we have, actually, our system is in such a way that, I mean, the government has done it in such a way that the policies to educate the child, but then the question What next? is not answered, you know. It's a very big problem. You realize that somebody goes to school maybe and does technology (at least we have some few schools here. They are there). When he comes out, there is just nothing he can do. You find situations, as I was saying, there is one of our colleagues, he did toxicology. The government sponsored him in toxicology. He came back here, there was no way he could work. All he had to do was maybe get out to the primary school and teach. Which means we train people we don't want to use. It's a big problem.

Even though Donald realized that not everyone who has been through even a technical schooling will be able to find a job meeting their expectations, he still saw a need for increased access to technical education to at least partly address the problem of educated unemployed:

> All we need is just some structures. We give the children what they need and they can work on it…Technical education, for example, if you consider that, you know, there are many technical schools. You know, children come back from schools, they can get one or two things to do on their own initiative, not necessarily the government employing them…I'm talking about schools here. Technical schools, equipment…

An interesting point that Donald made, which will be extended in following responses, is the relationship between graduates and the state; many school-leavers have no alternative economically but to look for employment with the government. The private sector in Cameroon nascent compared with that in the West. The value placed on technical education indicates a desire for material development, particularly of private industries.

Another teacher, Paul, felt that his educational system still relies too much "on the curriculum…they had borrowed from the Western world." He believed that if the curriculum were better adapted to the "practical situation" in Cameroon, then it would increase modernization. Paul was confused about why "officials" are not attempting such curricular transformations; he did not consider in what ways those officials might be benefiting from the current situation. For example, Paul mentioned natural resources which are not being used to further development in Cameroon, but he did not see connections between governmental officials who attempt to maintain the status quo and the destination of many of those natural resources—Western European nations. Many in the Cameroonian government benefit personally and financially from Western exploitation of Cameroonian natural resources and are thus reluctant to support educational processes which might empower Cameroonians to act on those natural resources for themselves. Paul did not mention any of these power relations. He was confused about why the situation persists.

However, Paul was clear about the direction he felt his educational system should go, and he gave specific examples which relate this direction to problems in his society like educated unemployed and reliance on governmental work. He also hinted that, in

order to get people interested in practical or vocational education over purely academic education, they will need to see the results in the form of greater access to wealth. Bradley also advocated for technical education, and he discussed the tension between general and specialized education. Recall that most of the teachers who expressed some level of satisfaction with their educational system felt that broad-based education was advantageous to being able to find a place later in life. Bradley, like the other teachers wanting more access to technical education, had a different opinion:

> The problem with the educational system in Cameroon is actually this of specialization. So we could start by bringing up more educational institutions which will go into specializations, not this, uh, broad-based education. [Consider] this northwest, as a whole. There is no university in the northwest. So we need universities like technical universities where a student leaving a secondary school could actually pick up a particular field and go into. Medical institutions. I think that is why the death rates has really increased nowadays…

The last teacher in this section, Lucas, brought up almost identical points as Bradley. He felt that his educational system should focus more on vocational and technical training than general education, because he thought that is "what brings development to a developing country like Cameroon." Technical education, while an alternative to academic education, was not seen by participants as resistance to Western imposition; rather it was a means by which they hope to emulate Western development, and to decrease reliance on government for employment:

> At the national level, you see, the main problem I see in Cameroon is this issue of depending too much, individuals depending too much on the government.

> Because if, like I was trying to call the case of technical development and vocational training. Let me just take in a small village of, say 100 persons. If 90 are education and out of these 90, let's say 80 of them have education in the technical and vocational spheres. It is evident that out of those 80 you may have just about 10 who may want to depend directly on the government. And so the rest would sort of try to self employ themselves. They will be self-reliant. The government will not have too much pressure. Not too much…people would actually try to depend too much on the government. Rather than saying that, what has the government done for me, I think you will be asking yourself what have I contributed for the government. Because you cannot just fold your hands and sit and think that God will send manna from heaven to—So I think that, it all starts from the basis. If there is a good foundation, then there is no doubt that, at the national level, we must strive to hit the target. Yes.

Lucas felt that technical education will help both problems of reliance on too-scarce public jobs and of development. He, like Bradley, was confused about lack of action on the part of governmental administrators to bring about educational changes which he felt will help increase the rate of development in Cameroon:

> We need to develop. We need to develop. How many Cameroonians are illiterate? How many? It is a sad case…The greatest need of our changing times is development. But you cannot develop without first developing yourself.

Again, Lucas did not explore the relationships between those in government and external agents. I discussed in Chapter 2 the immense pressure felt by those sub-Saharan African countries who attempted substantial curricular transformation after

independence. The efforts of these countries were undermined largely by economical situations created by conditions of independence and by constraints that Western nations instituted in the event that the direction of educational change did not suit their interests. Lucas seemed unaware of these hegemonic power relations.

This section has detailed a range of perspectives about the educational situation in Cameroon; most of these perspectives were based on the extent to which teachers felt their culture related with their educational processes. Many of the teachers, in interviews or surveys, expressed dissatisfaction with their educational situation, mainly because it did not relate to local realities or alleviate problems such as educated unemployed. The final section in this chapter is a space for the opinions of the teachers considering what they want for their society and how it might be brought about. Ambitions and goals of Cameroonian teachers are important to understand because these hopes for the future help highlight influences on their perspectives.

Transformational Possibilities

Again, there is a continuum, a range of thoughts about future prospects for the society of these teachers. Some teachers were more optimistic than others, and some were pessimistic almost to the point of fatalism. Several teachers were disgruntled with the political situation in their country and expressed various degrees of faith in various possibilities for change. Most of the teachers brought up the idea of progress or development as one goal for the future of their society. Most teachers thought of development of progress as a process of growth which at least begins with the individual, and includes non-material aspects such as ways of thinking and behaving. Lucas opens

the discussion with his ideas about development and then reasons he thought Cameroon is not developing at the pace it should.

> Development, you have, at the level of an individual, intellectual development. Because, to be able to cope in society, you need, you need the intellect. You need the skills, you need the abilities, without which you cannot cope. And, if you can be developed intellectually, if your intellectual development is up to a certain standard, you are already quite sure that, even on your own, you can think critically. You can think positively on how you can change yourself, on how you can strive to achieve goals that will make you comfortable in life. And if every individual is having a certain standard of these skills, then the whole community, the entire community would also be developing in that respect.

Lucas considered the effect of debt and dependence on future prospects for development:

> Cameroon, as of now, is one of the most heavily indebted countries…Why is Cameroon heavily indebted when the resources are there? Why? If people can try to sit and try to reflect and ask themselves, " We have these potentials. Can we not develop them? If these potentials are developed, are we not going to strike a positive balance and also [come up] to measure, in terms of output, be it intellectual, industrial, or—Why should we continue to depend and we cannot also strive to see how we can produce our own needs? Why must I depend on goods produced in America only? Why can I not try to find out the technological know-how and see…I have the resources, by the way, the raw materials are here.

> They are carried from here. Then why can I now not also try to see if I can acquire that knowledge and try to strike that positive balance?"

Lucas' explanation of Cameroonian's indebted and dependent situation focused on individual will:

> The potentials are there but I think the will is not there. The will is not. Yeah…I decided to formulate a formula that development should be equals to the human resources plus the manpower, all in brackets, times the will. [development = (human resources + manpower) * will] The will is a piece—is a coefficient of the entire function. If the will is not there, no matter the potentials that are there, no matter the resources, you cannot strike, you cannot achieve your target. So I think the first thing is to have the will. Where there is a will, there is a way…

Lucas believed that will is a necessary and sufficient condition for progress or development. He was optimistic that if one just has the will, then there will be a way. This is analogous to those in the U.S. who feel that disadvantaged populations can pull themselves up by their bootstraps. There was no acknowledgement or questioning of power relations which might be acting on broad scales to attempt to perpetuate Cameroon's situation. There was no questioning of who benefits, both inside and outside Cameroon, from the status quo.

Ernest shared Lucas' optimistic outlook; he believed that evolution will occur with or without external influences. He felt that materials cast out from western nations will help Cameroon in its development process, and he hoped that Cameroon will not forever remain more of a consumer than a producer.

