anthro·notes

a newsletter for teachers

vol. 4 no. 1 winter 1982

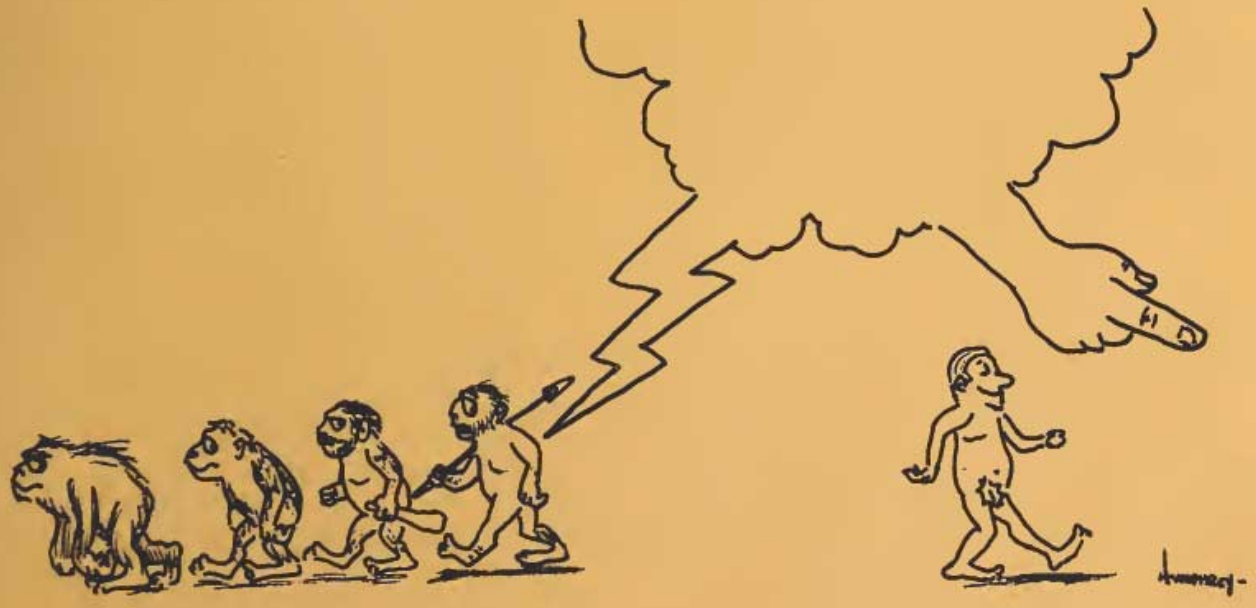
CREATIONISM ≠ SCIENCE

When asked the difference between science and creationism, anthropologist Ashley Montagu answered: "Science has proofs without any certainty; creationists have certainty without any proof." You may agree, and are puzzled by the controversy, but meanwhile students are asking questions, court cases in Arkansas and Louisiana are considering mandated class time for creationism, school boards are being pressured by creationist lobby groups, and some textbook publishers -- bowing to these lobby groups -- are reducing or eliminating the discussion of evolution in high school biology texts.

Sticking our heads in the sand or dismissing the issue as nonsense will not make the controversy disappear. Educating ourselves and our students will help. But to do this it is essential to know what creationism is, and is not. We need to know creationists' objectives for schools and their methods of argumentation. We need to explain why creationism is not science; and why, in spite of that fact, their arguments persuade some members of the public.

What is Creationism?

While it is often difficult to elicit clear explanations from creationists (see Moyer), they agree on a literal interpretation of Genesis from the King James version of the Bible. They believe that: 1) the earth is not older than about 10,000 years; 2) the earth, plants, animals, and humans were created by God in six days and humans have a separate ancestry from apes; and 3) the earth's geological formations and sedimentation were caused by a one-year, worldwide flood that deposited layers of



fossils about 6,000 years ago. They believe that no new species have developed since the original primeval period when a supernatural creator used processes of creation no longer in operation and therefore not subject to scientific measurement and study (Callaghan, p.6).

Creationists and Public Schools

What are the creationists' objectives for schools? Their primary goal is to have creationism qualify as a scientific theory and therefore be given equal time in public schools with evolution. To this end more than 20 states have bills pending that mandate the teaching of a Biblical account of creation. The newest draft of a creationist bill circulating in legislatures eliminates all overt references to God.

Arkansas and Louisiana passed laws in March and July 1981, respectively, requiring that "public schools shall give balanced treatment to creation-science and evolution-science. Balanced treatment to these two models shall be given in classroom lectures..., in textbook materials ..., in library materials..., and in other educational programs in public schools, to the extent that [they]...deal in any way with the subject of the origin of man, life, the earth, or the universe" (Arkansas, Act 590).

The American Civil Liberties Union, on behalf of several groups, filed suit to have the Arkansas Creationism Act declared unconstitutional -- in violation of the First and Fourteenth Amendments to the U.S. Constitution. Their suit argued that the state law (Act 590) "(a) constitutes an establishment of religion, (b) abridges the academic freedom of both teachers and students, and (c) is impermissably vague." The suit concluded with this statement: "By initiating this action, plaintiffs are neither anti-religion nor asserting the final truth of any theory of evolution. Many of the plaintiffs are deeply religious and believe religion is important in personal, family, and community life. Other plaintiffs are science professionals committed to the scientific method of inquiry, which necessarily rejects all claims to final truth and perpetually tests for flaws in existing scientific theories. All plaintiffs are united in the firm conviction that religion is strengthened by its complete separation from government and that government-supported education in science is strengthened by its complete separation from religious doctrine" (Scientific Integrity 1(5):1, August 1981).

In January, at the end of the well-publicized federal court case, Judge Overton ruled that creationism is not science and that the Arkansas law is unconstitutional.

