In any field of endeavor, there are those who contribute by working within the conventions of the field, and those who contribute by introducing new dimensions that transcend the conventions and bring to bear new ways of thinking and doing things. John Collier, Jr. was not one to be encumbered by convention, but rather was able to draw upon a unique combination of life experiences, shaped in part by some severe physical handicaps, to make significant methodological and conceptual contributions to the field of anthropology and education. In the following account, I will attempt to document the evolution of those contributions and illustrate the continuing significance of his work in demonstrating the role visual data can play in a cultural analysis of the interplay between education, communication and ethnicity.

I first met John Collier, Jr. in Boulder, Colorado in the summer of 1968 when he was invited to participate in a two-week workshop to help develop a research design for a National Study of American Indian Education that had been commissioned by the federal government. Robert Havighurst, director of the study, had invited an assortment of prominent sociologists, anthropologists and American Indian educators to meet with those of us who would be doing the fieldwork for the study and offer ideas on how to best approach our task. After listening to two days of sometimes heated debate across the various disciplinary domains on the kind of data we should be gathering and the efficacy of various quantitative and qualitative research methodologies we might use, John finally got the floor and proceeded to encapsulate the issues at hand in the form of a story.

He told about a time down on the Navajo reservation when he needed some repair work done on his car. When he asked where he could go to get the work done, he was told to see a certain Navajo family whose sons were the resident expert mechanics in the area. He took the car over to the family’s hogan and while one of the sons was checking it out, he struck up a conversation with the mother, asking her how her sons had learned to be such expert mechanics. Had she sent them to a BIA trade school? Did they subscribe to Popular Mechanics? She responded somewhat indignantly that, no, they hadn’t gone to trade school and they didn’t read about it in books, but rather, whenever something broke down she would just tell them to get underneath and work at it until they figured out what the problem was, and then fix it, and they did. Sometimes it took them several days to figure it out, but once they did, they understood how the car worked and were able to fix it. So our job as researchers, he told us, was not to presume to know what the issues were beforehand, but to go out into the communities and work with people until we understood the problems of Indian education from the point of view of the Indians themselves. Furthermore, we shouldn’t assume that all education was derived from books or took place in the school.

Six months later, my wife Carol, our eight-month-old son John and I were out in Bethel, Alaska sharing a small, three-room apartment with Collier and his colleague from San Francisco State, John Connelly, who was responsible for overseeing the Northwest and Alaska portion of the National Study. It was a neophyte fieldworker’s dream come true for me, as I listened late into the long winter nights to the two Johns swapping old BIA stories and solving the myriad problems of anthropology, Indian education, field research, the politics of faculty promotions, and the pending strike at San Francisco State. Along with all these academic and political topics available for our nightly "tundra seminars," we also had the practical concerns that derived from the day-to-day demands of the fieldwork, made all the more interesting because this was Collier’s first extensive use of motion (instead of still) pictures as a research tool, and his first foray into the processes of schooling as a research topic. He put the lesson from the Navajo mechanics to use early on, when he found his Super 8 movie camera hadn’t been designed for the Alaskan winter and would freeze up on him when he took it outside. Being a keen observer and inclined
to self-sufficiency, he negotiated the purchase of a locally tanned seal skin and proceeded to construct a customized parka for his camera, and it worked, just as it did for the Eskimo people in the region. He even had enough hide left over to make my wife a pair of mukluks and himself some seal skin slippers.

Needless to say, this was all very impressive to a young graduate student learning how to do fieldwork and struggling with the day-to-day challenges of "participant-observation" and making sense out of a new cultural setting in just a few months. The real significance of the story Collier had told us in Boulder didn't sink in, however, until one night when we were invited to dinner at the home of the high school science teacher, Mr. Moore, who like us was new to the area and still learning the basics of survival in the Arctic. He told us how a few days earlier during a cold spell, he was having trouble starting his snow-machine. He had methodically checked the spark plug, wiring, magneto, carburetor and fuel line, but all to no avail. Desperate to get his "sno-go" going, he finally swallowed his pride and approached Peter, an Eskimo man next door whose machine always seemed to be running, even on the coldest days.

