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*Applying Anthropology: An Introductory Reader* is a fascinating collection of articles that shows how and why anthropologists study humankind. Through readings that span the subfields of anthropology (cultural, physical, archaeology, and linguistics), we see anthropologists at work solving contemporary problems.

Cover photo: From calipers to computers, forensic anthropologists use tools such as these in studying human body measurements and skeletal anatomy to solve mysteries. For an overview of one forensic anthropologist's career, turn to the profile of Clyde Snow in this volume, "No Bone Unturned."



Members of Clyde Snow's six-person Argentine forensic anthropology team—four anthropology students and two medical students—examine the skeleton of one of the *Desaparecidos* ("the disappeared ones") killed by Argentine military death squads between 1976 and 1979. (Note the bullet holes in the skull.)

Clyde Snow has devoted a lifetime to forensic anthropology investigations; he was one of the experts asked to review the Warren Commission's investigation of the assassination of President Kennedy. This book contains an account of one of Snow's cases: "The Oklahoma City Child Disappearances."

**Other Mayfield books of interest:**

John H. Bodley, *Anthropology and Contemporary Human Problems*, Second Edition

John H. Bodley, *Tribal Peoples and Development Issues*

John H. Bodley, *Victims of Progress*, Third Edition

Kenneth L. Feder, *Frauds, Myths, and Mysteries: Science and Pseudoscience in Archaeology*

Daniel R. Gross, *Discovering Anthropology*

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Introduction: Understanding Humans and Human Problems 1

## PART ONE BIOLOGICAL ANTHROPOLOGY

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### 1 Teaching Theories: The Evolution-Creation Controversy 6

ROBERT ROOT-BERNSTEIN AND DONALD L. MCEACHRON (*The American Biology Teacher*, October 1982)

Through a comparison of evolution and creationism, this article examines the logic of scientific inquiry and the characteristics of scientific theory. Scientific theories are testable and correctable, which is why they lead to new and useful knowledge.

### 2 What Are Friends For? 15

BARBARA SMUTS (*Natural History*, February 1987)

"Friendship" between adult males and females is an important part of the society of olive baboons of Kenya. These mutually beneficial long-term relationships are usually based on female choice and are only indirectly related to sex. Observations of nonhuman primates make anthropologists rethink the origin and nature of human sociality.

### 3 Lucy 21

DONALD JOHANSON AND MAITLAND A. EDEY (from *Lucy: The Beginnings of Humankind*, 1981)

Paleoanthropological field research can be incredibly exciting, as in the discovery of Lucy, an *Australopithecus afarensis* fossil of unprecedented completeness and antiquity. Such important fossil discoveries as Lucy raise new questions and force the redrawing of our evolutionary family tree.



#### **4 The Search for Adam and Eve 26**

JOHN TIERNEY, LYNDIA WRIGHT, AND KAREN SPRINGEN (*Newsweek*, January 11, 1988)

Using techniques of molecular biology on human mitochondrial DNA, which is inherited exclusively through the female line, researchers speculate about the age and location of a common ancestor—"Eve"—for all modern humans.

#### **5 The Extinction of *Homo sapiens* 32**

BARRY BOGIN (*Michigan Quarterly Review*, Spring 1985)

The fossil record shows that most species that have evolved are now extinct, primarily because they were unable to adapt to a changing environment. Will modern humans, who are rapidly degrading our environment, be exempt from such a fate?

#### **6 Ancient Genes and Modern Health 40**

S. BOYD EATON AND MELVIN KONNER (*Anthroquest*, Winter 1985)

Many of the serious health problems confronting us today may be the result of an incongruity between our genetic heritage as descendants of hunter-gatherers and our current diet and lifestyle. The study of Paleolithic people may be the key to a healthy life.

#### **7 Racial Odyssey 44**

BOYCE RENSBERGER (*Science Digest*, January/February 1981)

Biological variation among contemporary humans is fascinating and complex. Simple racial taxonomies have no scientific value, but much of the human variation can be explained by the process of natural selection.