> I want to believe that, I am somebody who believes a lot in evolution. And I want to believe that things in the future will change. Because, even if education or westernization was not introduced, then culturally, culture itself will one day evolve to a certain, it will evolve itself. Yes, it will evolve itself. Yes. Without any external influence, I want to believe it will one day evolve itself…And I want to believe, I believe that most of the obsolete…material that western societies used to develop will all be shipped to this our own rural sectors now and probably will lead us to help in one way or the other to develop our own society or ease its industrialization process…

In contrast to Lucas, who wanted to decrease material dependence on the West, Ernest actually hoped that the West will send its "obsolete material" that was used for its own development. At this point, I asked Ernest whether he thought natural resources were abundant enough or not to support the type of industrial development he is talking about. Again, his answer was optimistic:

> Yes, it is true, the fast disappearance of natural resources is a limit to industrialization, but, as I said, industrialization has no limit. Because, when, I already told you about evolution, that things evolve. They change from one form to another yet they are not exhausted…For example, at one time, probably this field was used as surely for grazing ground. In the days of our great-great grandparents, this field was used for grazing ground. Later on the land was transformed from grazing ground to a primary school. And then, from a primary school to secondary school now. Maybe tomorrow it will evolve from a secondary school to a high school and maybe a university. A university ground. I

> don't know what will come next. Maybe a war will come and transform it into a bare ground, where some other children will come up and start using it, maybe, you don't know the materials, the minerals that are beneath it. We don't know whatever resources.
>
> Because we are only looking at the superficial natural resources. We are not looking at those beneath. So that is why as I said…the disappearance of the immediate natural resources that we are able to see is a handicap in the sense that we fall short of them, but we equally need knowledge, we need education to discover the ones which we are not able to discover today. Because I only believe those things we call natural resources today are, they are those that we have generally accepted to be the best. But maybe tomorrow they will not be the best. Other people will discover the best. And I don't see any limitations…insofar as education as at the forefront to help this discovery.

Ernest realized that the future cannot be predicted and he was comfortable with that; what we consider important natural resources today might not be important resources for future generations. His view opens spaces for hopeful scenarios for transformation that more pessimistic mindsets, such as my own, do not permit. Ernest also expressed faith that education can help bring about changes which we cannot foresee today. Mark shared Ernest's belief that education is related to development, but Mark saw something lacking in people's education, and this hinders progress. Mark is also a good transition along the spectrum from optimism about the future to a much more dismal perspective. Mark was not exactly filled with hope, but he would not let himself lose hope entirely:

> To talk of ambitions, now, at the moment…having ambitions now is a frustrating thing. Because you will soon see that maybe nothing will be fulfilled. But whatever the case, you must have hope. Because to live without hope, I mean, it's suicidal. [Laughs.] So you still dream…something may just happen. And then you think of the society in Cameroon will change and then children coming out of the university will have their jobs. But if I have any wish, if there is one wish I have, it's that we should have a change. In the government. Because the government determines a lot in any society…Even if the changes are for worse, I just want that change. Because from worse things, good things come.

Mark's point about desiring change, no matter the direction of change, is also present in several other interviewees' responses. Many of the teachers in this study seemed to dread stagnancy even more than they might dread change for the "worse." Mark then went on to illustrate why he thought something was lacking in education and in the society, something that hinders transformational potential.

> Something is lacking there [in education]. Which means that there is a problem, again, in the education…Now, I for one, I studied out of the country. But there is something which I discovered. If you have a friend out there [in Britain], the friend is very reliable, the person will never want to tell you a lie…There, people have reached a certain—they have reached a certain level which I actually envy. But, now, you come here, you are trying now to stay, too, at that level, you find yourself being in trouble with so many people…Nobody trusts you. Whatever you do, you are always kept right at the background. In every thing. Because the society in which you are, is that culture of dishonesty.

> And that culture of dishonesty, it destroys every other thing. So that is why…whatever knowledge you acquire, it will not help you to build a society, but to destroy it. Because you go to a bank, you are only looking for ways to enrich yourself. Maybe…you have a master's in education…That is a good person to be appointed as administrator. You have been taught all the skills. How to manage the place. But because that thing is lacking, you come and become a tyrant. You endanger minds. So, again, something must be, you see, lacking. [Pause] So if there's any emphasis, really any emphasis, the culture of dishonesty, if our education can get rid of it…it will be solved. Even those who are right at the heart of it…But you see they are still there, doing it. So it's a problem.

Mark saw a problem with honesty in his society and used Western society as an example of a standard of honesty for which his people should strive. Another teacher, Tim, also talked about problems of corruption and honesty in Cameroon, and he also mentioned the West as a possible model of greater honesty, but he did not share Mark's faith in education as a way to alleviate the problem. Indeed, Tim pointed out that most of those who are corrupt have had good education:

> I know that, even in our African culture, corruption has gone inside…So, you see, corruption is everywhere. It has gone everywhere. I'm sure that children to be born in this country 50 years from today have already been corrupted. We really need to, if at all the West is not corrupt, we need to borrow it from them…
>
> It is unfortunate that most of those people who are corrupted, who are corrupt, are people who had sound moral education. It is unfortunate…corruption is a vicious circle. Education, per se, should be related to the corruption it does. You see, the

> common man is hardly corrupted. Corruption is mostly at the higher level. You know, they call themselves senior citizens. They are mostly those who are corrupted. And by the corrupt means, their children benefit from better training, by the time they are going on retirement, one or two things, their children are coming to replace them. So, you see that there is that circle—that circle needs to be broken. I don't know how. By, by God. By African magic.

These Cameroonian teachers looked to the West for examples of honesty and less corruption. These particular teachers did not mention ways in which the West helped to establish and maintain corrupt practices in former colonies. Further, Tim explicitly stated that corruption has gone "inside" his culture but did not see the West as having perpetuated this invasion. I do not think most of the interviewees shared my perspective of the West, and the U.S. in particular, as a force whose first priority is to protect, sustain, and enlarge its capitalist interests at whatever expense and by whatever means necessary. My views of my own country are pessimistic, perhaps overly so, and Bradley shared this sense of pessimism as far as the prospects of his own society were concerned:

> The hope for the future of my country, I see the country, the future being very, very bleak, especially politically. Because everything seems to be coming to a standstill. It's not really changing. The same people in power, every day, every day. So it makes the future very, very, especially for a young, aspiring person like me. I don't really see, unless when nature will take its course.

Bradley's sense of the stagnancy of his situation seemed to be very depressing to him. Bradley offered no elaboration on possible means of political or other change; he was

resigned to whatever nature has in store. Ian also saw what he calls "evils" in his society and turned not to fatalism but to Christianity, an inherited religion:

> Our society is getting out of hand…But I also think that what I would like for this society is when I see them get the fear of God. Because, I have another thing in me. I believe that, any society that fears God, that society is going to progress, and is going to grow well, and things will move well with them. Because they will have a uniform way of thinking, they will have a way of thinking, and that is going to reduce evil, and as much as evil is reduced in any society, there is bound to be progress. So, generally, what is holding our society back is evil. But if that fear of the Lord is there, then the society will change forward. That is the way I look at our society, and I pray that one day it should change…

The last four interviewees (Charles, Paul, Donald, and Stephen) were each fairly pessimistic about future prospects for their society, and each saw political leaders and their corruption as prime hindrances to Cameroon's progress. Charles felt that no amount of outside help can "better" the situation of Cameroonians. He said that Cameroon is "rich" enough to "handle" its own problems—which he stated are primarily corruption and self-centeredness. Though he acknowledged that the corrupt people at the top are "well-educated", Charles also felt that there is no future for Cameroonians if everybody continues to reason at their current level of reasoning. He felt that if the "masses" are educated, they will be less susceptible to manipulation from those in more powerful positions.

Paul offered another reason that education might empower Cameroonians oppressed by corruption—to help remove those corrupt leaders from their positions. Paul

thought that if more people were educated, they would be more able to see that they could also do at least as good a job as those currently in more powerful situations:

> I feel that, uh, my society is still needs to be politically developed, and a lot of learning will help in that, because if you have a political leader who is the only learned, then the person will remain. Because nobody will see that he or her can equally be there and can still run it well. So that education is necessary because if they are learned, they can talk well and also feel that they can occupy that position and do it well too…

Paul also felt that those in government do not generally have national interests at heart; they are more concerned with personal gain than with what might help Cameroonian society as a whole. His point is, "I feel that our government is a kind of just doing a kind of greedy politics. They are doing something just for themselves and their family."