"Peter, how about helping me get my sno-go started? I've been having trouble with it lately."

"Sure Mr. Moore, but where's your water?" "Water! What do you mean? This is an air-cooled engine. It doesn't need water."

"No, Mr. Moore, not to put in the engine; warm water to pour over it."

"Are you serious, Peter? That'll short-circuit the ignition, freeze up the carburetor and cover the whole engine with ice."

"O.K., Mr. Moore, but let's try it and see."

Reluctantly, the teacher brought out a can of warm water and Peter poured it over the carburetor and manifold of the engine. The teacher stood by to watch the transformation of his sno-go into an iceberg. However, to the teacher's amazement and delight, Peter flipped the ignition switch, pushed the fuel primer button, pulled the starting rope, and the engine started. Peter expressed no surprise -- only satisfaction that what was expected had happened.

His scientific curiosity aroused, the teacher asked Peter how he came upon this unorthodox procedure for starting sno-go engines. Peter did not explain exactly why pouring water on the engine helped to start it, but he indicated that it was only reasonable that it should do so. If engines get warm when they are running, why not warm them up to get them running, and what is an easier way than by pouring warm water over them. With that, Peter went on his way, satisfied that the problem had been resolved. The teacher, however, was not satisfied with just knowing how to start his engine; he wanted to know why it started. Though he could not argue with Peter's logic, he reviewed for us the principles of an internal combustion engine and the laws of physics, and systematically deduced that the thermal properties of the warm water had helped heat the carburetor and combustion chamber, thus assisting the atomization of the fuel and allowing it to ignite more easily. Only after he had grounded his understanding in the book knowledge he had learned in school was he satisfied that Peter's starting technique was scientifically valid, though not necessarily reliable under all conditions.

Like the Navajo mechanics, Peter had drawn on keen observational skills derived from direct experience as his teacher. He looked at the engine as a wholly functioning unit and approached the problem from that perspective. The science teacher, on the other hand, applied the scientific method he had learned in school to methodically examine each of the engine's component parts, but in the process, he had overlooked the engine itself. Not finding the solution in the component parts, he had to be reoriented by Peter to gain a new perspective on the problem.

Therein lies the significance of John Collier's contribution to anthropology and education -- he has brought a fresh set of lens to examining human behavior and has provided a framework and methodology for looking at the interaction of the components of a cultural system from a holistic, integrative perspective. It was Collier's specialty to be able to see the connections between the trees and the forest, to tease out, build upon, and bring to the attention of others the subtle, but often neglected human qualities that bind us together and give meaning to our everyday lives. Just as the snow machine engine consists of an assemblage of interrelated, mutually dependent parts, so does a social system, such as the school. And just as the teacher became too narrowly focused on the parts in his approach to the engine to see the problem, so do we as social scientists and educators at times, become so immersed in the conventions of our disciplines and methodologies that we are unable to stand back and see the world around us as an interdependent whole and develop genuine alternative perspectives in our understanding of human problems.
Collier’s work has spanned many fields, some of which evolved out of his own seminal contributions — most prominently that of “visual anthropology,” for which he has probably been most widely recognized as a result of his now classic book on the subject, *Visual Anthropology: Photography as a Research Method* (Collier, 1967). Less known, but equally influential have been his contributions to the emergent field of “anthropology and education,” which is the main subject of this review. Just as one can trace the evolutionary path of his movement from the use of the camera as a recording device for static images to its use as a research tool for analyzing the dynamics of culture, so too can one see his ever-expanding quest for understanding the role and dynamics of education as a tool for celebrating ethnic diversity in a pluralistic society.