How Creationists Argue

It is useful for students to understand how most creationists argue. First, many focus debate by poking holes in the research of biologists, while rarely focusing on proof for their own views. They attack the inconsistencies, the gaps in knowledge, and the controversies of science -- such as the current question about whether evolutionary change has been gradual or jerky. Questions and gaps, they argue, invalidate evolutionary theory.

Second, creationists quote scientists out-of-context. To buttress their arguments, creationists quote other scientists (but seldom biologists) who have remarked negatively on evolution; however, they usually fail to point out that some of these scientists were Darwin's contemporaries.

While creationists are principally anti-evolution, they also try to explain the origin of energy, the universe, and the earth. In doing so they attack anthropology, and also geology, astronomy, nuclear physics, and molecular biology. They must do so because their world view is contradicted by all the physical and social sciences. For example, creationists

argue that geologists (who actually apply many dating techniques) use circular reasoning because they date strata by their fossils and fossils by the strata in which they occur. Creationists attempt to discredit the findings and interpretations of paleontologists. They say that the pre-Cambrian fossil record is virtually blank (for a long time scientists have known otherwise) asserting that this contradicts slow, continuous evolution. Dr. Duane Gish from the Institute of Creation Research notes that Piltdown Man was a hoax and implies that anthropologists, therefore, are vulnerable to believing in hoaxes.

Furthermore, creationists present themselves as scientists; many do have advanced degrees, but usually from obscure Christian fundamental colleges and often in engineering fields. As happened in the Arkansas court case, the "scientists" defending the creationists' stance had not published anything on the subject of evolution and quoted from books written in the 1920's or 1930's.

While trying to argue that creationism is a science like evolution, creationists sometimes switch tactics arguing that evolution is a "religion". Evolution is not a science, they say, because it deals with origins and to say that these origins must be "natural" is as much a religion as to say that they are "supernatural" (Callaghan, p.1). Both evolution and creationism, they say, require acts of faith, since events of the past cannot be tested in a laboratory (Callaghan p.6). They accuse evolution of being only a "theory", using the laymen's meaning of theory as an educated guess, a personal idea. To the scientist, a theory is an ordered system for explaining empirical data. It is based on decades of observation and, when possible, experiments, and has survived the critical analysis of other scientists.

Perhaps the most misleading argument creationists make is that there are only <u>two</u> ways to explain the natural biological world. Creationism, they argue, is the <u>only</u> other view of the origin of life and the universe besides an evolutionary one. Using this simplistic polarity, any argument against evolution is automatically an argument for creationism. If you believe in evolution, you must be a secular humanist and cannot also believe in religion.

Evolution, however, does not ally itself with any religious denominations. Evolution is accepted by Christians, Jews, Moslems, Hindus, and atheists alike. Science is nonreligious; scientists, however, believe in whatever religion they choose. Yet creationists' polarization and their highly ethnocentric views ignore how many other religious views there are to explain creation and the evolution of life. This is only one of the many reasons religious leaders and scholars from the major denominations in the U.S.A. do not want creationism. taught as science. Not only does it bring about an entanglement of church and state, but it also demands a very primitive and restrictive interpretation of <u>Genesis</u>.

<u>Creationism is NOT Science</u>

Why is creationism not science? Science deals with natural phenomena. It compares alternative ideas about what the world is, how it works, and how it came to be. "Some ideas are better than others, and the criterion for judging which are better is simply the relative power of different ideas to fit our observations. The goal is greater understanding of the natural universe. The method consists of constantly challenging received ideas, modifying them, or, best of all, replacing them with better ones" (Eldredge, p.16).

Creationism is a closed system. The Institute for Creation Research abhors experimentation. Instead, it combs available research to see how evidence might be used to substantiate creationist views. The proselytizing role of their research is not hidden.

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TEACHERS CELEBRATE!

Celebration: A World of Art and Ritual opens at the Renwick Gallery of the National Museum of American Art (Pennsylvania Ave. at 17th St., N.W.) on March 17, 1982, and will be on view until June 26, 1983. This major exhibition is cosponsored by the Office of Folklife Programs and the National Museum of American Art and comprises nearly 600 objects assembled from museum collections throughout the Smithsonian Institution. These artifacts, representing rituals, ceremonies, and festivals from cultures throughout the world can serve as valuable instruments for learning and facilitate an unique collaboration between the classroom and the gallery. The thematic categories of celebrations presented in the exhibition are: life experiences (birth, initiation, marriage, and death), work seasonal cycles, religious/spiritual events, and shared community celebrations.

A special Outreach Program has been designed to help teachers use this exhibition to create enriching experiences for their students. A limited number of Workshops are being held in area schools. Overviews of the Outreach Program and slides of objects in the exhibition are presented. Discipline-Linked Workshops and a reception for educators are being held at the Renwick Gallery. For further information, please call the Outreach Program Director at 357-2531. "Let's Celebrate!" which is a supplementary curriculum packet is being distributed to area junior high/middle schools and a special "Objects Speak" tour can be scheduled for classes by calling the Tour Scheduler at 357-3095.

Credit for Teachers Program has been arranged with Prince George's County Public School system and Fairfax County Public School system and is pending in Washington, D.C.

Florence E. Schwein
Outreach Program
Director

NEW PUBLICATIONS

Two publications of interest to our readers are now available. TEACHING ANTHROPOLOGY TO STUDENTS AND TEACHERS: REACHING A WIDER AUDIENCE, edited by Patricia Higgins and Ruth Selig, provides an up-to-date report on the history and status of anthropology teaching along with case studies describing innovative high school anthropology programs and teacher training efforts. The volume includes a guide to further resources on pre-collegiate anthropology. For copies call Ann Kaupp, 357-1592, or send a check for $3.00 to the Anthropology Curriculum Project, 107 Dudley Hall, University of Georgia, Athens, GA 30602.

