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A Reference Guide

THE
BIBLIOGRAPHY
OF
HUMAN BEHAVIOR

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Bibliographies and Indexes in Anthropology, Number 7



GREENWOOD PRESS
Westport, Connecticut • London

Preface

This bibliography is meant to facilitate access to the literature on human behavior and psychology based on the biological sciences. The decision to spread the net widely was prompted partly by the need for a guide to the traffic across disciplinary boundaries, and partly by the proliferation of new applications from basic disciplines to once remote subjects.

The intention has been to select the best and the latest from an eligible literature of about 60,000 titles. About 80 percent of our entries were published after 1979. The editors have nevertheless been mindful of classics. Charles Darwin, needless to say, is a vital if ambiguous force in contemporary research, but Romanes, Lashley, Spearman, Yerkes, Lorenz, and other major contributors are included in the title lists.

The criteria for inclusion were the attributes of the good scientific article: novelty and adequacy of concepts and data, methodological soundness or innovation, significance of the findings, and suggestiveness toward further research. Concept formation and criticism, especially where evolutionary ideas or mind-brain relations are involved, inspires a sizable speculative literature. It is represented here, together with the critical debates that seem to be its leaven.

Various procedures have been used to identify publications having the desired features. The principal method was to develop bibliographies of specific fields in collaboration with professional associations or research centers. Their contributions have varied in kind and degree, but in aggregate they have been essential to the validity of our title lists.

For fields in which such collaboration was not established, the editors relied primarily on the consensual ranking of journals. Articles appearing in leading specialist journals were deemed to be more eligible for inclusion than articles appearing elsewhere. For books and edited volumes, reviews appearing in journals specializing in reviews have been a guide; the standing of a series or a publisher were also taken to be indicative as was the standing of individuals,

research centers, and laboratories. In addition, we obtained from a number of investigators their own nominations of their best publications.

Estimates of standing were not derived from a formal methodology. This presents no difficulty with respect to professional associations, which the bibliographer may assume to represent the considered judgment of a particular field. More refined title selection uses bibliometric methods. This option was not pursued because we doubted that the quality enhancement so obtained would be cost-effective.

Standard on-line and printed bibliographies have been used for title searches, but they are of limited value. We found that the most effective means of compiling title lists was to examine publications directly on the library shelf. On-line systems were however indispensable for title verification. They were accessed through AARNet, which links Australian research institutions with on-line data bases world-wide. The Harvard University HOLLIS system and the University of Melbourne library were the sources most often tapped for title verification.

We have elected to classify titles by discipline, and in a few cases by sub-field topic. This approach anchors our lists in the research mainstreams from which they spring. The disadvantage is that so much research crosses disciplinary boundaries. It is possible for a study of an emotion to be assignable to psychiatry because of a morbidity element, to neurology because of a neural reference, and to endocrinology because of a hormone reference. Thus our sub-field file, *Sexuality*, is based primarily on endocrinology, but there is substantial in-put from studies of personal and cultural experience of sexual expression. Some of these investigations are conducted by endocrinologists, but ethologists, sociobiologists, sexologists, and psychiatrists also contribute. Again, *Parenting* is anchored in inclusive fitness investigations and studies of attachment, but other fields also figure. The moral is that the disciplinary origin of a title does not determine its location in our lists. The indexes have been compiled to provide additional paths through these ambiguities.

The most heterogeneous file is *History and Philosophy*; the most promiscuous subject is evolutionary theory. The simple solution to the latter problem was to establish an *Evolutionary Theory* title list. However, much evolutionary theory has no direct bearing on human behavior, whereas some disciplines, such as sociobiology, engage substantially in evolutionary theory, or a branch of it. In this

predicament, we have substantially on philosophy list. Or signed to Human Evolution it to another list. Numerous general entries because of their apparent influence the orientation

The history of ideas Darwin and successful history of the behavior such titles are included the man and his theories studies over the past that prevailed at the that Darwin's dependence reaches to the core by natural selection. ical demonstrations ing agency, while c tion. The personal aptness for resolving extinction integral the belief in the triune century, by detailing gists.

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predicament, we have classified evolutionary theory titles that bear substantially on philosophical or paradigm issues in the History and Philosophy list. Other general evolutionary theory has been assigned to Human Evolution, unless there is a subject angle that directs it to another list, such as Sociobiology or Behavior Genetics. Numerous general evolutionary theory titles have been included not because of their application to human behavior but because they influence the orientation of empirical investigation.