His continuous thirst for greater understanding of the hidden dimensions of human behavior in general, and his ability to use multiple senses to extract original insights from his everyday experiences may be rooted in the special circumstances that limited his own exposure to the channeling effects of formal schooling. At the age of eight, he was struck by a car while riding a scooter and suffered major neurological injuries which left him with serious speech, hearing and learning disabilities (including dyslexia and the inability to perform basic mathematical or technical tasks), along with various physical impairments, all of which grew progressively worse for the rest of his life. The impact of that traumatic event on his subsequent development is summarized in the following statement prepared on his behalf as part of the case for his academic promotion at San Francisco State, where he had been granted a faculty appointment in 1961, despite his lack of formal education beyond high school.

> "The candidate (Collier) had followed a post-high school course of self-education to determine his capability to function as an adequate creative adult, not in spite of a physical handicap but in a sensitive perception of discovering what capacities needed development to offset the deficits of a severe hearing loss. The physical disability, for whatever its frustrating irritations, became a base from which other senses had to be extended in compensation with disciplined exertion and determination. (SFSU, 1974)"

Collier’s compensatory “self-education” program included, among other things, extensive travel and cross-cultural experiences, a tour of duty as a seaman in the Merchant Marine, a brief study of gross-anatomy at Johns Hopkins Medical School where he assisted in a dissection to explore the functional design of the human body, apprenticeships under several prominent artists and designers, and finally extensive work as a field photographer. His photographic fieldwork brought him into close contact with such luminaries as Roy Stryker, Alexander Leighton, Allan Holmberg, Edward T. Hall, and John Adair, and took him to places ranging from the Maritimes and Northwest Territories of Canada to the Peruvian Andes.

These experiences, coupled with growing up in the context of Indian and Spanish American communities with a father who was a noted community organizer, poet, writer and political activist who revolutionized federal Indian policy as U.S. Commissioner of the Bureau of Indian Affairs under Franklin Roosevelt, and a mother who was a public health educator and once operated a progressive free school in their home, helped Collier to hone his observational skills, establish an independent existence, and develop his own special frames of reference for making sense out of the world. It was his keen interpersonal skills and his unique visual frame of reference that were brought to bear in his seminal cross-cultural studies of Eskimo schooling in Western Alaska, Navajo education in Rough Rock, Arizona, and multi-ethnic schools in San Francisco, each of which made a special contribution to the field of anthropology and education.

**Eskimo Classrooms in Alaska When**

Collier began filming classrooms in Western Alaska in 1969, it was his first attempt to use Super 8 film to analyze human interaction, and to focus on schooling as an arena in which to examine the dynamics of such interaction. His intent was to supplement the “fixed facts” gathered through the pre-structured questionnaires and interviews assembled for the National Study of American Indian Education, with film data, which he hoped “would offer the emotional flow between facts and allow us to discuss genuinely the emotional-psychological behavior of the child in education” (Collier, 1973: 49). Drawing on the work of people such as Birdwhistell, Hall, Byers, Ekman, Mead and Bateson, he set out to use film to explore the role of nonverbal behavior, particularly in the areas of proxemics and kinesics, in shaping the dynamics of the Alaskan Eskimo classroom. Concerned that the data on schooling as an arena in which to examine the dynamics of such interaction was too dependent on “abstractive evidence” linked to static, verbally-based methodologies, he sought to ground his research in the more “authentic observation” of motion that film data could provide. As he put it:

> Film documentation is nonverbal, hence at many points less speculative and more open to critical judgment by a team of analysts. It is, in this sense, a very low level of documentary abstraction that is as sensual as it is intellectual, and therefore offers the analyst emotional-psychological opportunities difficult to research from verbal projections (Collier, 1973: 49).
It was this emphasis on the analysis of nonverbal behavior as a basis for assessing educational performance that presented the biggest challenge and the greatest potential for Collier's work. He met the challenge and overcame numerous obstacles, both in the data gathering and the data analysis stages. He was a consummate field worker who could move himself and his gear around in the most complex and difficult situations and acquire rich data in ways that were minimally intrusive and always respectful of the people with whom he worked. I once sat awkwardly in the back of a quonset hut where an Eskimo dance competition was taking place and watched with apprehension as Collier set up his lights and moved in and out of the activities on the dance floor. However, he did so in such a way that people seemed to hardly notice he was there, and his presence did not appear to have any inhibiting effect on the performances. In an effort to minimize the potential intrusive influences of his filming on student/teacher classroom behavior, he would set up his camera a day or two before he started actual filming, to let behavior settle down to a more normal routine as students and teachers got used to his (and his camera's) presence.