Donald expressed the opinion shared by many interviewees that the actions of leaders influence the lack of opportunity that educated people in Cameroon face:

> As of now, I think it's a bad situation, because many of those who have gone to school, they are on the streets. And doing nothing. And those of them who have the opportunity, they go out. That means a kind of brain draining. There are many of them going out. And so it doesn't help the country as such. I know of people who have had scholarships, they have studied abroad, they have come back here, there is no job. They get back [abroad]. And so you begin to doubt the educational policies. I think it depends mainly on the leaders…
>
> I think the problems will be resolved but not in the immediate future. Africa has it's own problems. It's going to be resolved but not in the immediate future.

> [Pause] And as I said, it's actually the policy of the government, of the policy makers, of the decision makers, frankly speaking, there are giant projects which they carry on which are not really necessary… they don't kind of prioritize their projects.

The last discussion is from Stephen, who expressed his belief, like several others, that Cameroon has enough resources of her own to develop. He began with local examples where progress is needed and then talked about the role of leaders:

> For my society, I maybe I start by, I start with the village. Like, in my village, there are a lot of basic amenities people can not have, they do not have like water, electricity. You still find people drinking water that is not potable, you still have people going about with kerosene lamps and so on. If electricity were made available at this level, it would be quite good. And then, uh, medically, you find that it is impossible for people to [visit doctors] because of lack of money for medical bills…
>
> Those in force are not the best and the way things are done, people, those in government take funds which are meant for the public and go unpunished—people up there, they like to [take advantage of] of the less fortunate ones. Cameroon is one of the few African states where ministers, those in government offices, can afford so many cars, buy a car for their girlfriends…
>
> I think that Cameroon has a very small population, and we are endowed with a lot of natural resources. There are quite many, but for the way the leaders, the politicians spread their abuse, they easily can connive with [others] to siphon resources out of the country to the detriment of the indigents themselves. Like

> what is happening with the forest zone. A lot of timber is exploited, but the people cannot have a good wood. The corporations that do the exploitation are from abroad. Yeah, they carry the timber away and they manufacture a few things for us to buy, these things at cutthroat prices. So it seems the government hasn't got some good regulatory methods so that the environment from which these things are harvested could be benefited in some way…

Stephen was the only teacher who so explicitly discussed ways in which other countries influence Cameroonian leaders for the benefit of those abroad and of those few Cameroonians in "fortunate" positions. Stephen realized that those involved in such exploitation are well-educated and knowledgeable; he shared Paul's observation that such people protect their own personal interests more than they value societal interests:

> Most of the people who do some of these things, it is not as if they are uneducated. They are highly educated. But they simply refuse to apply what they know is right. They simply don't want to. They are so self-centered that they think of self first and they care less about the rest of the people. But the more educated people become, I think, the more people could stand up to maybe fight for their rights…You need to be educated to know that…you have the right to exist like he himself has, then someway, sometime, somehow, people will stand up and say, "Look, this must stop." Education can help people to become aware…to become aware of their rights.

This chapter presented interview responses from Cameroonian teachers about their meanings for culture, education, mathematics, and development, and how these are related. Most teachers view culture, education, and mathematics from a more technical

and modernist perspective than a critical, relational perspective. Interviewees ranged from fairly satisfied with their educational system, to dissatisfied with their system, to being so dissatisfied that they offered increased access to technical education as a way to improve their system. Teachers also discussed what they wanted for their society in the future, and expressed varying degrees of optimism in their society's ability to bring about transformation in the direction of development.

The last guiding research question for this study asks what factors influence these participants' perspectives. Strikingly absent from almost each teacher's discussion was an acknowledgement of Western constraints acting on broad scales to perpetuate Cameroon's situation of being oppressed within hegemonic structures. For instance, there was no mention of the Western resistance that would be faced if Cameroonians actually tried to act in their interests by, say, attempting to utilize their own natural resources. It seems to me that lack of information, or an incomplete awareness of power relations, influences what the teachers in this study consider possible and practical. The next chapter relates the findings from this chapter to the overarching, influencing structures of Westernism and modernism.

Chapter 6

Making Sense: Modernity and Westernism

The purpose of this study was to better understand how Cameroonian teachers perceived their educational situation, and what relationships, if any, they saw among their educational situation, their culture, and the mathematics they teach. Since Cameroon was colonized for approximately a century and only gained independence within the last forty years, this study also sought to make sense of the relationships between continuing Western influence and participants' perspectives. I had expected, given the situation of Cameroonian cultures having been forcefully separated from their own ways of making sense and knowing, to hear some significant distinctions between the way they perceived culture and education and the way culture and education are thought of in the West.

Having listened to the voices of the interviewees, however, it struck me that many of their responses were similar to those I might have heard anywhere else. Definitions of culture as, generally, the way of life of a people and education as the process of acquiring skills we will need to succeed in life are common. My own high school students here in the United States responded in a like manner to the question of the purpose of education. Further, it seemed to me that the proportion of people anywhere who are completely satisfied with their educational systems is likely small. Even the suggestion offered by some participants of increased access to vocational/technical education or specialization is one which people in the West are familiar with. To this point, responses in this particular study are neither surprising nor novel. Then the question becomes why the ideas of the teachers in this study were not as distinct as I had anticipated.

The last level of analysis of ethnographic data, according to LeCompte and Schensul (1999) is a structural analysis which consists of relationships among the data patterns and helps to give an overall portrayal of a culture or explains cultural phenomena. Again, the structures one perceives depends on the perspective of the researcher. The central theoretical structure for the patterns in this study, from my view, is cultural invasion (Freire, 1970/2000). Two particular ways in which this hegemonic process has influenced the participants in this study are through their perspectives of modernity and Westernism.

Modernity

This section begins with a summary of teacher's perspectives about modernism and its relationship to their culture. Though I did not specifically ask about either Westernism or modernism, these topics spontaneously arose during most of our conversations and in many of the surveys as well. Ways of making sense of these perspectives, through analyses of power relations, are then discussed.

Culture and modernization. Most teachers in this study expressed a desire for modernization, and they discussed ways in which this kind of development might affect their culture. For instance, Ernest gave environmental examples such as road and housing infrastructure, and the disappearance of natural resources like trees, animals, and water, to illustrate ways in which modernization has helped his culture and his education to adapt to changing material conditions. Ernest hinted at the irony of modernization's role in creating both problematic situations as well as possibilities for resolving these situations. For example, he attributed amenities like running water and electricity to difficulties arising from disappearance of water sources such as rivers and springs; he

pointed out that some of the springs people were accustomed to using as their source of water have been paved over by roads. Increasing and better road infrastructure is part of the process of modernization, which affects the way local people live their daily lives (for example, how far they must walk to have access to water sources), which helps create demand for further modern conveniences—running water and electricity.

Ernest continued this conversation with a discussion of why the process of development has been asymmetric:

> We want to believe that, the limited knowledge we have at this level, we are all at your disposal. But I am not in any way saying that we are your disposal to always come and extract knowledge, no. We are at your disposal for any exchange of knowledge. And I find it very impressed…to discover somebody who leaves…from the United States coming out to do this research in [Cameroon]. Yes, it just goes a long way to show that, truly the world is fast becoming a global village.
>
> And I have the optimism, I am very, very optimistic that surely one day, God willing, one will also find himself or herself somewhere in the other continent to also come out and research. But we have committed no crime. It is just the evolution of the continents itself that separated us. It is the evolution of the continent itself that separated us. And knowledge must always begin somewhere, I think…or education must start somewhere and disseminate somewhere. So I want to believe that the ladder of success is not crowded at the top. I want to believe that is just an opening or a fronter, and one day, things will go well.