The history of ideas territory covered is the domain of Charles Darwin and successors. No effort has been made to represent the history of the behavioral sciences, although a sufficient number of such titles are included to provide indications of the literature. As for the man and his theory, the bibliography tracks the outpouring of studies over the past decade that have substantially revised the view that prevailed at the time of the Darwin centenary. It is now believed that Darwin's dependence on the natural theology of William Paley reaches to the core of his "long argument" for the origin of species by natural selection. On this view, Darwin accepted Paley's zoological demonstrations of adaptation as the evidence of a central directing agency, while changing the agency from God to natural selection. The personal motivation for this shift, it now seems, was its aptness for resolving the problem of evil by making adversity and extinction integral to the life process. Historians have also revised the belief in the triumph of Darwinism, by the end of the nineteenth century, by detailing numerous criticisms from a diversity of biologists.

The ferment of ideas has been abundant in the past two decades. The extinctions controversy of the Seventies featured, among other things, a replay of the contention between Uniformitarians and Catastrophists. The now general acceptance of some major and many minor asteroid collisions seems to have shifted the balance, for the time being, to the Catastrophists (Raup 1986).

The consensus that *Homo* evolved in a savannah environment was challenged in the Eighties by revival of Alister Hardy's proposal that many details of human adaptation point to an aquatic phase of human evolution (Roede 1991). Meanwhile the rival chronologies of recent evolution, based on paleobiology and molecular methods, respectively, have enriched evolutionary thought by adding exact laboratory methods to the traditional morphological approach to phylogeny.

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At the Darwin centenary, the central thesis of neo-Darwinism was characterized as the belief that evolutionary change derives from small genetic changes under selection pressure. This thesis has been contested during the period covered by this bibliography. In 1982 the *Journal of Social and Biological Structures* published a manifesto proclaiming the successor to neo-Darwinism, Constructional Biology. At about the same time, an exponent of punctuated equilibrium avowed that neo-Darwinism "is effectively dead, despite its persistence as textbook orthodoxy." The 1984 Ho and Saunders volume, *Beyond Neo-Darwinism*, and the 1985 Depew and Weber edited volume, *Evolution at a Crossroads: The New Biology and the New Philosophy of Science*, were further signs of conceptual trends and empirical breakthroughs that include the discovery of somatic hypermutation, an apparent Lamarckian inheritance mechanism.

This ferment, important as it may be, has not substantially influenced the great body of our titles, whose orientation is unambiguously neo-Darwinian. The enormous surge of innovative ethological and sociobiological studies throwing very new light on human behavior is proof against premature epitaphs. No doubt fractal mathematics, by describing previously unexplored nonlinear phenomenon, has promoted catastrophist research simply by providing an alternative to the equiprobability rule invoked so widely in physics and genetics. Physicists have long since accepted wave and particle interpretations of radiation. Perhaps a similar acknowledgement of "complementarity" awaits the evolutionary sciences.

A number of titles on cosmology and physical theory have been included in the History and Philosophy list. This is traditional, since theories of life on earth have always comprised a sublunary cosmology inviting linkage to the stellar universe. But since many of these studies expound cosmology using nonlinear models, their inclusion is particularly apposite.

While most of the titles are anchored in biologically oriented studies of human behavior, there are exceptions. The largest cohort are animal, especially primate studies, elucidating behaviors occurring also in humans. The Prehistory file however lists numerous archaeological investigations that are only loosely related to paleobiology or to cultural evolution. Their inclusion is dictated by the need to represent Prehistory as a field. Although some social psychologists began to connect with psychobiology, ethology, and sociobiology in the Eighties, a substantial number of non-biologically oriented titles have been included.

The study of a period of relative stability in the grand sociological. The current revolution in genetics, economics, and the environment. The revision of the subject. The fusion, since art change, whatever studies that take mathematical and technological change into attention.

Critical to the drive it forward retrograde. This is the story. The faded European culture has no immunity. The resulting from independent simultaneous.

Scientific film preservation of archives quickly defeat an attention bibliography department would be required there is published 1957 Carleton Papua New Guinea of disease patient archive at the University; for its designs of film studies 1966. A second generation, Germany, history, psychology holdings are described in *senschaftlichen* Max Planck Center Irenäus Eibl.

The study of cultural evolution is experiencing a revival after a period of relative obscurity as a sub-field of prehistory and anthropology. In the last century cultural evolution was the central idea of grand sociology in the manner of Spencer, Mill, Comte, and Marx. The current revival is driven from diverse directions; population genetics, economic history, and evolutionary psychology are prominent. The revival does not at the moment seem to form a coherent subject. The focus of our list is technological and economic expansion, since artifacts and techniques are clearly units of cultural change, whatever else might also be units. Some recent economic studies that take techniques as units of change interpret them in the mathematical idiom of population genetics. An interpretation of technological change as a nonlinear phenomenon has not come to our attention.