#### **8 Profile of an Anthropologist No Bone Unturned 51**

PATRICK HUYGHE (*Discover*, December 1988)

Throughout his career, Clyde Snow has used the skills of the physical anthropologist in studying human body measurements and skeletal anatomy to solve mysteries.

#### **9 The Oklahoma City Child Disappearances: Forensic Anthropology in the Identification of Skeletal Remains 57**

CLYDE C. SNOW AND JAMES L. LUKE (*Journal of Forensic Sciences*, April 1970)

The detailed analysis of a child's skeleton found in a shallow grave shows that a process of hypothesis testing is necessary for proper identification of a murder victim.

#### **10 Engineering Anthropology: Past, Present, and Potential 64**

H.T.E. HERTZBERG (from *The Uses of Anthropology*, 1979)

Expertise in human anatomy and human variation makes the contributions of anthropometry (the anthropological study of human body measurements) important for the design of aircraft seats, crash dummies, and clothing.



**11 What's New in Archaeology? 78**

COLIN RENFREW (*UNESCO Courier*, July 1985)

Although the goals of archaeology—establishing chronologies and describing earlier lifeways—remain the same, new technologies are being used to analyze archaeological sites and artifacts.

**12 Opportunities in Cultural Resources Management 82**

ALLEN G. PASTRON (1988)

Since the enactment of national historic preservation legislation in the 1960s and 1970s, many archaeologists have entered the expanding field of Cultural Resources Management (CRM). CRM research, which seeks to evaluate and preserve the nation's cultural heritage, has provided archaeologists with a new set of challenges and opportunities.

**13 Fingerprints in the Sand 86**

RICHARD MONASTERSKY (*Science News*, December 1990)

Archaeologists are interested in describing and understanding the prehistoric past and not in artifacts as "things" for a collection. The looting of archaeological sites is a crime. Sophisticated new technologies are being used by both archaeologists and federal prosecutors to arrest and convict archaeological thieves.

**14 Disease and Death at Dr. Dickson's Mounds 90**

ALAN H. GOODMAN AND GEORGE J. ARMELAGOS (*Natural History*, September 1985)

The intensification of maize agriculture among prehistoric Native Americans of the Mississippian period combined with their involvement in a trading network led to a drastic decline in their health.

**15 The Worst Mistake in the History of the Human Race 95**

JARED DIAMOND (*Discover*, May 1987)

The agricultural revolution has long been considered one of the most important transformations in human history. But was it for the better or worse?

**16 Profile of an Anthropologist  
From Tikal to Tucson: Today's Garbage Is Tomorrow's Artifact 99**

(*Anthropology Newsletter*, 1981)

Archaeologist William Rathje shifts his research from ancient Maya to modern America and invents garbology.

**17 Food Waste Behavior in an Urban Population 102**

GAIL G. HARRISON, WILLIAM L. RATHJE, AND WILSON W. HUGHES (*Journal of Nutrition Education*, January/March 1975)

Archaeological research methods applied to the study of garbage in American society lead to new insights into consumer behavior and realistic policies for our current waste disposal crisis.



**18 Dawn of a New Stone Age in Eye Surgery 108**

PAYSON D. SHEETS (1987)

An anthropologist applies his knowledge of the stone tool-making technology of ancient Maya to the manufacture of surgical scalpels; his obsidian blades are more than 200 times sharper than the surgical steel scalpels currently in use.

**PART THREE CULTURAL ANTHROPOLOGY****111****CULTURE****19 Space Speaks: How Different Cultures Use Space 114**

EDWARD T. HALL (from *The Silent Language*, 1959)

Hidden cultural meanings of the rules of social interaction become evident through an examination of the cultural uses of space. The meaning and definition of personal space vary considerably from one society to another.

**20 Swimming in Cross-Cultural Currents 123**

CONRAD PHILLIP KOTTAK (*Natural History*, May 1985)

A comparison of the meaning of "time" and how it affects the organization of competitive swimming in Brazil and the United States reveals important, although subtle, differences between these two cultures.

