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Notes

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3. This article is based on a paper presented as part of the symposium, "Teaching Comparative Psychology: Its Nature and Role in Undergraduate Education," conducted at the convention of the American Psychological Association in Toronto, Canada, on August 26, 1984.
4. Requests for reprints should be sent to Jack Demarest, Department of Psychology, Monmouth College, West Long Branch, NJ 07764.

Unnatural Selection: Comment on the "Teaching Comparative Psychology" Symposium

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In this discussion of symposium papers, I examine why comparative psychologists do not consider professional associations of psychology to represent the core of the discipline. I review textbooks in terms of their contribution to comparative psychology and argue that psychology avoids its natural epistemology, that of natural selection and ultimate causality, in preference for the meretricious offerings provided by proximate causation. I also examine why many psychologists consider evolution to be dehumanizing and state three goals for the teaching of comparative psychology:

(a) its reliance on a central epistemological premise, (b) its demonstration of the historical ways in which comparative psychology has changed our views of human behavior, and (c) its duty to compel the student and the public to examine the ethical standing and rights of animals.

It is not only curious, but inexplicable, that the single aspect of modern psychology that can boast of following a unified epistemology is that which has been driven nearest

to extinction by its own professional organization, the American Psychological Association (APA). During the last 10 years, comparative psychologists migrated from the APA in droves, flocks, and herds in a migration that to date has been one way. Some moved toward the academic setting provided by the Animal Behavior Society, some pressed forward by re-marking their camouflage to become “animal behaviorists,” and some repainted themselves as “biological psychologists” and found the Society for Neuroscience to provide a nutritious environment. An examination of the programs of the national and regional psychological associations and even the Psychonomic Society shows the effect of the enforced march: Most comparative psychologists have found associations concerned with “psychology” to be less promising econiches than those provided by other academic and professional organizations.

One effect of the exodus from the psychological establishment is a profound and rapid shuffling among the quality and stature of journals that publish articles regarding animal life. A second effect is a shift within academic programs as to where and how comparative psychology is taught. (Comparative psychologists have formed links with other disciplines, sometimes creating formal, “interdisciplinary” programs, thereby removing comparative psychology from the core of psychology.) A description of the scurrying is documented through contributions to the *Comparative Psychology Newsletter* (e.g., Demarest, 1980), an informal and informational quarterly that has served to reestablish self-awareness among those who practice and teach comparative psychology. The documentation records both disagreement and agreement on the singular contribution of the field to psychology, namely, the insistence that the study of behavior use its gift of an ultimate explanatory principle.

Who Speaks “Psychology”?

As psychologists, we tell our students that modern psychology is a collection of findings, theories, and generalities whose common core is a description, and perhaps prediction, of human behavior. Sometimes information on nonhuman life is included either because the psychologist considers the nonhuman to be a model of human life (e.g., in studying the optic nerve of *Limulus* or the learned and motivational responses of pigeons and rats) or because the psychologist perceives that all life is under the influence of the same pressures (e.g., population density is a variable that influences human beings and rats alike). Can we know whether comparative psychology has been used in teaching to further psychological understanding? A review of how major textbooks have described the contribution of comparative psychology is one such way.

James (1892), whose text established psychology as an academic discipline in North America, mingled traditional philosophical issues with physiology and, by so doing, created psychology. James’s texts separated psychology into aspects such as sensations, habits, consciousness, emotion, instincts, and the will. The accumulation of topics without a coherent epistemology is with us still, for most introductory texts in psychology do not differ from James’s approach.

Titchener (1921) provided the standard text for the next

generation of psychologists. For Titchener, psychology was the study of the mind, conducted by examining consciousness. Titchener proposed a method of inquiry, introspection, and although seemingly experimental, it was aligned with the Kantian tradition in European philosophical thought. Watson’s (1919) successful attack on introspection as an experimental method was extended to include all attempts to study mental aspects of behavior and replaced Titchener’s methodology. But the replacement failed to occur at the level of the textbook. Textbooks that used behaviorism as a guiding epistemology never became successful, and the text that replaced Titchener’s was the series of editions by Weld (1928) and eventually Boring, Langfeld, and Weld (1948), works that not only returned to the separation of psychological topics, but were written by authors either trained by Titchener or sympathetic to his views.