Several of Ernest's points are intriguing. First, he explicitly stated his resistance to being exploited for my benefit; he was excited about this research project, provided that the knowledge emerging from it was not a one-way street. Second, he felt that Cameroonians are somehow disadvantaged because, for example, they have fewer opportunities to travel to do such studies. He attributed this imbalance in situations wholly to environmental causes; there was no questioning of the process of modernization itself or of Western influences on the imbalance.

Like Ernest, Paul also talked about wanting society to move ahead. Paul saw development as a process in which education and infrastructure move ahead and people's ways of thinking grow. He also talked about a "gap" between the West and Cameroon, in which Cameroon is disadvantaged, and Paul mentioned factors like cultural, political, and financial "barriers" that might be slowing Cameroon's rate of development. Paul thought a solution to the slow pace of development might be a more national and less tribalistic cultural perspective:

> Because, to me, I feel that, another way of maybe bringing [our] cultures to a unilateral situation will be that we should gradually, gradually, bring in the Western culture and suppress these ones gradually. Because there are some of these our cultures, they want to stick on it so much. And when you stick on it, you don't want to see the other side of the equation. You don't want to see anything good from the other culture, from the other people. So if the whole Cameroon were to have one culture, we don't have any tribal barriers and so on, it will speed up our development. But with this problem, it will be very difficult to get closer to America. You see that America, they have a single culture

throughout. They have one language throughout. So—I don't think that we have a place in the world where we have as large land space as America with one political leader. They are unique. So, with that, it makes them to develop fast. But with the other places, it is very difficult. But they will keep on. They will keep on. They will keep on. But it will take some time.

Paul's desire to develop the way America has was so strong that he advocated suppression of tribal cultures in Cameroon. How is it that this Cameroonian teacher has reached the point of being willing to sacrifice rich and diverse ways of knowing in a quest to catch up with the west—a quest whose success is constrained and limited by the very cultures Paul is trying to emulate? The process of cultural invasion seems to have been so extensive that Paul wanted to stop the process of constructing various indigenous Cameroonian cultures in favor of production of the West (Freire, 1970/2000).

Paul's inclination for complete suppression of diverse cultures was a minority view among the teachers in this study, though. The consensus was that education did "erode" (in Donald's words) or transform culture, but interviewees were generally optimistic that the best or most important aspects of their culture would survive. Indeed, Stephen felt that, though his culture has been "suffering" because the process of education tends to relegate some aspects of culture to the "background", this very education will help people to realize which aspects of culture are most important so they can be preserved. He did not consider that education through Western hegemonic processes might influence what one defines and values as important cultural aspects, so that those aspects more beneficial to Western interests might be differentially preferred even by non-Westerners.

Tim succinctly expressed the general opinion from the teachers:

> We need to develop also. But, in as much as we have to develop, it should not be at the expense of some of our basic aspects in our culture. So we have to develop while preserving our culture.

I was surprised, not merely by their mechanistic, modernist way of thinking about culture, but by the optimism most interviewees expressed that development would not result in the complete annihilation of their culture. Many participants, in surveys and interviews, expressed the opinion that, with more widespread education, people would be more cognizant of both development and culture and this would allow the one to progress at only the partial expense of the other. There was no expression of the possibility that culture might be an emergent property of local conditions and people, and that this emergence might be transformed when material conditions were changed. When asked to contemplate possible consequences of modernization on their culture, the participants responded by expressing an optimism that the good aspects of their culture would remain and the bad aspects would be changed, like a machine in which broken parts can be replaced (my metaphor). Teachers seemed not to consider that properties of culture, like other living systems or organisms, "are properties of the whole, which none of the parts have. They arise from the interactions and relationships among the parts" (Capra, 1996, p. 29). The teachers' optimistic view that at least the vital aspects of their culture can be preserved while their society develops in the Western sense helps reinforce hegemony since the process of modernization itself is seen as an unquestioned, unproblematicized good.

Making sense of the influence of modernism. A starting point for understanding the influences of modernism on the perspectives of the teachers in this study is Freire's (1970/2000) discussion of development in culturally invaded peoples. Invaded cultures develop an emotional dependence upon the invading societies; the invaded no longer have authority and cannot make decisions regarding their actions. Since development in the Freirean (1970/2000) sense requires "a movement of search and creativity having its seat of decision in the searcher [and] that this movement occur not only in space, but in the existential time of the conscious searcher" (p. 161), socio-economic development is impossible in an invaded society. Invaded societies can undergo modernization, which is almost always induced and which ultimately benefits the invader society, but modernization without development continues dependence on the outside society. Teachers in this study, while expressing high value for modernity (e.g., the general desires for amenities and industrialization), did not articulate power relations affecting their autonomy and, thus, their potential for development.

Others, however, have discussed ways in which power relations can be analyzed. Indeed, Foucault (1982) believes that analysis and questioning of power relations is incumbent upon members of societies, and that this task is an ongoing process with no fixed end. Foucault (1982) raises five points which need to be established in an analysis of power relations:

1. The system of differentiations which permits one to act upon the actions of others: differentiations determined by the law or by traditions of status and privilege; economic differences in the appropriation of riches and goods, shifts in the processes of production, linguistic or cultural

differences, differences in know-how and competence, and so forth. Every relationship of power puts into operation differentiations which are at the same time its conditions and its results.

2. The types of objectives pursued by those who act upon the actions of others: the maintenance of privileges, the accumulation of profits…
3. The means of bringing power relations into being: according to whether power is exercised by the threat of arms, by the effects of the word, by means of economic disparities…
4. Forms of institutionalization…they can…take the form of an apparatus closed in upon itself, with its specific loci, its own regulations, its hierarchical structures which are carefully defined, a relative autonomy in its functioning (such as scholastic or military institutions)…
5. The degrees of rationalization…The exercise of power is not a naked fact, an institutional right, nor is it a structure which holds out or is smashed: it is elaborated, transformed, organized; it endows itself with processes which are more or less adjusted to the situation. (p. 223-224)

Since Foucault was primarily concerned with Western European power relations (Foucault, 1982), I want to bring in the perspective of one who was concerned with the African situation in particular—Rodney, who was a Guyanese scholar writing about a decade before Foucault wrote the works I referred to above. Rodney's (1972) analysis of power relations between Western capitalist nations and Africa serves as an exemplification of Foucault's five points of analysis. Rodney's focus is development and economic structures.

Rodney (1972) seeks to understand the relationships that are created within a social group because he sees such relationships as crucial to understanding the society as a whole. Looking at social groups, then, according to Rodney (1972), "[d]evelopment implies an increasing capacity to regulate both internal and external relationships" (p. 3). A more developed social group would have greater means of influencing and transforming relationships both within members of the group and between other social groups; among these relationships are power relations. Perhaps, linking Rodney's view of development to Foucault's view of power, development could be thought of as a kind of meta-power relation; development could be a mode of action that acts upon other actions, including power relations. In other words, it seems to me that one way of making sense of development is to think of it as the extent of one's or one's group's agency to influence relationships; it is the power to influence power relations, among others.

Rodney (1972) notes that, historically, development across the globe has been consistently unequal; he attributes this inequality of development to the different environments in which humans evolved and to the different social relations, governments, behaviors, and belief systems that humans created. When societies at distinct levels of development interact for prolonged periods of time, two processes occur: First, the weaker of the societies (those with less developed economic capacity) will be adversely affected, and the larger the difference in development levels, the more detrimental the interactions are for the weaker. Secondly, if the weaker of the societies survives, then the only way it can resume its independent development is if it evolves to a higher level than the economy which had dominated it (Rodney, 1972). Further, the gap,

measured in terms of per capita income, between developed and underdeveloped countries, is not only large, but increasing.