Critical to the understanding of cultural evolution is not only what drives it forward but what holds it in a steady state, or sends it into retrograde. The history of disease is likely to be an important factor in this story. The outward expansion of Europe from 1300 transmitted European diseases to New World and Oceanic peoples who had no immunity. The high morbidity and mortality rates among natives resulting from European contact may illustrate the principle of independent simultaneous causes in the establishment of cultural dominance.

Scientific film is a distinctive methodology for data collection and preservation of non-recurrent data. Our investigation of film archives quickly revealed that the number of archives alone would defeat an attempt to describe their contents in a synoptic fashion; a bibliography devoted specifically to behavioral and ethnographic film would be required. We mention here but two sources for which there is published documentation listed in the Bibliography file. In 1957 Carleton Gajdusek made the first of numerous expeditions to Papua New Guinea and neighboring islands to document his studies of disease patterns in primitive cultures. He established a film archive at the National Institute of Neurological Diseases and Blindness; for its description together with an analysis of the methodologies of film studies and film archiving, see Sorenson and Gajdusek, 1966. A second archive is the Institute for Scientific Film, Göttingen, Germany. The archive covers biology, ethnology, medicine, history, psychology, technology, and natural sciences. Archive holdings are described in two publications, *Publikationen zu wissenschaftlichen Filmen* and *Encyclopaedia Cinematographica*. The Max Planck Center for Human Ethology, under its Director Professor Irenäus Eibl-Eibesfeldt, pioneered the ethological film. Over 130

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films made by Max Planck scientists in the course of their five-site, twenty year longitudinal studies are incorporated into the Göttingen archive; see Galle, 1980-. Many countries maintain similar archives, and there are major holdings in the Pitt Rivers Museum, Oxford, the Peabody Museum, Harvard, and the Smithsonian Institution, to mention a few.

Film methodologies for the study of animal and human movement have developed in tandem with technologies of visual data analysis. Film studies of human facial expression, which commenced with the Ekman and Friesen (1977) Facial Action Coding System of still photographs, have progressed through computer coding and analysis of video to the new technology of computer-generated facial images. Leonard and colleagues (Leonard 1991) have automated computer coding by using artificial intelligence techniques for digitizing facial signals.

There are a number of other exclusions in addition to film. The exclusion of book reviews prompts misgivings, since they are an important medium of evaluation and of shop talk. Hopefully the inclusion of review articles (indicated as such in the Subject Index) and of open peer review articles is some compensation. With fewer misgivings we have excluded theses, conference papers and communications to newsletters. A list of newsletters would have been relevant, but it is among the ornaments that the project's limited budget could not afford.

Another exclusion is applied research, with the exception of some clinically-related research. Five years hence this exclusion will not be viable. Clinics are utilizing genetics, neurology, and endocrinology. Impacts are spreading to education, law and justice, public health, insurance, family policy, multicultural policy, economics, and politics, inclusive of the gender equality question. This phenomenon signals that the Era of Biology has arrived in the domain of public policy.

A related exclusion is policy and ethical studies of technological impacts. Although the editors have in hand some 500 titles in this area, they have not been included because they were not collected systematically and because their inclusion would tilt the bibliography in the direction of applications.

The Politics list is brief because linkages between political behavior and the evolutionary sciences are still weakly developed, notwithstanding some important contributions. Articles appearing in

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Politics and the Life Sciences deal in the main with policy questions. That journal sponsors a bibliography of biopolitical and policy publications (Somit and Peterson 1990).

This bibliography has a history. One of us has compiled a 100,000 title bibliography on war, aggression and violence. The other two commenced their title collection over a decade ago as political scientists seeking illumination from science colleagues. The rewards of this activity resemble the rewards of the naturalist: one becomes attuned to slight differences and celebrates novel specimens. There is also the reward of tracking the large changes that occur in decade increments. The level of sophistication reached during the Eighties may be measured by reading the interpretations of the evolutionary sciences emanating from the Fifties. Social scientists could derive little more than general ideas and no method to speak of. Today biological methods and hypotheses are pursued in all fields of social science, while the advance of behavioral medicine and other applications in leisure and design are gradually replacing cultural and philosophical interpretations of the body by a naturalistic view.

In offering this bibliography, we acknowledge its imperfections. Significant publications have been omitted from want of sufficient acquaintance with certain fields. Quite a few have been omitted because the project's budget would not support the cost of their verification. It is hoped nevertheless that it will be a useful tool for the promotion of research.