Should your students major in anthropology? Is there a career future for anthropologists? ANTHROPOLOGICAL CAREERS: PERSPECTIVES ON RESEARCH, EMPLOYMENT AND TRAINING, edited by Ruth H. Landman with Linda A. Bennett, Alison S. Brooks, and Phyliss P. Chock, may provide you with some answers. Published by the Anthropological Society of Washington, the volume begins with an overview of the anthropological employment scene in the Washington area describing both traditional and new jobs held by more than 200 anthropologists. The papers which follow describe research results and some of the novel settings in which anthropologists work, together with the ways in which anthropologists are being trained towards new careers. Order your copy from A.S.W., P.O. Box 57400, Washington, D.C. 20037. Include a check payable to A.S.W.;$8.95 per copy plus $1.00 for postage and handling.

TEACHER'S CORNER: ETHICAL DILEMMAS

This group discussion activity, developed for the George Washington University/Smithsonian Institution Anthropology for Teachers Program, can be used to introduce or conclude a unit on social change, culture conflict, technology, or anthropological theory and method. The format can also be used as a model for any ethics discussion in the classroom.

I. Objectives:

1. students will recognize the difference between a choice based on facts and a choice based on values;

2. students will gain some familiarity with the dilemmas anthropologists face in their fieldwork; and

3. students will gain some understanding of their attitudes or their culture's attitudes toward intervention and change.

II. Procedure:

1. Choose 4-5 students to join you in a discussion of case #1. Arrange this group in front of the class so that your leadership role and the group discussion can be observed.

2. Read the case aloud and then ask the group to analyze the given situation.

a) Ask the group to define exactly what happened? What information is missing?
b) What issues and problems does the case raise and why?
c) What are courses of action the anthropologist could follow and what would be the negative and positive consequences of each?
d) What assumptions are being made by the anthropologist? What values are being expressed?
e) How would "you" have acted in the same situation?

3. As a group leader demonstrate your role by primarily a) asking questions, b) clarifying students' answers, c) linking together various responses, and d) summarizing the insights gained. Be sure to point out to the students that there are no right or wrong answers. They, also like the anthropologist in the field, may not have all the information they would like to have before making their decisions.

4. Divide the class up into 4-5 groups and have each person from the initial demonstration group act as a group leader. Assign each group a case to analyze for 15 minutes, using the same approach outlined above.

5. One person from each group presents a summary of their case and the group's conclusions. As a whole class the teacher and students might consider:

a) How and why do cultures differ in their values?
b) How can ethical dilemmas shape or modify fieldwork research?
c) What, if anything, can be done to prevent anthropologists from getting into ethical binds?
d) What questions need to be asked before introducing change into a culture?

Case 1

Mary Thompson (pseudonym) had been conducting fieldwork in a Southeast Asian community for 18 months. Her house was ideally located on the edge of the village plaza, allowing her to readily observe daily activities which took place in the plaza. In addition to gatherings of women who shared food preparation tasks and talk groups of men working individually on carvings, the plaza was regularly a gathering place for men at night.

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One night while Thompson was working on some statistical problems in her house, she was distracted by loud, seemingly argumentative discussions in the plaza. When the noise of argument reached a high pitch, she decided to investigate the situation. Just as she stepped from her doorway, she saw one of the men in the group of five angrily raise his machete and deliver a deadly blow to another -- Tom (pseudonym) -- in the group. Stunned silence fell over the other three men, as they watched their companion quickly bleed to death before their eyes. Moments later people from other homes began moving into the plaza in response to the wailing which came from the man who had wielded the machete. Mournful crying and wailing was carried throughout the village. The family members of the dead man carried him to their home and began the funeral preparations. The next evening, Tom was buried. The man who had dealt the deadly blow was allowed to participate in the funeral and to make a death payment to the family of the deceased.

Two days after the funeral, three regional policemen came to the village. As part of a new governmental program designed to reduce blood feuds, the regional authorities now regularly sought to arrest and jail people who were involved in killings. They had heard about the recent death.

They began questioning the villagers in an attempt to determine if Tom had been "murdered." Thompson had written a detailed description of the events of the night of Tom's death in her notebook which contained a running record of village activities.

Since she knew the police would question her, should she quickly tear out and destroy the pages in her notebook where the events were recorded? When questioned by the police, should she, like the other villagers, plead ignorance concerning the killing?

Case 2

Roger Thompson had recently spent 18 months in Melanesia with the Grand Lake people. When he was invited to contribute a chapter to a colleague's book on myth, Roger decided to discuss one of the Grand Lake myths about the origin of certain magical powers. The story would illustrate a point that he wished to make about the authority of the shaman in the lives of the people.

After carefully translating the myth, Roger reviewed his field notes to check a few details. As he was turning the pages in his notebook, he discovered that two of them were stuck together. When he separated them, he found that the second page, which had been concealed by the first, contained a few short notes describing how he had come to record the myth, the details of which he had forgotten. According to his notes, he had persuaded the leading shaman in the village to recount the myth provided that Roger promised never to reveal it to anyone else. Suddenly Roger wondered whether he was violating a confidence by contributing a discussion of this myth to his colleague's book.

Case 3

Terry Kelly (pseudonym) received a NIMH grant for research in the Western Tropics. As part of her personal gear, she took along a considerable amount of medication which her physician had prescribed for use, should Kelly find herself in an active malaria region. Later, after settling into a village, Kelly became aware that many of the local people were quite ill with malaria. Since she had such a large supply of medication, much more than she needed for her personal use, should she distribute the surplus to her hosts?

Case 4

Ray Davidson listened in amazement as his student, Frank Sawyer, recounted his reactions to his National Foundation interview. Sawyer had applied for funds to support research for his dissertation and had just recently been interviewed by a foundation representative with regard to his application. He sat across the desk from Davidson, laughing and obviously enjoying his success in "faking out the National Foundation people." Sawyer had flunked his oral exams during the spring term but did not reveal this to his interviewer. Instead, Sawyer told him that he was scheduled to take his orals in the late autumn. The interviewer hinted that Sawyer was very likely to receive funding if he passed his orals.