> I found the term 'underdeveloped' problematic until Rodney (1972) clarified:
>
> All of the countries named as "underdeveloped" in the world are exploited by others; and the underdevelopment with which the world is now preoccupied is a product of capitalist, imperialist, and colonialist exploitation…
>
> In some quarters, it has often been thought wise to substitute the term "developing" for "underdeveloped." One of the reasons for doing so is to avoid any unpleasantness which may be attached to the second term, which might be interpreted as meaning underdeveloped mentally, physically, morally, or in any other respect. Actually, if "underdevelopment" were related to anything other than comparing economies, then the most underdeveloped country in the world would be the U.S.A., which practices external oppression on a massive scale, while internally there is a blend of exploitation, brutality, and psychiatric disorder. However, on the economic level, it is best to remain with the word "underdeveloped" rather than "developing," because the latter creates the impression that all the countries of Africa, Asia, and Latin America are escaping from a state of economic backwardness relative to the industrial nations of the world, and that they are emancipating themselves from the relationship of exploitation. That is certainly not true, and many underdeveloped countries in Africa and elsewhere are becoming more underdeveloped in comparison with the world's great powers…

As Rodney (1972) distinguishes between developed and underdeveloped countries, and as he analyzes factors involved in the perpetuation of inequitable economic situations, his points relate closely to many of those the reader has heard earlier from the Cameroonian teachers. For example, many interviewees asserted that part of what it means for Cameroon to develop is that it must transition from being primarily a consumer to also a producer. Tim is one of several teachers who spoke about this situation:

> We have to…we need not only to be at the consuming end. We need to train people that they can invent, train designers, we need, yeah, we need production also.

Rodney (1972) argues that, while degree of industrialization is a common indicator of development extent, it is also the case that developed countries have agricultural systems that are much more advanced than those in underdeveloped countries—indeed, agriculture in developed countries has become an industry in itself. This supports what the teachers in this study were saying about being on the consuming end and not being significant producers. Because of their more advanced industrial and agricultural economies, developed countries produce many more goods than underdeveloped nations, both in luxuries and necessities (Rodney, 1972).

Another quality of underdeveloped countries which some of the Cameroonian teachers spoke about at length is the focus of the economy. Many teachers pointed out the situation that school leavers rely too heavily on the government for employment, and many pointed out the corruption in political circles. Further, several interviewees said that the government's budget priorities were wrong and that the government wasted money on projects which would not benefit the public as much as other projects might

have. Rodney's (1972) analysis aligns with these teachers' observations. According to Rodney:

> It is typical of underdeveloped economies that they do not (or are not allowed to) concentrate on those sectors of the economy which in turn will generate growth and raise production to a new level altogether, and there are very few ties between one sector and another so that (say) agriculture and industry could react beneficially on each other…It has [also] been noted with irony that the principal "industry" of many underdeveloped countries is administration…In describing a typical underdeveloped economy it is essential to point out the high disproportion of the locally distributed wealth that goes into the pockets of a privileged few. (p. 19)

The Cameroonian teachers in this study spoke of another aspect of underdevelopment; supply and use of natural resources. When I heard many interviewees expressing their sense that Cameroon has plenty of resources, some yet untapped, to support its people, I was skeptical. I questioned the feasibility of Cameroonians being able to use such resources for their own benefit. When interviewees talked about having access to those resources, they primarily spoke of needing the technicians and the skills to be able to process the resources in Cameroon so that the goods would be produced there and remain there. What I did not hear was any mention of Western forces at work to keep the supply of rich natural resources flowing from Cameroon to the West and with what powerful relations those Western countries might act to resist transformation of that supply.

Rodney's (1972) analysis includes accounts of constraining forces which disempower underdeveloped nations from acting in their own interests. The teachers in this study generally agree with Rodney that African countries in general have not even come close to maximizing the utilization of their natural resources, and that the wealth generated from the natural resources which are being tapped is largely not retained within Africa for the benefit of Africans. Contrasting with the participants in this study, though, Rodney (1972) is primarily focused on detailing ways in which such exploitive relationships are perpetuated. In brief, some of these means include inequitable trade relations (in which prices for agricultural products, manufactured goods, and freight rates are set by developed countries), foreign investment (in the form of foreign-owned land, mines, factories, etc…and also in the form of loans to African governments), structural dependence (including ways in which African economies are subsumed into the very fabric of developed capitalist economies), and religion and education (institutions which imposed the culture and values of the developed countries).

What is perhaps most striking about the power relations between the West and underdeveloped countries is that, hearing from Rodney (1972) again,

> It is the technologically advanced metropoles who can decide when to end their dependence on the colonies in a particular sphere…It is for this reason that a formerly colonized nation has no hope of developing until it breaks effectively with the vicious circle of dependence and exploitation which characterizes imperialism. (p. 26)

It seems to me that the teachers in this study were not aware of the numerous hegemonic power relations involved in their continuing dependence on the West. They seemed to

think that, if they just had the training or skills, they would be able to have more control over their own resources. They did not articulate external reasons why such training and skills might not be forthcoming; they seemed to be unaware of the extent to which the West values the current asymmetrical relationships and the extent to which the West will act to ensure the stability of such power relations.

Rodney (1972) addresses at least the five analysis points that Foucault (1982) saw as essential to an analysis of power relations. The situation in Cameroon would not be expected to differ fundamentally from that of other underdeveloped nations, and I do not think it does. What is interesting, based on the findings from the interviews, is the degree of rationalization. The question of why the participants in this study seemed not to think of the possibility of power relations which influence the extent of the domains of potential action, I think, is related to the ways in which such power relations are rationalized. Indeed, it seems to me that the average American is also largely (and purposefully) unaware of the extent to which and processes by which other countries' natural resources are siphoned to the U.S. for our benefit to the detriment of those societies. The rationalization is at least two-way, then—somehow Cameroonians are able to convince themselves that tinkering with their educational system and having honest political leaders are the main factors necessary for development (in the holistic, Freirean sense). Simultaneously, we Americans are able to justify (rationalize) our expenditures at Wal-Mart and other shops because we tell ourselves that at least those so-called exploited people in Mexico or wherever have jobs.

Rationalization is also present in Western-generated reform and development efforts which are not as problematicized as they might be. An example from this study which is discussed in the next section is the German DED teacher training program.

Westernism

This section begins with excerpts of participant responses which illustrate privilege for the West as a model economically and educationally. Ways in which the German DED training program impacted teachers' philosophies and practices is then analyzed.

Valuing of Westernism. Ernest starts this discussion with his description of traditional (precolonial) education:

> And with us, specifically, keeping aside Western education that has come to maybe open the eyes, our eyes, or remove something like the cobwebs in traditional education or cultural education, our parents, our forefathers had it in mind that when the child is growing up and you teach the child farming skills, hunting skills, fishing skills, that was surely some of those activities that they were opportuned to find themselves carrying out relative to the environment in which they found themselves. And they considered that to be their own education or culture. And then there were certain practices that they could also practice, certain beliefs that they believed in which was culture and another form of educating their own children. Yes.

What I found striking in Ernest's response was his perspective of Western involvement in educational processes. In light of the close links he saw between education and culture, I had not expected to hear appreciation for Western education and characterization of

precolonial education as "cobwebs." I struggle to understand what it means when a Cameroonian characterizes his native education in such a negative way and Western influences so positively. Ernest specified why he felt westernization has been a helpful influence on his culture:

> With westernization…education has been facilitated. Because eyes have been opened. And these same forms of cultural education now have been modernized. And I think that is the very essence why each and every child sees the need to go to school to widen the brain in order that, if you acquire knowledge, you can now use your knowledge partly to carry out most culture's traditional skills. Or to be able to carry out the cultural form of, say, hunting, farming in a skillful way and in an intelligent way. Catch up or to adapt with your environmental occurrence or situations. Because…I want to believe that, with the changing seasons, I think culture too is also evolving very seriously.

Most participants expressed a value for Western culture; they spoke of wanting to catch up with the West and having the same standard of living. They talked about wanting to close the gap between themselves and the West, and also looked to the West as a role model for cultural values like honesty. While most participants felt that their own culture was valuable in many respects, they also felt that Western influence was positive on their society and that using the West as a model might help their own society to develop more quickly. The extent to which it might be possible or desirable for post-colonial societies to close the development gap with the West has been discussed; what is important here is that (and why) the desire, value, and privilege of Westernism is present. From the context of mathematics education, one reason these Cameroonian teachers

might have valued the West to such an extent is because there were no alternatives; if the teachers were to have training, their only option was the DED.