Collier's ability to convert his handicaps into assets in establishing rapport with people opened up many doors for him, as well as for the rest of us associated with the research team. It was also the source of some amusing anecdotes, such as the following encounter which he related in a letter after having filmed a Russian Orthodox church in a nearby village.

> Seems that all the colorful characters around the Kuskokwim have interesting case histories. They are the source of endless stories - even the Vista workers, and even me. I don't know how these stories get started, but today when I was walking over to the store a very sober Eskimo passed me saying, "Good afternoon Father," crossed himself and ceremoniously bowed and kissed my hand. I raised my hand in a papal salute and went on my way (Personal communication, May 9, 1969).

The challenges Collier encountered in the data gathering were matched by the challenges he later faced in the data analysis, particularly in determining "how education could be seen on film." He addressed this issue through a two-stage process. First, he collared anyone he could find (students, colleagues, experienced teachers) who had sufficient interest and was willing to watch the classroom film segments to help him identify when effective education seemed to be taking place and when it was not. He then set out to identify the characteristics that distinguished the successful classroom episodes from those in which the teacher's efforts did not appear to be working. After many hours of film watching (speeded up, slowed down, frame-by-frame, and initially without sound because "verbal stimuli drained off the nonverbal sensitivity") by a team of trained observers back in San Francisco, some patterns began to emerge. Bringing all of his observational and analytical skills to bear, he concluded that the most significant distinguishing characteristic was that "communication is vividly apparent in the classes that the judges felt were educationally alive," and based on this critical observation, he postulated the following link between his film data, communication and education.

> Education is a communication process - from teacher to student, from student to teacher, between student and student, and between the student and himself. From viewing film we cannot tell whether education is taking place, but we might be able to tell circumstantially if education could take place, and be reasonably sure of the circumstances in which education is not taking place (Collier, 1973; 53).

With these as working assumptions, he attempted to put in written form what he could see in the film. This was no easy task, because very often there were no conventional labels or constructs in the literature on classroom analysis to convey what he was seeing. Most of the available literature on classroom interaction and communication patterns focused on verbal behavior (e.g., talking demeanor and questioning strategies), rather than the non-verbal behavior that Collier was able to discern in the film. To overcome this limitation, he had to adopt and adapt his own lexicon as he went along to describe the subtle forms of patterning that appeared to govern the way students and teachers did or did not connect with one another in (and out of) the classroom. So it is from this and his later work that we begin to see terms like rhythm, synchronization, tuning in, pace, flow, presence, etc. enter the vocabulary of educators and educational researchers to account for both the verbal and non-verbal aspects of classroom behavior.

Following Collier's own report, published as Alaskan Eskimo Education: A Film Analysis of Cultural Confrontation in the Schools (Collier, 1973), his son Malcolm further refined the analysis of the film, focusing in on the elements of pace and flow in classroom interaction and communication. This work was published later in A Film Study of Classrooms in Western Alaska (Collier, M., 1979). In the meantime, other researchers (most notably Fred Erickson and his students) had also begun to focus on the effects of proxemics and kinesics in their analysis of teaching/learning environments, and eventually a new branch of "microethnographic" analysis utilizing film and video data emerged in the field of anthropology and education, as well as in related fields such as sociolinguistics and the ethnography of communication (cf. Erickson and Wilson, 1982).
No less significant than the methodological contributions that derived from Collier's fieldwork in Alaska were his contributions to our understanding of the interpersonal and intercultural dynamics of schooling in Native American contexts. The contrasts between children's behavior in and out of school and between Native and non-Native teacher's behavior in classrooms that he so vividly portrayed in his analysis of the film had the effect of shifting the burden of responsibility for addressing Native students' school failure from the student to the institutional environment that established the conditions in which the failure occurred. Having convincingly established in his film images the emotional and cultural vitality of students' lives outside of school, he held the teachers accountable for nurturing that vitality as students came under the school's influence. His concluding statement in the report on Alaska Native education is unambiguous.