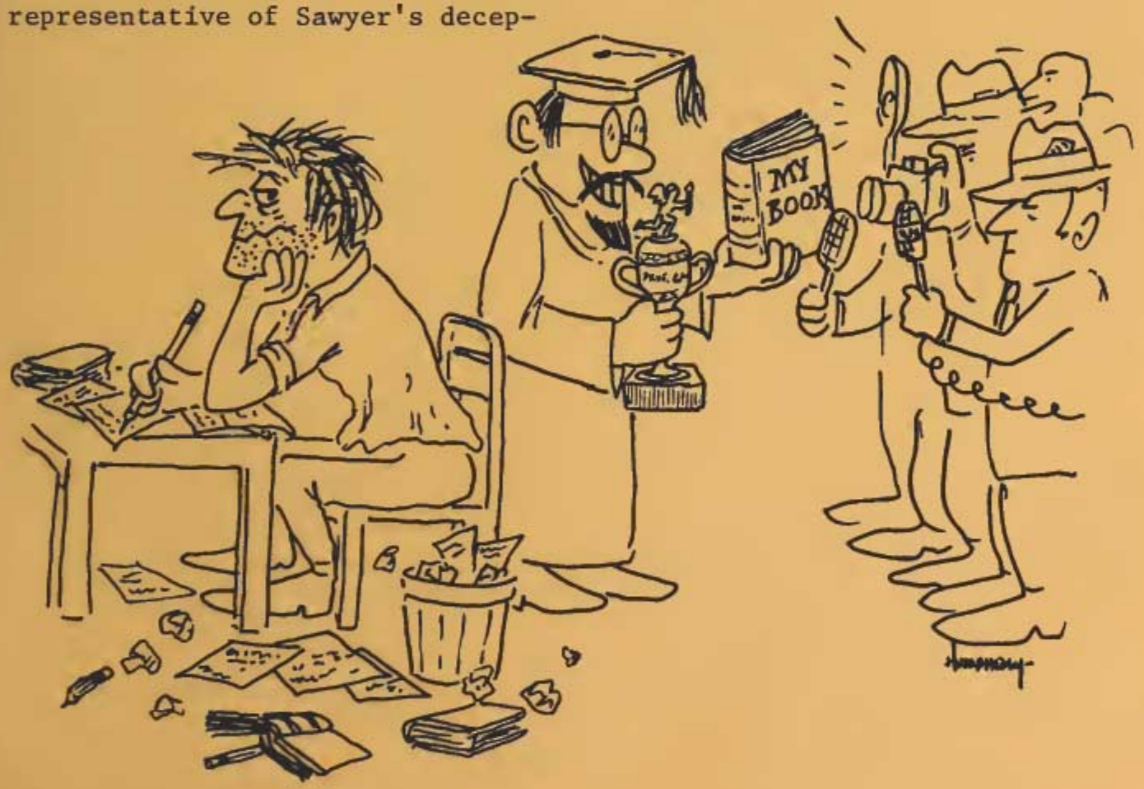
After Sawyer left the office, Davidson wondered what he should do. Although Sawyer had failed his oral exams the first time, he was a good student, and Davidson felt that he would pass the next time. However, he was concerned whether a student with this attitude toward the truth would become a reliable scientist, and whether he might be tempted to skew his data to support his hypotheses. Should Davidson inform the National Foundation representative of Sawyer's deception?

Case 5

M was a disruptive student activist in the sixties, when it was the fad to be a disruptive student activist, but never to the point of "trashing" the administration buildor placing stink bombs in the airconditioning system. I am asked now to evaluate M for a government position. How much ought I to divulge?

Case 6

Laura Bohannon in her book RETURN TO LAUGHTER, describes a dilemma when smallpox begins to rage through an African country. She has been vaccinated but cannot get the people to go to the hospital to get vaccinated by Western doctors. Their way of coping with it, is to banish a person from the tribe as soon as a person contracts smallpox. If Bohannon goes after the banished man to give him food and returns without having smallpox she will be considered a witch. This will mean she can no longer study these people effectively. Would you stay in the tribe or go help the man?



Bibliography for Ethical Dilemmas

(A full bibliography on Anthropological Fieldwork can be obtained from the Editors of Anthro·Notes by calling 357-1592 or writing Ann Kaupp, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560. See also Anthro·Notes 3 (Spring 1981) for bibliography on fieldwork.)

AAA NEWSLETTER. American Anthropological Association, 1703 New Hampshire Ave., N.W., Washington, D.C. 20009.

1981 issues contain a series on ethical dilemmas prepared under the auspices of the Committee on Ethics. (cases 1,3,&5)

"AAA Principles of Professional Responsibility", AAA NEWSLETTER, vol. 11, no. 9, (1970).

The principles cover responsibilities to those studied, the public, the discipline, students, sponsors, one's own government, and host government.

Appell, George N. ETHICAL DILEMMAS IN ANTHROPOLOGICAL INQUIRY: A CASE BOOK. Waltham, MA: Crossroads Press, 1978.

An excellent resource of over 80 cases designed to help sensitize students and anthropologists to the moral consequences of social inquiry. Cases cover such areas as dealing with threats of aggression; intervening in infanticide; perceiving of illegal activities; dealing with theft, medical emergencies, and missionaries; and handling problems in urban ethnic research. (cases 2 & 4)

Bowen, Elenore S. RETURN TO LAUGHTER. New York: Doubleday, 1964.

Laura Bohannon, using a pseudonym, vividly and compassionately describes the joys, problems, and ethical dilemmas of her fieldwork with the Tiv.