Western influence on teacher practices. From my experience with mathematics education in Cameroon, and, considering the primarily technical perspectives of mathematics and education expressed in interviews, I had imagined that the teachers in this study would be primarily employing typical Western techniques like lecture and explain/practice procedures (Kamii, 1989; TIMSS, 1995; Wheatley, 1992). I was not aware of the extent of DED In-Service Training, however, and it turns out that the participants generally highly valued what they called child-centered approaches and relating mathematical concepts to local contexts. Fifteen survey respondents mentioned only a child-centered approach to teaching, while an additional eighteen survey respondents used a child-centered approach, among others. However, one survey respondent used a teacher-centered method even though s/he was aware that it was the student-centered method that was "required." Most interviewees pointed out that their teaching strategies varied with students' grade levels and with the mathematical content. Robert specified what he meant by the inductive or child-centered method:

> Most often, I use the inductive method… This one means you let the children, some sort of, discover what you would like to teach them. This one brings in what we call group work… Before you come, you design a task. Now you people work together. Now it is child-centered. It is the child to discover what you want to give the child. You know it quite right but you don't just come, immediately you are pouring [information] in. Design an activity, which the children will work. They work in groups, they will be able to talk, express themselves, argue

among themselves, and then come out with conclusions. They come out with conclusions in their different groups. After that, you…organize a plenary session where they present what they find out. From the different presentations, you can be able now to harmonize and come out with what you wanted them to know. Because now they will recognize it comes but from them, not from you, the teacher. That is what we call the inductive method… Because, when you do it, you know more. When you learn by doing, you know more because you can remember faster.

This type of process is what the teachers meant when they talked about a child-centered or inductive teaching approach. Robert's rationale for using an inductive method, that students remember more or faster or easier, is reiterated in many other responses as well. The goal generally seemed to be improving retention in students, a modern priority. Ernest, however, varied from this value of storing information:

…To us, that is Cameroonians, teaching…it looks like coming from Mr. Know All to somebody who knows nothing. Yes, that is some sort of teaching. But if I were opportune and had the facilities to teach, then probably I would do it in another way. By maybe causing an awareness. I would like to look at it as causing us to have a feeling, an awareness or that feeling and desire to probably move into a particular direction…

That is how I look at it. Yes. And that is why I earlier said mathematics is ideas. Because I have my own idea, you have your own. And you have your own idea about an elephant, with a very long tail, but some other person could have his own idea about an elephant, too, that has a hunch back. Yes, so some of the

> differences. And you harmonize the ideas, you bring the ideas together, and then you compare, and then you see that those other persons who had a different idea about this will probably now start appreciating without someone telling them that this is the correct one, and will take to the one that is more or less the best. And in that way, things are easily learned. And, that way, what the child accepted as gospel truth is no longer the gospel truth at that particular moment, so knowledge has been gained and ideas exchanged.

Ernest's language of creating awareness, questioning accepted truths, and challenging teachers' authority was strikingly different from most of the other respondents. Only Bradley also discussed his practice from a critical perspective:

> I would teach the participatory approach. Allowing these young people to be able to discover things for themselves. Doing those things and actually discovering them. Unlike bringing them up to be secretaries, just sit and take down everything that you say for the gospel truth…And also make your own mistakes…

While Bradley seemed to have more of a discovery than a constructivist perspective (von Glasersfeld, 1995), he did question the traditional relationship of teachers dispensing truths to the unknowing. Neither Ernest's nor Bradley's descriptions of their actual classroom methodologies and activities differed greatly from their colleagues', though, so perhaps particular rationales are irrelevant if they do not result in distinctive classroom practices. If the outcome, or result, or behavior, or process is the same as someone else's, does it matter whether the thinking behind those processes differs?

Understanding instructional strategies the teachers used helps in making sense of the relationship between these methods and their educational perspectives, and the extent to which either might be influenced by external, Western factors. For instance, as I said, I was anticipating more skill-oriented classroom practices than the ones the participants described. The training offered by the DED In-Service seems to have influenced participants' techniques, at least. Further indications of DED influence on practice surface when teachers discuss specific activities they have done with their students in class.

Classroom examples. To illustrate what they meant by student-centered teaching approaches, some teachers gave examples of activities they had done in class. Donald discussed the way in which he tried to give students opportunities to make sense of measurement:

> Most of the time my teaching is student centered. So I give the instructions and the students carry out the task… For example, let's say I'm teaching the metric system…We do some conversions and I ask them to measure some objects, for example, the length of the field. I don't give them the materials. I don't give them the [measuring] tapes…So I just watch and I see what they do. You find some of them using their footsteps, some…get objects and they try to measure. Then when that is done, you bring them to class and they kind of analyze their findings. They realize there are variations…and they try to normalize. How should we make it in such a way so that this length is the same, and they probably come out with something standard. Some could say they use the arm length. But then, you see, the thing is, now you get a student who is smaller in size maybe the

length is not as large as some other's. There is a problem. Finally they come out with a solution.

Lucas gave a different mathematical example of a child-centered activity:

> When I was treating calculations of circumference of a circle…When I came to class, I had my didactic materials, I brought bottles…round cylindrical objects and so on. I came with tapes, measuring tapes and so on. First of all, just the didactic material…captivated them…
>
> So…I explain to them, then I give them sheets, put them in groups, and I give them specific steps, instructions. Cut like this, cut like this, cut like this, join, measure, plot the table, take these ratios, and see what you are coming up to. Within ten minutes the children tell me that the ratio they are come up is almost the same. I say, "Ok. That one, we call pi. Now, try to measure the distance round each of those circular objects, stretch it out…Ok, do that." I say, "Ok, let us now try to see whether there is a relationship with the radius…measure it, and see whether there is a relationship between it, the pi that you had measured, and then try to tell me how can you now get this distance all around a circular object without actually measuring it." And, before long, they tell me. They come out with the formula.

These classroom examples illustrate a value for active student engagement, or what participants called a participatory or child-centered approach. These activities were introduced in DED In-Service training seminars. It seems to me that these teachers were highly concerned about what they are doing and what the students are doing. Their words indicate the extent to which they care about their students, and the willingness of

these teachers to spend untold extra hours with students is further indicative of the teachers' desire for the best for their students. From what I heard, though, it seems that the teachers are more technicians than philosophers or theorists.

For example, it is telling that the educational reforms introduced in this school system have come from Europe, and mainly from Germany. Why is it that these Cameroonian teachers have not created their own avenues for reform? I realize that many of the teachers see their child-centered approach as a way to make education more practical, relevant, and meaningful, but why did it take a German development group providing in-service training to instigate such changes in classroom practice? I believe one possible reason, out of many, is precisely that Cameroonian teachers focus more on being technicians than philosophers. I think the DED In-Service Training perpetuates this focus by omitting philosophical and theoretical perspectives in their seminars. The focus of the seminars is how to teach, what materials to get, new activities to try, and feedback on observed classroom lessons. When I asked the Cameroonian teacher working for the DED which authors and which works they read to better understand the approach they promote, he could not name one.

The educational system in Cameroon, by participants' own examples, is still highly influenced and, to an extent, controlled by the West. From the structure of grade levels, and promotional and GCE exams, to the curricula and instructional methods, Western European forces are evident. The teacher/student relationship has even been defined in some measure by the West. Newly independent teachers, some of which were still Western, relied on heavily disciplinary actions such as caning and manual labor, to establish relationships of authority with students. Recently the trend, coming from

Western educational trainers, has been towards a more nurturing relationship. Meaningless and as groundless as such reforms would be, without the opportunity to think about them, Cameroonian teachers still attempt to keep up with changes because they want to see their students do better in life than they themselves did. Why do they wait, however, for word on which methods "should" be used, when such word is generally out of context and does not usually attempt a discussion of why the methods help students make sense? Why are these Cameroonian teachers apparently dependent on outside sources to help them with their practice? Why do they not have philosophers and theorists?

Privilege. Aside from Western trappings like material wealth, luxuries, and instructional strategies, there are critical privileges which can foster transformation and resistance. For instance, though I am female (and therefore underprivileged in some respects), I am also white and successful in traditional school settings—I have access to luxuries like space to think about education, culture, mathematics, and power. I am composing a dissertation; this is a luxury which will likely help increase my access to privilege. I have opportunities to read philosophers and theorists, and I have freedom to wonder about identity, existence, and knowing. These are luxuries to which the teachers in this study have extremely limited access at best, but which are important to their awareness and their agency to create transformations.