**21 Body Ritual Among the Nacirema 129**

HORACE MINER (*American Anthropologist*, 1956)

The examination and analysis of the rituals of this tribe shed light on the meaning of culture and help us reflect on our own way of life.

**22 Just Another Night on Crack Street 133**

PHILIPPE BOURGOIS (*New York Times Magazine*, November 12, 1989)

While some anthropologists travel long distances to find exotic cultures, others stay closer to home. During fieldwork in a New York crack house, the author comes face to face with the culture of terror.

**CULTURE AND COMMUNICATION****23 Shakespeare in the Bush 139**

LAURA BOHANNAN (*Natural History*, August/September 1966)

Laura Bohannan finds great difficulty in communicating the dramatic themes (and basic story line) of *Hamlet* to the Tiv of Nigeria. Assumptions about human motivations, morality, and the nature of reality are embedded in a cultural context and limit the possible understanding of the story. Great art does not necessarily transcend cultural boundaries.



**24 Problems in Pocatello: A Study in Linguistic Misunderstanding 145**

BARBARA JOANS (*Practicing Anthropology*, Volume 6, Numbers 3 & 4, 1984)

An anthropologist is called as an expert witness in a dispute between the Social Security Administration and six Bannock-Shoshoni Native American women. At issue is the ability of bilingual speakers to understand bureaucratic language.

**25 Living Abroad: Cross-Cultural Training for Families 149**

LILLIAN TRAGER (*Practicing Anthropology*, Volume 9, Number 3, 1987)

Training programs are extremely important for employees and their families who are going abroad. Anthropologists can make a special contribution.

**CULTURE AND AGRICULTURE****26 Agricultural Development and the Quality of Life 153**

PEGGY F. BARLETT AND PETER J. BROWN (*Agriculture and Human Values*, 1985)

Agricultural development does not necessarily bring about an increase in the "quality of life." Economic change radically alters different societies' perceptions of life circumstances and life satisfaction.

**27 The Domestication of Wood in Haiti: A Case Study in Applied Evolution 161**

GERALD F. MURRAY (*Anthropological Praxis*, 1987)

Using his anthropological knowledge of Haitian peasants, Gerald Murray designs and administers an astoundingly successful reforestation project. Wood as a cash crop makes good economic sense to Haitian farmers, and, as a consequence, both production and agricultural earnings increase.

**ECONOMY AND BUSINESS****28 In Search of the Affluent Society 171**

ALLEN JOHNSON (*Human Nature*, September 1978)

A comparison of Machiguenga Indians of Peru and middle-class Parisians raises questions about the meaning of affluence. Who has more leisure time?

**29 Eating Christmas in the Kalahari 179**

RICHARD BORSHAY LEE (*Natural History*, December 1969)

When the !Kung San make fun of an ox that the anthropologist wants to give the group for a Christmas feast, Richard Lee learns about the important value of reciprocity in a food-foraging band.

**30 Coping with Cultural Polyglots 184**

CLAUDIA H. DEUTCH (*New York Times*, February 24, 1991)

Anthropological field methods are applied to the study of corporations and promote understanding of employees as well as consumers.



### **31 If Only They Would Listen: The Anthropology of Business and the Business of Anthropology 186**

S. BRIAN BURKHALTER (*Practicing Anthropology*, Volume 7, Number 4, 1986)

The methods used to analyze the social and cultural dimensions of economic exchange among exotic tribal cultures are equally effective in the American corporation. Anthropologists have much to offer the business community through their study of "corporate culture."

## **SEX ROLES AND SOCIALIZATION**

### **32 Society and Sex Roles 192**

ERNESTINE FRIEDL (*Human Nature*, April 1978)

Equality between men and women is the product of the social organization of food production and the control of scarce resources. Cross-cultural comparisons of hunter-gatherer groups reveal marked variation in equality between the sexes. Such comparisons contain important lessons for our own society.