Fernea, Elizabeth. GUESTS OF THE SHEIK: AN ETHNOGRAPHY ON AN IRAQI VILLAGE. New York: Doubleday, 1969.

A very absorbing narrative of Fernea's two-year stay in a rural village in southern Iraq and her analysis of the role of women.

Freilich, Morris, ed. MARGINAL NATIVES AT WORK: ANTHROPOLOGISTS IN THE FIELD. Cambridge, MA: Schenkman Publishing Co., 1977.

Five anthropologists describe their personal experiences collecting data and suggest possible solutions for field problems.

Powdermaker, Hortense. STRANGER AND FRIEND: THE WAY OF AN ANTHROPOLOGIST. New York: W.W. Norton and Co., 1966.

In a very readable and dramatic style, the author describes the four major field experiences of her career: 1) Lesu, in the South Pacific (1929-30); 2) a rural Mississippi community (1933-34); 3) Hollywood (1946-47); and 4) an African mining town in Northern Rhodesia, now Zambia (1953-54).

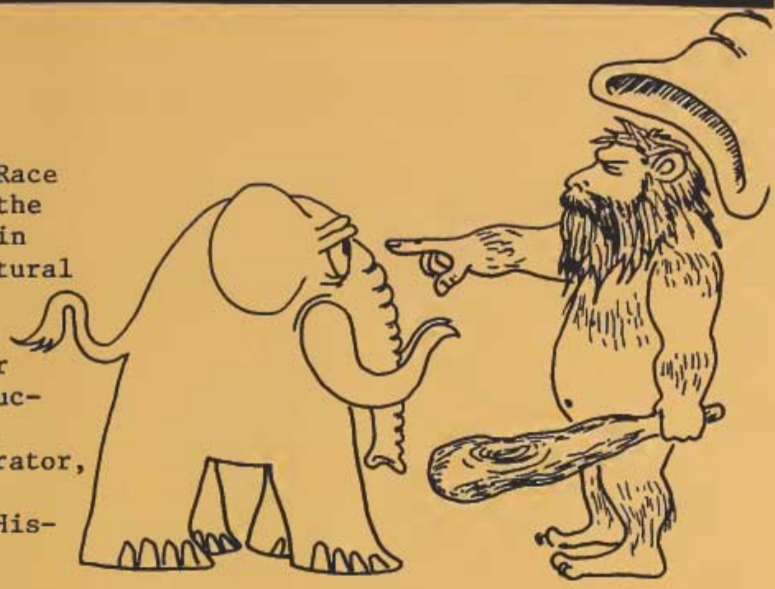
Wax, Rosalie. DOING FIELDWORK: WARNINGS AND ADVICE. Chicago: Univ. of Chicago Press, 1971.

A very readable and thoughtful book that explores the problems of fieldwork in Japanese-American Relocation Centers, on Thrashing Buffalo Reservation, and among the six "friendly" tribes.

Weaver, Thomas, et al., eds. TO SEE OURSELVES: ANTHROPOLOGY AND MODERN SOCIAL ISSUES. Glenview, IL: Scott, Foresman and Co., 1973.

A provocative and thoughtful reader that discusses the contributions of anthropology to contemporary social issues. It addresses the myth of the melting pot, anthropology and the Third World, race and racism, poverty and culture, schooling, violence, our troubled environment and changing the system. It also gives the code of ethics for anthropologists.

UPCOMING EVENTS



March 3 - April 15: "The Vanishing Race and Other Illusions: A New Look at the Work of Edward S. Curtis." Exhibit in Evans Gallery, National Museum of Natural History.

March 12: Film: "In the Land of War Canoes" by Edward C. Curtis. Introduction and comment on film of Kwakiutl culture by William C. Sturtevant (Curator, National Museum of Natural History). Baird Auditorium, Museum of Natural History, 12 noon.

March 15: "Lost Cities: Palenque" by George E. Stuart (Archeologist, National Geographic Society). First lecture of a series of luncheon and evening talks sponsored by Smithsonian Resident Associates. For further information call the Program Office at 357-3030.

March 16: "The Hans Egede Mission: 1721-1728, and Scandinavian Acculturation of the West Greenland Eskimo" by H.C. Gullov (Danish National Museum). Anthropological Society of Washington (ASW) meeting, Gallery Theatre, Museum of Natural History, 8:15 p.m.

March 23: "The Mysteries of Martin's Hundred" by Ivor Noel Hume (Resident Archeologist of Colonial Williamsburg). Discussion of the oldest British domestic settlement discovered in America. For ticket information call Smithsonian Resident Associates Program Office at 357-3030.

March 24: "Paleo-Demography of Teotihuacan" and "Economy and Subsistence at Tlajinga III, Teotihuacan"by Rebecca Storey and Randolph Widmer. Archaeology Lab, Marist Hall, Catholic University, 7:30 p.m.

March 26: Films: "The Rise of Mammals" and "The Marsupials" from LIFE ON EARTH series. Baird Auditorium, Museum of Natural History, 12 noon.

LIFE ON EARTH series on evolution, started January 12, is shown on PBS, Tuesdays at 8 p.m., and is repeated Saturdays at 7 p.m. The Natural History Film and Lecture Series shows the edited 20 minute versions, approximately two each week, Fridays at 12 noon in the Baird Auditorium, Museum of Natural History.

March 31: "Is Structuralism Possible in Historical Archaeology?" by Mark P. Leone. See March 24.

April 16: Films: "A Life in the Trees" and "The Primates" from LIFE ON EARTH series. See March 26.

April 20: "Early Native American-European Contacts: East Coast Overview" by Prof. David Quinn (St. Mary's College). ASW meeting, Gallery Theatre, Museum of Natural History, 8:15 p.m.

April 23: Films: "Upright Man" and "The Compulsive Communicators" from LIFE ON EARTH series. See March 26.

April 28: "Interrelations of Religion and Hunting in Cree Society" by Dr. Regina Hertzfeld and Beth Chambers. See March 24.