As it is teachers who order textbooks for students, rather than an open market in which students select texts for themselves, it would appear that teachers continued to prefer the fractionated version of psychology from James’s time forward. None of these texts showed any interest in animal life, comparative psychology, or evolution as a guiding principle. (To be fair, Titchener credited higher mammals with consciousness.) The notions that evolution was a worthy epistemology and that animal behavior was related to human behavior were to be found in highly specialized works that were of little standing interest to psychology (Alverdes, 1927; Baldwin, 1902; Romanes, 1889; Washburn, 1908).

Epistemology: Kinds of Causation

The result of ignoring the most promising epistemological premise is that psychology comes to be unrelated studies based on correlations or, at best, proximate causation. It is to Aristotle, that splendid experimental psychologist, that the distinction between ultimate and proximate causation (among other types of causation) must be credited and directed (Aristotle, 1928). Grier (1984) has put the issue into graphic form, as shown in Figure 1.

That birds migrate mostly south in the winter is explained, as a proximate cause, by the fact that it is winter, which is a clearly correlational explanation that is not, by itself, causal. Explanation of migration in terms of ultimate

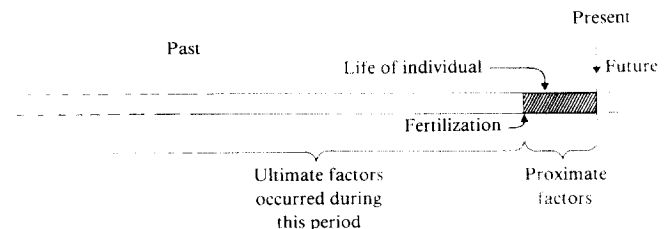


Figure 1. Grier’s model of ultimate and proximate causation, here shown in relation to the life of the individual. Contemporary psychology concentrates on correlational studies and those involving explanations based on proximate causation. It is argued that such explanations are inferior to those that utilize the principles of ultimate causation.

Note. From *Biology of Animal Behavior* (p. 22) by J. W. Grier, 1984, St. Louis, MO: Times Mirror/Mosby College Publishing. Copyright 1984 by Times Mirror/Mosby College Publishing. Reprinted by permission.

causation requires reference to such causal concepts as natural selection, thermoregulation, or perhaps the balance between the physical structure required for flight and thermoregulation. When we inquire into the causes of human behavior, psychology almost always accepts answers derived from proximate causation: Frustration leads to aggression; behavior on a VI schedule is different from behavior on an FI; longevity is the result of certain kinds of nutrition. Studies that imply causality from correlational findings interpret proximate causality incorrectly as ultimate causality. To be sure, there is nothing against, and much to be said for, such studies because they may implicate meaningful causes. But almost every introductory text in psychology describes such studies in a way that requires readers to treat proximate causality as ultimate causality.

Wilson (1975) has revived the charge that psychology cannot prosper until it adopts the strategy of attending to ultimate causation. He writes:

Most psychologists and animal behaviorists trained in the conventional psychology departments of universities are nonevolutionary in their approach. Yet, like good scientists everywhere, they are always probing for deeper, more general explanations. What they should produce are specific assessments of ultimate causation rooted in population biology. What they typically produce instead are the nebulous independent variables of theoretical psychology—attraction-withdrawal thresholds, drive, deep-set aggregative or cooperative tendencies, and so forth. And this approach creates confusion, because such notions are ad hoc and can seldom be linked either to neurophysiology or evolutionary biology and hence to the remainder of science. (p. 23)