Emphatically we can appreciate the personality needs of the students who must make the educational journey. We know they will need clear identity. We know they will need great resources within to make this experience positive. The Eskimo students setting forth need what all our children need, a strong foundation of self and culture to stand on. In some fashion, each teacher is contributing to or negating this process, perhaps concurrently doing both! The teacher has broad freedom in person-to-person learning and communication. On significant levels, education results from interpersonal success and this can be accomplished even in the midst of repressive administration (Collier, 1973; 126-127).

Navajo Classrooms at Rough Rock

Building on the foundation he had established in his Alaskan Eskimo classroom research, Collier went on to do a similar film analysis of Navajo classrooms at the Rough Rock Community School in Arizona. The report he and his collaborator, Marilyn Laatsch, prepared on that research (Collier and Laatsch, 1975) provides some of the richest data on the interpersonal dynamics of cross-cultural classrooms available anywhere. Covering ten classroom episodes with both Navajo and White teachers teaching subjects ranging from math and art to Navajo language, the analyses provide numerous original insights into the patterns of interaction and communication that sustain or negate productive interchange in a culturally complex educational environment. The following excerpt from his account of one of the Navajo teacher's (Emma) behavior illustrates the kind of observational skills he brought to bear in his film analysis.

The camera pans to the front of the room, picking up a lone boy sitting by himself at a desk doing nothing. Emma's group has also enlarged, a fifth girl leans over the table by the teacher. Emma is writing as she corrects a student's paper. The newcomer is watching this writing intently. The girls look relaxed but involved, one leans over the table observing, others are working on their papers. In observing this group from a distance, Emma might seem uninvolved with her students for her posture rarely changes. Now she is writing but most of the time she sits motionless with her arms folded on the table. But when the camera focuses closely it is clear she is watching every action of her girls. Her quiet manner has impact, for the pace of this group does not slacken. On film her style of interaction is familiarly Navajo in contrast to most White teachers who speak animatedly and with dramatic gestures, to deliver their impact (1975; 127).

Based on numerous such classroom episodes recorded on film in which Collier makes similar detailed observations of the ways in which Rough Rock students and teachers enacted their everyday behavior, we get a detailed picture of how education was accomplished at Rough Rock School. Coupling the film data with his extensive fieldwork in the school and community, and building on the insights he gained from the film analysis he had completed in Alaska, he reached the following conclusions about education at the Rough Rock School (1975; 280).

1. Rough Rock children retain and strengthen their Navajo identity.
2. Rough Rock students show both confidence and fluency in meeting strangers.
3. Rough Rock children are personally involved and exhibit very long concentration spans.
4. Children are masters of their own movements in Rough Rock classrooms.
5. Rough Rock has disciplined classrooms because children control their own behavior.
6. At Rough Rock there is a Navajo way of teaching.
7. Academically well trained White teachers can fail to motivate and educate Navajo children.
8. Navajo teachers are not always successful in motivating and directing Rough Rock children.
9. Rough Rock children respond to the Navajo-involved curriculum.
10. Curriculum in general, and Navajo cultural material in particular, do not seem to be the governing factor in Rough Rock student involvement.
11. Rough Rock children appear to involve themselves most deeply in units of learning they can individually master and control. They prefer:
Learning by direct observation;
Learning by direct participation;
Learning through personal mastery;
Mastering a survival-related skill;
Learning through group cooperation.

As is evident from the breadth of these conclusions, Collier was not satisfied with only describing what he saw in the classroom settings at Rough Rock, but he sought to place those observations in the broader context of the cultural fit between the school and community and the emotional well-being of the students. In so doing, he laid the groundwork for reconstructing our conventional thinking about multicultural curricula, teaching and teacher preparation. Through his analysis of the film record of Anglo and Navajo teachers in the Rough Rock classrooms, Collier provided a detailed account of the behavioral circumstances in which students did or did not benefit from the experiences the school was providing. He was able to use the “hard evidence” of communication and participation (or lack thereof) provided in the film record to reframe the way we look at classroom behavior and establish a more appropriate set of criteria for evaluating the efficacy of formal education in a cross-cultural context.