TEACHERS AT AAA

Over 100 teachers, educators, and anthropologists attended an all-day workshop on Multicultural Education held at the American Anthropological Association meetings in Los Angeles on Saturday, December 5.

The day's activities began with a paper session organized by the Council on Anthropology and Education's Committee 3 (Teaching Anthropology) on "Innovative Teaching in Anthropology: New Approaches for New Students". Peter Tirrell of the University of Oklahoma's Stovall Museum described several archaeology programs for pre-college students designed by the museum's education staff in cooperation with archeologists and teachers. Patricia Bacot, representing the team of Bacot, Sylvia Flores, and Dolores Reed-Sanders, explained how they had incorporated anthropological content and inquiry methods into their NSF Teacher Development Project on Multiculturalism for teachers in the Rio Grande Valley of southern Texas. Suzanne Spina talked about the rationale, development and results of the Smithtown (New York) High School Ethnography project and called for the establishment of a national network of teachers and classes involved in the ethnographic study of student culture. Finally, Diane Kagan described her use of ethnographic research projects for non-traditional students at Santa Rosa (California) Community College.

Discussant Carol Mukhopadhyay, former secondary teacher and Assistant Professor of Anthropology at California State University, identified several themes linking the paper presentations: the value of collaboration between teachers, college-based anthropologists, and museum personnel; the value of experiences involving students directly in anthropology; the value of ethnographic and archeological research for deepening understanding of different groups and for undermining student stereotypes; the importance of public contacts beyond the school; and an emphasis on the use and teaching of scientific inquiry.

The second discussant, Courtney Cazden of the Harvard Graduate School of Education and President of the Council on Anthropology and Education (1980-81), focused upon the relationship of the papers presented to the overall topic of the workshop, Multicultural Education. "If we take the term 'culture' in multicultural education seriously," Cazden said, "we must then give more consideration to the topics and concepts covered in the papers. If we, as educators, want the scientific method to be used in thinking about human life, then we must use anthropological materials and inquiry processes." Anthropologists, she urged, must become more involved in teacher training and in helping teachers use these materials and processes in multicultural classrooms.

Following the paper session, the workshop continued with several sessions providing materials and specific suggestions for integrating an anthropological perspective into a variety of classroom contexts. Dr. Valesta Jenkins of Berkeley described ways to utilize cultural concepts from Africa, South America, and the Middle East into mathematics programs. Dr. Richard Jacobs took participants through a discussion of ethnocentrism and cultural relativism to help them introduce these same concepts to students.

In the afternoon, Ms. Jo Bonita Perez, Educational Consultant for the Los Angeles County Schools, presented a workshop entitled "Cross-Cultural Perspectives in the Development of Language Arts and Science Programs." Ms. Perez shared several modules and a science program she had developed for the L.A. school system. A final session, "The Use of Media in Multicultural Education", was led by Dr. Denise Lawrence, Director of the Center for the Study of Visual Anthropology at the University of Southern California, and Ms. Pat Seeley, Consultant, Los Angeles County Schools. Dr. Law-

rence showed a videotape on religious home shrines in Mexican American culture, explaining ways the videotape could be integrated into social studies or ethnic studies programs. Ms. Seeley showed a videotape on Africa based on an out-dated film which she uses to develop critical viewing skills in students who analyze the film's stereotypes and ethnocentrism.

Plans are presently underway to make the papers and workshop materials available for wider distribution; details will be announced in a future issue of Anthro·Notes.

Dr. Patricia Higgins,
S.U.N.Y. -Plattsburgh
(Organizer, paper session)

Dr. Yolanda J. Moses,
California State Polytechnic University
(Organizer, workshop session)

IF PSYCH CAN ...

In order to better determine what efforts the Council on Anthropology and Education (C.A.E.) or the American Anthropological Association (A.A.A.) might undertake to further precollege anthropology, a report, "Involvement in Precollege Psychology, A Model for Anthropology," was prepared by C.A.E. Committee #3 (Committee on the Teaching of Anthropology). This report summarizes the history, accomplishments, and organization of the American Psychological Association's (A.P.A.) efforts to promote the teaching of psychology at the secondary level.

According to the U.S. Registry of Junior High and Senior High School Social Science Personnel published by the National Science Teachers Association, there were 9,658 teachers of psychology in 1981, and 3,929 teachers of anthropology. As psychology is the largest member organization among the social sciences (65,000 members), perhaps these statistics are not surprising. Although the number of anthropology teachers is far smaller than that of psychology, the number is nevertheless substantial and growing (in 1976 the registry showed 3,619). Perhaps this is a good time to assess what the A.P.A. has done for secondary psychology teaching over the past three decades in order to better weigh the alternatives facing anthropology today. Below is reprinted the concluding section of the report.

"Since the 1950's the American Psychological Association has had a commitment to precollege psychology. During the 1960's that commitment encouraged curriculum development, teacher training, and long-range planning for A.P.A.'s involvement in secondary school concerns. In 1963 an affiliate program within the A.P.A. was established; in 1968 a clearinghouse for materials dissemination took shape; and in 1971 a teachers' newsletter began. Since 1968 paid professional staff in the national office supported the increased activities of the A.P.A.'s Committee on Precollege Psychology. In the 1970's this combination of Committee and paid staff produced impressive and continuing accomplishments in the areas of publications, curriculum development, teacher training and certification, and general service to the growing number of high school psychology teachers.