Access to knowledge—whatever one's race or gender—is a crucial, critical privilege since knowledge is so intimately connected with power (Foucault, 1977), empowerment, and awareness (Freire, 1970/2000). The Cameroonian teachers in this study have had relatively few opportunities to dialogue with each other and make sense

of educational and cultural issues outside of the presence of the DED In-Service Training. Spaces in which educators can exchange ideas and opinions are vital to the interests of Cameroonian teachers—not necessarily so they can reach a consensus of their own creation about meanings for education and culture, but so—in the process of hearing and thinking about one's own and others' viewpoints—perspectives, and philosophies, meaningful knowledge and understandings might emerge. Then, educational and cultural transformation of Cameroon by Cameroonians becomes more possible. Cameroonian educators might have greater potential to become autonomous (Kamii, 1989) and their reliance on outside sources for educational innovations might be lessened.

Ways of thinking and sharing ideas could be called discourse (Foucault, 1972). Ninnes and Burnett (2003) illustrate ways in which discourse is related to power:

> Power can be exercised by deploying particular discourses. For example, proclamations made by school principals, multilateral NGO's, or governments about the purposes of education have power because they have the effect of circumscribing the purposes of education. (p. 4)

In this study, the influence of the DED In-Service training program was such that discourse about education was largely defined by German trainers; further, this discourse focused on techniques and neglected teachers' access to potentially empowering educational theories and philosophies. These Cameroonian educators generally lack autonomy to create critical discourse and to affect educational transformation. The original German trainers for the In-Service program debated on how much theory and philosophy to include and decided such knowledge would be useless to the teachers; perhaps these trainers did not fully appreciate the relationships between discourse,

autonomy, and power. It seems to me, from the widespread, almost unquestioned practice of approaches coming from DED trainers, that, at least, the educators in this study did not fully appreciate these relationships. They have not had sense-making space in which to create such understandings and meanings.

Nature of mathematics. Along with Westen influence in the form of DED training, another reason for a lack of autonomy and agency might be the ways in which mathematics is itself generally viewed by the teachers in this study. The Cameroonian teachers in this study largely felt that mathematics was a tool for quantification, calculation, and manipulation—a tool which could be used by almost any field of study. Many teachers thought that practical applications of mathematics could spur industrialization. As Fleener (2002) discusses, a focus on quantifying and controlling nature—what she calls "mathematization of reality"—helped to bring about "the development of modern technologies" (p. 41). However, mathematization of reality has also created a disconnect of humans from nature which is manifest in part by illusions of control over nature.

Further, a logic of domination underlies mathematization of reality; this logic of domination consists of structures and conceptions which serve to perpetuate and rationalize oppression and subordination (Fleener, 2002). Fleener (2002) discusses how the logic of domination has been "detrimental to women and our natural environment"—I would add that it has also been destructive of indigenous cultures (p. 47). Not only has Westernism disconnected many Cameroonian teachers from themselves, but it has also introduced a logic of domination which values exploitation of resources, quantification and prediction of nature, and objectification of reality. The extent to which Cameroonian

teachers exemplify mathematization of reality and a logic of domination could be an indication of the degree of cultural invasion (Freire, 1970/2000).

Not every teacher saw mathematics as manipulation of figures and numbers, as calculation and quantification, however. Ernest's description, for instance, seems to contrast with a notion of mathematics as purely or primarily quantification:

> …The idea of culture in itself is mathematics. Because, to be able to sort out the different cultures and probably those that are prominent in your own area and those that are prominent in other areas, yes, when you now move out of your own society, looking at the whole…at large.
>
> Because…I say they are all embedded because you take the typical example of a baby child. Probably when the child is just conceived in the womb, because…I always believe that when children are conceived in the womb and they are about seven months…they are human beings. Yes, almost at that level. And at that time, the child thinks that the whole world ends in the mother's womb. And probably that is why, when the child is delivered, the child feels that he has been cast out of his own world and the child is probably forced to cry.
>
> (Ernest laughs.) And maybe after crying…well after crying surely the mother will hold and pet. So the child already starts feeling that the whole world ends between itself and the mother's arms. Later on, maybe a closer person like the father comes communicating with the child. You discover that the child only feels that the world ends between the two of them. At one time, it ends between my mother's breast, my father…maybe around the parlor. And, all of a sudden maybe the child will already learn how to creep out of the parlor and outside and

then he will discover that, oh this world does not only end in this parlor. Maybe it ends somewhere around our compound. He is able to identify certain points…maybe there is an area where he always likes to go and play, knowing that that is where the world ends, after that, no the world has ended. There are certain other areas, maybe he can remember that, oh, my mother is always preparing in the kitchen whenever I feel hungry I creep there and get there and she gives me what I want, ok, and then I creep back.

The child already feels that the world ends around, that is already mathematics because that is ideas now that are already coming and are disseminating. At one moment then the child will also learn that, oh, so other people also exist in other compounds. You see, and after that they discover that there are many other villages, there are many other divisions, there are many other provinces, there are many other countries, there are many other continents, there are many other species of people and that is how knowledge is [broadened] from your own little room or womb, which probably was your own culture, to a very broad something else. So all of it is embedded and I find it very interesting.

The way Ernest thinks about mathematics, as making sense of our surroundings, is different from a modernist view of mathematics as a collection of tools for quantification and prediction. To Ernest, culture, mathematics, and education are embedded to such an extent that he rejects compartmentalization. Just by being alive—or perhaps even in prenatal consciousness—we are engaging in culture, thought, education, mathematics. We are engaged in efforts to make sense of ourselves and our worlds. It is

in teachers like Ernest that hope exists for an alternative, more critical and relational, perspective of mathematics and reality.

Concluding Remarks

This section is a reflection on the processes of this study, from data collection to analyses to findings. During the course of this project, I have come to some understandings which help me re-focus my research interests and refine the process of conducting research of this nature. This section discusses questions that arise or remain from this study, possible directions for further research, and potential implications that could be drawn from this study.

One reflection that arises from many of the teachers in this study is the importance of the ideas of government or public teachers who have been educated at a Cameroonian Teacher Training College. Not fully understanding the influential reach of the DED training program, I did not realize how important it might be to make sense of Cameroonian teacher education efforts. Hearing views from both of these populations—public school teachers and professors at teacher training colleges—would shed another perspective on the depth of Western and modern influence in the lives of Cameroonian educators.

Another consideration is my use of surveys. I do not feel that my use of surveys garnered as meaningful information as they might have. I would probably have gotten more insight from teachers had I used the surveys as, in part, a screen. When I read the surveys, there were several responses that I wanted to explore further—for instance, the teacher who kept using a teacher-centered approach even though s/he was aware that

approach was not in vogue. If I had been able to follow up with those respondents, the surveys might have been more meaningful than just corroboration of interviews.

What Next? What, if any, implications can be drawn from this study? One consideration pertains to my own involvement in this research project. I question whether, and to what extent, it is legitimate for me to engage in research exploring hegemony which arises from my own culture in a Cameroonian setting. Freire was Brazilian, in spite of other differences that might have existed between those he worked with and himself. I am not Cameroonian or even African; I am Western, American. I taught a student in high school who raised this same issue of legitimacy for me.

This student was a tall, black male who played high school sports and whom I taught for two different mathematics classes. I remember the first time I heard him use words like foshizzle and minizzle. When I heard those words I was excited. I thought that it was a way for him to resist school culture by using street talk in a school setting (Apple, 1992). I also felt he was challenging or countering me, since he likely guessed I would not be familiar with those words and might have to declare my ignorance by asking him about them—even if I ignored them, he probably figured that his use of language might make me uncomfortable (Ogbu, 1994). I appreciated that these words belonged to a sort of counter-culture to which I, pointedly, did not belong. I mentally applauded all these various efforts at resisting white hegemony, even though I knew those very efforts might be deciding his blue-collar fate (Willis, 1977). I had to admire someone who chose to go down fighting, though. I hoped his resistance might at least empower him to retain his spirit, whereas playing the 'school game' might obfuscate his identity more rapidly.