As a result of his research, the Rough Rock Community School was recognized as making a positive contribution to the education of Navajo children in a way that had been overlooked in previous external evaluations, most of which had indicated that little academic improvement was evident from the demonstration effort (1988). Based on the observations outlined above, Collier concluded:

There is agreement that Rough Rock education is successful in carrying out the school’s central purpose: to offer a whole-personality school experience for Navajo children. This achievement, however, has not been observed by the conventional educational surveys that have evaluated this school. Educational testing has mainly revealed conventional school accomplishment as judged through quiz scores and reading levels. These achievements by themselves do not measure emotional well-being essential in retaining and later using school training (1975; 280).

By extending his analysis to include consideration of the “emotional well-being” of the students, which he was able to explicitly identify in the film data (as evidenced by the quality of communication and participation exhibited), Collier added a whole new dimension to the study of classroom behavior in cross-cultural situations. He was able to demonstrate that it was not sufficient to judge educational performance in purely academic terms, without taking into account the relationship with, and implications for, self esteem and cultural identity on the part of the students. It was axiomatic in Collier’s view that emotional well-being and children being “masters of their own movements” were inseparably linked and served as necessary preconditions for effective “whole-personality” education. Intellectual, emotional, psychological, social, cultural and physical development were all interconnected and could not be considered in isolation in Collier’s conception of education. One could not nourish the trees without considering their place and part in the forest. From his film record of the various classrooms, he was able to describe the patterns of teacher behavior that fostered the kind of learning environment where “children control their own behavior.”

Collier’s work at Rough Rock helped him to refine his thinking on the relationships between observable aspects of classroom behavior such as pace, synchrony, flow, intensity, space, etc., and the more intangible human qualities of communication, self-esteem, stress, learning, and cultural identity. Using the visual acuity he had developed in his previous fieldwork (and life experiences), he was able to penetrate the veneer of abstracted measures typically used in classroom research to ground his analysis in the drama of interactive behavior observable on the film. In so doing, he was also able to relate the student’s and teacher’s behavior in the classroom to the patterns of behavior in the community from which the students emerged. This relationship between education and the cultural well-being of the individuals and communities to which the school’s services were directed was a thread that wound through all of Collier’s work, and one to which he turned his attention next, as he sought to unravel the dynamics of education in a multicultural and multilingual setting - that of the urban schools of San Francisco. Collier summarized his Rough Rock work as follows:

This isolated school demonstrated that there can be a successful scheme for Navajo learning. Rough Rock learning took place in the midst of the Navajo ecology, surrounded by a community of forward thinking Navajos that supplied the school with a self-fulfilling culture, a current that carried the children forward even with a varying presence of Navajo and White teachers, some excellent, some good and some only mediocre. But, can Rough Rock success be transferred, or established, in the congestion and multi-ethnicity of urban public schools? (Collier and Laatsch, 1983; v).
Education and Ethnic Diversity in Urban Schools

Collier's research in schools in Alaska and Arizona reflected his long-standing concern about the cultural integrity of Native American communities, and while his initial approach to each setting was in the conventional role of an anthropological fieldworker serving as a detached observer seeking to gain a deeper understanding of events in a far-off place, it was not long before he took an active interest in the issues that surfaced and sought to adapt his research and make it useful to the people with whom he worked. His involvement in the cultural complexities of education for Eskimos and Navajos caused him to take a more active interest in the educational issues facing the urban schools in San Francisco as well, where many of his students and his own family were situated. He was able to put the observational tools and skills he had honed and the insights he had developed in his fieldwork in culturally homogenous settings to use in the analysis of heterogeneous classrooms with a complex mix of immigrant and non-immigrant student populations.