### **33 When Brothers Share a Wife 198**

MELVYN C. GOLDSTEIN (*Natural History*, March 1987)

Fraternal polyandry, a rare form of plural marriage, has both benefits and costs for the people of Tibet. Given the economy and ecology of this area, the practice of polyandry has adaptive functions.

### **34 The Four-Year Itch 203**

HELEN E. FISHER (*Natural History*, October 1987)

Ethnographic evidence suggests that marriage is a human universal, but it also suggests that divorce and remarriage are common occurrences in all societies. The institution of marriage obviously serves important social and biological functions for reproduction and child care. The frequency of divorce in a four-year-cycle, however, might be best understood from an evolutionary perspective.

### **35 American Schoolrooms: Learning the Nightmare 209**

JULES HENRY (*Columbia University Forum*, Spring 1963)

In addition to reading, writing, and arithmetic, American children learn fundamental cultural values at school. One of the most important lessons is the fear of failure in our competitive society.

## **POLITICS, LAW, AND WARFARE**

### **36 The Kpelle Moot 216**

JAMES L. GIBBS, JR. (*Africa*, Volume 33, Number 1, 1963)

The informal moot, a method of resolving disputes among the Kpelle of Liberia, is significantly different from our court system. It emphasizes the mending of social relations between the disputing parties; the process of the hearing is therapeutic. The moot is a useful alternative model for settling disputes in our own society.



### **37 Contemporary Warfare in the New Guinea Highlands 224**

AARON PODOLEFSKY (*Ethnology*, 1984)

Intertribal warfare flares up in the highlands of Papua New Guinea even after decades of relative peace. To understand why, anthropologists focus on changes in the local economic system that have, in turn, changed marriage patterns.

### **38 Flaming Crosses and Body Snatchers 233**

DAVID L. KERTZER (from *Ritual, Politics, and Power*, 1988)

Kings, revolutionaries, presidents, and even the Ku Klux Klan use symbols and rituals to build their political organization. Political ritual is not trivial fanfare, but a cross-cultural mechanism for getting and maintaining power.

## **SYMBOL, RITUAL, AND CURING**

### **39 Hallucinogenic Plants and Their Use in Traditional Societies 242**

WADE DAVIS (*Cultural Survival*, 1985)

The author, whose writing about psychoactive plants and *zombis* in Haiti has stirred controversy, surveys the use and functions of hallucinogenic plants in other societies. Particularly in traditional South American Indian societies, hallucinogens play a central role in religion and ritual.

### **40 The Integration of Modern and Traditional Health Sectors in Swaziland 246**

EDWARD C. GREEN (*Anthropological Praxis*, 1987)

A shortage of biomedical health care personnel in developing countries might be eased by incorporating traditional healers into the health care delivery system. The first step in this cooperation is a survey of traditional healers and their activities.

### **41 Ritual in the Operating Room 252**

PEARL KATZ (*Ethnology*, Volume 20, Number 4, 1981)

Rituals exist in both sacred and secular contexts, and ritual behavior is an integral part of modern surgical procedures.

## **SOCIAL AND CULTURAL CHANGE**

### **42 AIDS as Human Suffering 263**

PAUL FARMER AND ARTHUR KLEINMAN (*Daedalus*, Spring 1989)

In the past decade the AIDS epidemic has spread throughout the world. Social reactions to the threat of this terrible and lethal disease vary between cultures; in this selection, medical anthropologists compare the experience of people dying from AIDS in the United States and Haiti. The suffering caused by AIDS is both biomedical and cultural.

### **43 Advertising and Global Culture 272**

NOREENE JANUS (*Cultural Survival*, Volume 7, 1983)

The expansion of the world economic system depends on the creation of new consumer demands through advertising. Do developing countries have the right to reject mass advertising for products that their citizens cannot afford?



## **44 The Price of Progress 276**

JOHN H. BODLEY (from *Victims of Progress*, 1990)

Economic development, sometimes called "progress," can bring about unintended social and medical consequences, especially for marginalized tribal peoples. New disease burdens, ecological degradation, and increased discrimination are among the hidden costs of economic change for many people.

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