In some ways precollege anthropology appears to be at a stage similar to that of precollege psychology at the beginning of the 1960's, when the A.P.A. decided to make a firm commitment to encourage precollege

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psychology. Increased awareness of anthropology nationwide has produced a growing interest on the part of teachers and students in incorporating more anthropology at the precollege level. There have been a few workshops and precollege teacher development in science programs in anthropology funded through the National Science Foundation. Some curriculum development has taken place, and there are now many materials available for the secondary classroom. In addition, the Washington, D.C. Anthropology for Teachers Program has produced some results similar to those of the A.P.A.'s Committee on Precollege Psychology: a newsletter Anthro·Notes now reaches 2,000 teachers and others interested in precollege anthropology; and the Anthropology Resource Center for Teachers functions somewhat like the early psychology Clearinghouse, bringing materials together and furthering their dissemination through bibliographies, listings and guides. Staff from the program provide courses for teachers and act as a resource for inquiries regarding secondary anthropology which increasingly come from all over the country.

Much more needs to be done. In particular, there is a serious need for an up-to-date high school textbook in anthropology or a combination anthropology/sociology text. Survey work is needed to assess the status, state by state, of anthropology in the secondary classroom and of the preservice and inservice training of teachers. Surveys of the certification requirements are also needed in order to develop a plan to increase the visibility of anthropology at all levels of teacher training.

Finally, a crucial and continuing need exists for the American Anthropological Association to make a commitment at the national level to the encouragement of precollege anthropology. At a time when the profession is concerned with enabling its ranks to grow and to incorporate new directions for its members, the association should direct some attention to encouraging a broader understanding of anthropology through its wider acceptance in the precollege curriculum. A staff member in the national office should establish a program to promote the teaching of anthropology at all levels of the precollege curriculum.

(This report was submitted to the C.A.E. Board of Directors at the 1982 A.A.A. meetings in L.A. Copies may be obtained from Ruth Selig, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560.)

FREE MATERIALS

The Anthropology for Teachers Program is presently preparing a packet of resource materials for teaching anthropology. This packet will be available free-of-charge in May. Write to Ann Kaupp, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560 or call 357-1592 in order for your name to be placed on the distribution mailing list. Materials in the packet will focus on eight anthropology topics which can be integrated into a wide variety of pre-college science and social studies classes: Primates, Human Evolution, Civilizations of the Past (Archeology), Anthropological Fieldwork, Growing Up in Africa, Native Americans, Human Variation, and Looking at America. A request can be made for the whole packet or any selection of topics.

(from page 3)

Creationists do not submit papers to scientific journals, or attend scientific conferences, or participate in the other procedures and methods of scientists. Creationism is not able to make any predictions and cannot be disproven because it does not depend on natural, observable phenomena, but on the supernatural. Acts of God elude scientific analysis and cannot be measured by application of scientific methods.

Creationists argue that their "theory" of faith is true and must be true. This is antithetical to the basis of scientific inquiry. Instead of revising ideas to reflect the world as it is observed, they start from the Bible. "To be unwilling to revise a theory to accommodate observation is to forfeit any claim to be scientific. For it is not facts or theories that are essential to the growth of science but rather the process of critical thinking, the rational examination of evidence, and an intellectual honesty enforced by the skeptical scrutiny of scientific peers. By these standards creationism is not science" (Science 81, December, p.57).

Ask yourself, how would you teach creationism as science if an "equal time" law were passed in your state? What is "equal time"? What would you say is the "equal" evidence? How would you scientifically verify events in Genesis?

Why Creationism Persuades

Creationism has a certain appeal precisely because people can believe in it fervently. In addition, Americans are open to arguments for "equality" and "fairness". Creationists sound persuasive when they argue that precluding creationism from science classes is unfair and represents a censorship of free speech. Many people do not realize that creationism is not science and that creationism as a religion is not being censored.

Some people think a school should be a marketplace of ideas in which students choose what is "right" and "wrong". But teachers include those theories and data that have the most credibility, research, and acceptance by the scientific community. There are many out-dated ideas that are not taught, such as the earth is flat or that the sun revolves around the earth.

With the explosion of biological knowledge in the last 20 years and unfortunately with the absence of much of this new information from high school textbooks, a gap in understanding exists today between biologists and the public. If people do not have a solid science background, they can misunderstand what true science is about, and may easily accept pseudo-science.

Education often gives the false impression that science is a rigid obedience to paradigms. Science in many secondary schools encourages far less critical thinking than do the humanities. As a result, students often see science as an absolutist discipline, one that may seem little different in tone from the absolutist quality of creationism.

And, of course, creationists, with their extensive use of the media, can also touch a responsive chord among those who feel society is too secular, that schools are not reinforcing the religious values taught at home, and that scientists "control" their lives too much.

But the panacea to those concerns is not creationism. It will not help students to teach them Biblical literalism as a science, when ways of knowing and terms are confused, when the senses are denied, and when the least knowledgeable people are mandating textbook and curriculum content.

(over)

As Niles Eldredge, Curator of the Department of Invertebrates at the American Museum of Natural History in New York, wrote: "The only real defense against such tactics lies in the true application of the scientific enterprise -- the trial-and error comparison of ideas and how they seem to fit the material universe. If the public were more aware that scientists are expected to disagree, that what a scientist writes today is not the last word, but a progress report on some very intensive thinking and investigation, creationists would be far less successful in injecting an authoritarian system of belief into curricula supposedly devoted to free, open rational inquiry into the nature of natural things"(p.20).

Bibliography

Callaghan, Catherine A. "Evolution and Creationist Arguments," THE AMERICAN BIOLOGY TEACHER 42 (October 1980): 422-427.

Over 20 different arguments that creationists use to attack evolution are given and refuted, in an easy to use form for the classroom.

"The Creationists," SCIENCE 81 (December 1981): 53-60.

The supplement contains two helpful articles -- "Creationism as Social Movement" by John Skow and "Creationism as Science" by Allen Hammond and Lynn Margulis.

Eldredge, Niles. "Creationism Isn't Science," THE NEW REPUBLIC (April 4, 1981): 15-20.

In an excellent article, some of the major differences between creationism and science are explained as well as a refutation of creationists' criticisms of evolution as scientific theory.