As Collier shifted his attention from Native American schooling to the multi-ethnic environment of urban schools, he also made a significant shift in his orientation to the role of research. He was no longer satisfied with film analysis as a social scientist's tool for gaining insight into the dynamics of classroom behavior, but sought instead to transfer control of the research process to the people to whom it was to be applied, thus making research an instrument of social change, with the social scientist serving more as a collaborator than a director in the process. This position became a major focus of his later work, in which he argued the need for research, and by extension education, to become a bottom-up, inside-out, emic endeavor, rather than the outsider-controlled etic approach that continued to dominate much of the educational research scene. His work in the urban schools attempted to incorporate this emic perspective.

The skills and strategies required for multicultural teaching remain vague. There are no formal models of successful multicultural urban classrooms; there has been little satisfactory dialogue between ethnic communities and educators; there is a growing pressure to study the problem of equal education for the culturally different, and schools of education have responded. But generally, the problem is being approached in haste and from the outside in. The approach of this urban school study is to look from the inside out and to present, based on film data, a variety of successful models of multicultural classrooms we found in San Francisco. The films have demonstrated that the styles of teaching are diverse, there is no single way of successfully teaching culturally different children. Each teacher works from within his or her personality, the procedure of one contradicting the procedure of another. Teaching styles cannot be standardized. But analysis of the methods of these contrasting teachers does reveal basic elements necessary in sustaining a positive learning environment (Collier and Laatsch, 1983; vii).

Collier and his colleagues (including many of the teachers whose classrooms were filmed) immersed themselves in film data drawn from a variety of classrooms situated in various ethnically homogenous and heterogeneous communities throughout the San Francisco Bay area. The direct involvement of research participants from the schools led them into the thick of issues such as language retention, cultural assimilation, political control, and parent involvement, all of which served to further inform and broaden Collier's base of understanding of the role of schooling as a socio-political institution. But the question of to what ends this all-pervasive cultural and political institution were directed remained one of Collier's major concerns. Based on the cumulative evidence drawn from his work in multiple cultural settings, he concluded that whatever else the schools were intended to accomplish in a given setting, their success depended on their ability to nurture and build upon the ethnic identity and extant cultural base that provided the foundation for each student's inherent intelligence. Success, in this regard, meant more to Collier than the mere preservation of ethnic diversity in the context of a larger society, as the following statement indicates.

There are attitudes and views that go beyond the balancing values of ethnic diversity into the dynamic process of cultural retention and acculturation. There are teachers and innovators who see learning and human development as essential functions of self-determination, of both individuals and groups. Retention of ethnicity preserves the full intelligence and vigor of cultural minorities, so that they can productively survive in modern society. This view sees education and innovation as a bottom-up enterprise whose success rests directly on the resources of the developing individual. Education and change coming from the outside and down upon the minority group can smother both intelligence and self-energy (Collier and Laatsch, 1983; 187).

To Collier, ethnic diversity was seen as a means, rather than an end in itself - a means to maintain a healthy society in which all people are able to participate on their own terms, to the benefit of the society as a whole. The contribution of the social scientist/researcher was also to serve as a means that went beyond the preparation of a report as an end product for the researcher's benefit, but included a responsibility to move the research tools (in Collier's case the camera) into the hands of the people for their own use as a vehicle for self-determination. As Collier's involvement with the social and political issues associated with schooling in a pluralistic society evolved, so did his role as a critical observer of contemporary policies and practices, and he directed his critique to anthropologists and educators, as well as to society as a
whole. He concluded his ethnography of multi-ethnic classrooms with the following "appeal for the support of diverse ethnicity."

Why should there be issue over human diversity and the retention of ethnicity? Does it spring from a universal drive to dominate others, thus promoting a hostility to difference? I had naively assumed that ethnic diversity was as American as individualism, and it was not until I pursued ethnicity critically that I discovered that the future of diversity was both obscure and controversial. Certainly there is confusion about the functions of ethnicity and personality, but more seriously, the energies of ethnicity may be a threatening challenge to the ordering of social systems. Assimilation gives security to dominating groups. Cultural diversity (pluralism) creates confrontations with economies, politics and the status shape of our society (Collier and Laatsch, 1983; 217).