However, I was careful not to show my complete enthusiasm for his actions because I sensed that, by legitimizing his use of counter-language, I would start the process of subsuming that counter-language into the hegemonic structures of which I was inevitably a part. I wanted, while I longed to feel those innovative plays on language on my tongue, for his struggles at resistance to remain his. I wondered what the point was of his resistance if those words became mainstream; then he would be back where he started.

There are alternatives to usurping resistance efforts, though. It seems to me that many meaningful implications arising from this study are related to my own, and others', situations within hegemony. The focus is on what I, and others in my culture, can do to resist hegemony from within. What can we do, within realms of education, mathematics, and modernization set in a Western context, to cope with and challenge hegemony?

For myself, one possibility lies in creating—with my students—critical mathematics classrooms to help us articulate (and challenge) power relations acting within our hegemonic structures. Discourses about who makes the most influential decisions, who benefits from those decisions, and what we might be able to do about it are starting points, as are conversations about mathematics and its relationships to our ways of thinking. We could talk about empowerment and dependence; we could have discussions about who benefits when students are rarely asked or expected to reason, conjecture, and make connections for themselves. Seeing oppressive situations within hegemonic structures in which we are embedded as pathways for creating critical consciousness might not only help us to better articulate our realities, but it might also make space for transformation.

For the Cameroonian teachers in this study, the process of cultural invasion has impacted their culture through, among others, unproblematicized valuation of modernity and Westernism. Potential for transformation and critical awareness exists, though, in those participants who saw, at least to some extent, broad power relations working to perpetuate their oppressed situation. Stephen, for instance, gives just one example of Western contributions to oppressing Cameroonians:

> Can you imagine the cost of petrol in Cameroon? It is too high, whereas we have a refinery…It looks like a lot of it has been shipped abroad and what remains you may call it the second grade or whatever…What remains is sold to Cameroonians at very exorbitant prices so as to pay the expatriates and the fortunate Cameroonians who work for that company at very high salaries…

People like Stephen, who can articulate such critical connections, can be found wherever there is oppression. It is through and with the Stephens of the world that paths for resistance can be created and transformation becomes possible.

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Appendix A

Interview and Survey Protocols

Interview Protocol. Thank you for taking the time to visit with me. I am conducting research about perceptions people hold about education and about mathematics, and how they feel about the educational system currently in use. I would like to ask you some questions related to these topics.

1. How long have you been teaching?
2. Why did you become a teacher?
3. What is education? What does education mean to you?
4. How do you feel about your educational system?
5. What is culture? What does culture mean to you?
6. Do you think education is related to culture? If so, in what ways?
7. What is mathematics? What does mathematics mean to you?
8. Do you think mathematics is related to culture? If so, in what ways?
9. What do you think it is important to learn? Why?
10. What instructional methods do you use? Why?
11. What mathematics do you think is important to learn? Why?
12. What are your goals and ambitions, for yourself or for your culture? Do you think education influences these aspirations? If so, in what ways?
13. What needs do you perceive in your society? Do you see your educational system as addressing these needs? If so, in what ways?

Survey Protocol. Please respond to the following questions. Feel free to attach extra sheets of paper as necessary. Thank you for your time, thoughtfulness, and honesty. All responses are anonymous—please do not sign your name or otherwise identify yourself.

1. How long have you been teaching?

2. Why did you become a teacher?

3. What is education? What does education mean to you?

4. How do you feel about your educational system?

5. What is culture? What does culture mean to you?

6. Do you think education is related to culture? If so, in what ways?

7. What instructional methods do you use? Why?

8. What do you think it is important to learn? Why?

9. What mathematics do you think is important to learn? Why?

10. What are your goals and ambitions, for yourself or for your culture? Do you think education influences these aspirations? If so, in what ways?

11. What needs do you perceive in your society? Do you see your educational system as addressing these needs? If so, in what ways?

Appendix B

Interview and Survey Consent Forms

Interview consent form. INFORMED CONSENT FORM FOR RESEARCH BEING CONDUCTED UNDER THE AUSPICES OF THE UNIVERSITY OF OKLAHOMA-NORMAN CAMPUS

INTRODUCTION: This study is entitled Cameroonian Teachers' Perceptions of Education, Culture, and Mathematics. The person directing this project is S. Megan Che. The faculty sponsor is Dr. Jayne Fleener, Associate Dean, College of Education. This document defines the terms and conditions for consenting to participate in this study.

DESCRIPTION OF THE STUDY: This study uses face-to-face interviews, open-ended survey questions, and classroom observations of educators to explore what some Cameroonian teachers think about education, culture, and mathematics. One purpose of the study is to provide an access of Cameroonian voices to the body of scholarly literature. Surveys will take approximately 30 minutes to complete; face-to-face interviews will last approximately one-hour, with the possibility for a one-hour follow-up interview. Classroom observations will occur over a period of at least two class sessions.

RISKS AND BENEFITS: There are no foreseeable risks, beyond those present in routine daily life, anticipated in this study. There are no specific benefits to the individual for participation. Benefits to society include a better understanding of how Cameroonians view their educational system.

CONDITIONS OF PARTICIPATION: Participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which the participant is otherwise entitled. Furthermore, the participant may discontinue participation at any time without penalty or loss of benefits to which the participant is otherwise entitled.

CONFIDENTIALITY: Survey findings will be presented in aggregate form with no identifying information to ensure confidentiality. Pseudonyms will be used in discussing findings from interviews.

AUDIO TAPING OF STUDY ACTIVITIES: To assist with accurate recording of participant responses, interviews may be recorded on an audio recording device. Participants have the right to refuse to allow such taping without penalty. Please select one of the following options.

[ ] I consent to the use of audio recording.

[ ] I do not consent to the use of audio recording.

CONTACTS FOR QUESTIONS ABOUT THE STUDY: Participants may contact Megan Che at 405-733-3977 or Dr. Jayne Fleener at 405-325-1081 with questions about the study. Or, contact the Alpha Royal Medical Center at Ntumazah Hill, Ntarinkon, Bamenda, Cameroon (phone number 336 29 15 or 336 30 86 or 766 62 66).
For inquiries about rights as a research participant, contact the University of Oklahoma-Norman Campus Institutional Review Board (OU-NC IRB) at 405/325-8110 or irb@ou.edu. Or contact the Institutional Review Board of the Alpha Royal Clinic in Bamenda at the address and phone number above.

PARTICIPANT ASSURANCE: I have read and understand the terms and conditions of this study and I hereby agree to participate in the above-described research study. I understand my participation is voluntary and that I may withdraw at any time without penalty.

_____	_____
Signature of Participant	Date
_____	_____
Printed Name of Participant	Researcher Signature

Anonymous survey cover letter.

Dear Educator:

I am a graduate student under the direction of Professor Jayne Fleener in the Instructional Leadership and Academic Curriculum Department at the University of Oklahoma-Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma-Norman Campus, entitled Cameroonian Teachers' Perceptions of Education, Culture, and Mathematics. The purpose of the study is to better understand what Cameroonian teachers think about education, culture, and mathematics, and the relationship among them. The study also seeks to provide an access of Cameroonian voices to the body of scholarly literature.

To participate in this study, you must be 18 years of age or older.

Your participation will involve completing a survey and should only take about 30 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time. The results of the research study may be published, but your name will not be used. This survey is anonymous. The results of our study may be published, but your name will not be linked to responses in publications that are released from the project. In fact, the published results will be presented in summary form only. All information you provide will remain strictly confidential.

The findings from this project will provide information on Cameroonian's thoughts about education, culture, and mathematics with no cost to you other than the time it takes to complete the survey.

If you have any questions about this research project, please feel free to call Dr. Jayne Fleener at (405) 325-1081 or e-mail atfleener@ou.edu . Questions about your rights as a research participant or concerns about the project should be directed to the Institutional Review Board at The University of Oklahoma-Norman Campus at (405) 325-8110 or irb@ou.edu. You may also contact the Institutional Review Board at the Alpha Royal Medical Center at Ntumazah Hill, Ntarinkon, Bamenda (phone number 366 29 15, or 336 30 86, or 766 62 66).

By returning this questionnaire in the envelope provided, you will be agreeing to participate in the above described project.

Thanks for your consideration!

Sincerely,

S. Megan Che
Ph.D. Candidate