Godfrey, Laurie. "The Flood of Anti-evolutionism," NATURAL HISTORY (June 1981): 4-10.

Describes briefly the development of creationist groups since 1963, their methods of argumentation, and most importantly, how they are using the punctualists' ideas incorrectly to attack evolution.

Lewin, Roger. "Creationism on the Defensive in Arkansas," SCIENCE 215 (1 January 1982): 33-34; "Where is the Science in Creation Science?" SCIENCE 215 (8 January 1982): 142-146; "A Tale With Many Connections," SCIENCE 215 (29 January 1982): 484-487.

Moyer, Wayne A. "The Implications of Balanced Treatment," paper presented at the Charlotte meeting of the North Carolina Science Teachers Assoc., November 13, 1981. For a copy contact, Executive Director, National Association of Biology Teachers, 11250 Roger Bacon Dr., #19, Reston, VA 22090. The NABT also publishes the newsletter,SCIENTIFIC INQUIRY,which focuses on the court cases, challenges to school boards, and actions teachers can take.

"The Nature of Knowledge," THE ECONOMIST (26 December 1981): 99-104.

An excellent article that cogently provides a history of scientific knowledge with synopses of the impact of Popper's, Kuhn's and Laudan's philosophies, the role of induction and deduction, the existence of scientific methods, the difference between physics and biology, and the nature of scientific truth.

JoAnne Lanouette

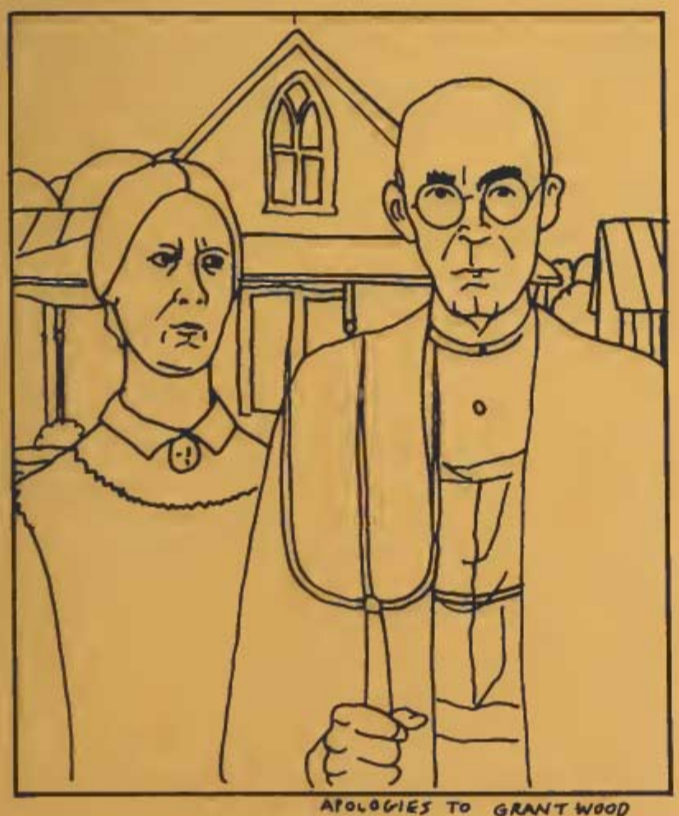
MIDDLETOWN

Beginning on March 24, 1982 and continuing for six consecutive Wednesdays, a new television series "Middletown" will explore the contemporary condition of the American dream. Made by award-winning documentary filmmaker Peter Davis, "Middletown" was inspired by the watershed community studies of Robert and Helen Merrell Lynd. During the 1920's and 1930's, the Lynds went to Muncie, Indiana to probe the basic structures and values of American life. They code-named the community Middletown. The TV series focuses upon the same six areas studied by the Lynds: politics, leisure, work, religion, marriage, and education, with a separate film devoted to each.

In a recent letter to Anthro·Notes, Davis explained:

> I am trying, in the Middletown films, to understand American Society just as Robert and Helen Lynd did in the Middletown books. My colleagues and I are telling stories about Muncie using the crises and confrontations of everyday life to explore the meaning of America in six areas frequently studied by anthropologists.

Study Guides will be available for $1.50 (26-100 copies $1.25) from Cultural Information Service, P.O. Box 92, New York, New York 10156; (212) 691-5240.



APOLOGIES TO GRANT WOOD

ASW

Are you interested in free stimulating lectures on a variety of anthropology topics, and perhaps dinner with the speaker beforehand? Would you like to receive a newsletter giving you anthropology news in Washington? Would you enjoy a special Saturday symposium, a potluck supper, a gala exhibit reception? Then you should become a member of the Anthropological Society of Washington (ASW). The oldest anthropology society in America was founded in 1879 by John Wesley Powell, then Director of the Smithsonian Institution's Bureau of American Ethnology. The Society continues to "promote the scientific study of man" through its newsletter, publications, and meetings held the third Tuesday of each month. Membership is open to anyone interested in anthropology.

To join ASW, simply write a check for $10.50 payable to ASW and send it with your name and address to ASW, P.O. Box 57400, Washington, D.C. 20037. By joining now, you will receive (free-of-charge) the new ASW publication ANTHROPOLOGICAL CAREERS: PERSPECTIVES ON RESEARCH, EMPLOYMENT AND TRAINING (see p.4 for description).

ANTHRO·NOTES is part of The Anthropology for Teachers Program. This program is funded by the National Science Foundation and conducted by the Anthropology Departments of George Washington University and the Smithsonian Institution. Program Staff: Dr. Alison S. Brooks, Director; JoAnne Lanouette and Ruth O. Selig. If you want information about the program or your name added to the mailing list, write: Ann Kaupp, Department of Anthropology, National Museum of Natural History, Stop 112, Smithsonian Institution, Washington, D.C. 20560.

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