His questioning of the roots of ethnocentrism did not stop with the individual members of society, but was extended to include the field of anthropology as well.

There are principled reasons for the support of ethnicity vital to the development of multicultural education that I assumed were in the very heart of anthropology, but I found an impartiality about the issue of cultural survival. Was this a purity of scientific view, or was behavioral science also invisibly controlled by ethnocentrism? (Collier and Laatsch, 1983; 218).

After critiquing several classical examples of fieldwork in applied anthropology and talking to many practitioners, Collier's conclusions to the above question presaged much of the subsequent debate that has taken place in anthropology, and the social sciences generally, under rubrics such as "critical theory" and "post-modernism" (labels which he would no doubt eschew). His views regarding the extent to which social science research traditions and practices continue to reflect the cultural biases of those who formulate the questions were unambiguous.

My anthropologist colleagues' responses in regard to the future of ethnicity may also reveal the classical character of the discipline. Despite developments in urban anthropology, medical and educational anthropology, the body of anthropological literature and all the most prestigious ethnographic films deal primarily with archaic and perishing tribal people. Ethnographic observers are largely White, belonging to "superior" Western cultures. Despite efforts to avoid the superior perspective, anthropology generally looks backward and down on less materially civilized humanity. The ethnocentrism of this view from above discourages the recognition of expanding and developing tribal diversity or challenging ethnicity of a modern kind. I have observed that the survival of diversity is confronted by the power of dominating modern nations. If tribalism is a threat to national unity, world ethnic diversity could also be a threat to international power. I see anthropologists and scientists as agents of their culture, and not immune to the power drives of their national origins (Collier and Laatsch, 1983; 223).

As if to anticipate the role ethnic tensions would play in subsequent global political events, he added:

An undercurrent of information indicates that ethnic retention is an unpopular research area with government funding agencies. Are we thus to believe that the United States and Russia are in a bicultural race to assimilate the world? (Collier and Laatsch, 1983; 223).

Conclusion

Using the camera as a central tool for data gathering, Collier probed the hidden recesses of human behavior and communication in everyday settings, finding neglected vestiges of cultural influences that have offered new insights into our understanding of human diversity and ethnic persistence. Drawing on fieldwork in five distinct cultural settings and observations in many more, he brought a sensitive and critical eye to his analysis of classrooms, schools and communities and identified patterns of interaction that were often overlooked in conventional critiques of education in cross-cultural circumstances. In addition, Collier strove to integrate his research with action, always seeking ways to put the tools and knowledge he developed into the hands of the people and communities with whom he worked. His contributions to anthropology and education were most pronounced in his study of cross-cultural interaction in classrooms, where he combined his methodological and conceptual skills to provide insights into basic elements of human behavior. He was a consummate fieldworker, as well as a quintessential educator, and for him the two were inseparable.

For me, teaching, or more rightly interaction with the classroom and group, is FIELDWORK - an experience I have never gotten to the bottom of. There is always more, like the prospector's lure. The more I research, the less truth glimmers in my pan - just lots of gravel and semi-precious pebbles. The enlightenment and the discouragement is more I research, the less truth glimmers in my pan - just lots of gravel and semi-precious pebbles. The enlightenment and the discouragement is
the problem - they just learn the other fellow's lingo and go about their business. These successes are disturbing in their functionalism. How do you teach empathy and human involvement in a contrived environment like the school, without the supportive human functionalism? A great deal of time, multicultural education is a disaster, or at best just negative, because credentialing means you need a formula - they want it systematized, like special ed for the deaf, or teaching ESL. Well, this won't work! Teachers are FIELDWORKERS, of course, and you can't TEACH fieldwork. You have to DO fieldwork! So we must analyze the accomplishments and suggest ways to avoid failure (Personal communication, March 23, 1977).


**Bibliography**


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