Wilson is not alone. The harsh judgment is but a cogent statement of what the public and our students intuit. "Researchers" report that there are four "kinds" of college students, which are determined post hoc after interviews with students. If there is a kind of empirical observation so inefficient that it cannot meet even the simple standards set by correlation, the kind must be the post hoc determination of types, sets, or groups for which no category can be found other than those with which the interviewer began. Because the investigator is not burdened with an experimental design, the nature of the sample is thought to be irrelevant to the generalities made. In this "study," the students were selected unsystematically from one university. To illustrate further how we encourage misrepresentation of design and generality, while confusing proximate and ultimate explanations, consider an example. We learn through the house journal of the APA and our newspapers that precisely 17% of female members of Division 12 (Clinical Psychology) residing in North America state that as graduate students they had sexual relations with professors. The data are derived from a self-report questionnaire sent to members of one division, the division of Clinical Psychology, of the APA, 44% of whom chose to reply (Glaser & Thorpe, 1986). When news of this is reported in *The New York Times* ("One in Six," 1986), the reporter summarizes correctly the conclusions of the paper: "The poll, taken among women in clinical psychology, is thought to reflect the level of sexual contact between women in graduate school and faculty members for those in other disciplines as well," (p. C3). The 44% who chose to answer the self-report questionnaire (464

of 1,047) now come to represent not merely all psychologists, but all disciplines. When the study is reported in *The Chronicle of Higher Education*, the reader is told that the sample is "464 women with doctoral degrees in clinical psychology" ("1 in 6 Female," 1986, p. 23). The percentage who did not reply to the questionnaire is not given, for by now the adequacy of the sample is not newsworthy. Whom do we fault, the reporter for reducing the text to tell a meaningful story or the authors and journal for writing and accepting results based on a sample that does not permit the generalities made? To my mind, the responsibility for performing work that meets minimal standards of generalizing from a sample is that of the author and journal. Luridness and news value do not compensate for incompetence.

The public has a sound sense of the difference between good science and bad science, and we cannot ask reporters to publish news articles that discuss generalizing from a sample. The public may not grasp the distinction between correlation and causality, but there is an identifiable communal sensibility to unsound or meaningless "research." Why do psychologists do work that incurs the denouncing by Wilson and others—and work that is not accepted by the public? One reason is that as the quantity of publications alone comes to represent ability, we can expect authors to publish thoughtless studies and journals to sell the results. A second is that such work attracts attention, as *Psychology Today* makes evident, however meretricious the finding. At present, attention to the shape given research by ultimate causation as the source of explanatory power is neither rewarded nor taught by psychology.

The Good Fortune of Comparative Psychology

As now practiced, comparative psychology has the fortune of depending on a strategy of ultimate causation (viz., natural selection and evolution). We remain eclectic because it matters little to the comparative psychologist whether punctuated equilibrium will show staying power or not. Comparative psychologists have shown a praiseworthy avoidance of slick explanatory principles based on "adaptation," and there are other ways in which the skepticism taught experimental psychologists saves us from the foolish ideas of other professions.

Auguste Comte (1927) saw psychology itself as the propaedeutic science because all science eventually depends on the human observer. In this century, psychology itself has tossed away that birthright (James must take much responsibility). Comparative psychology, made a stepchild in important texts on psychology, has the potential for becoming propaedeutic to psychology.

Odd, to the comparative psychologist, is the fact that although psychology texts contain material related to the many ways in which psychology is practiced and applied, comparative psychology is absent or, perhaps worse, presented as if psychologists consider animals to be but models of human beings, little cellular entities and incomplete representations of human structure and thinking. The notion that human beings form a continuation of the great chain of being, subject to the same laws of natural selection, environmental pressure, and genetics as any other being, is not-

ably absent from material presented to the beginning student and from information provided to the major.

The oversight gives credence to the idea that studies of human beings and other animals are antithetical, that one is either humanist or reductionist, and that one either "believes in the theory of evolution" or is "concerned about human beings." A colleague who reviewed this article for the journal comments so wisely on this issue that it would be wrong for me to let the words remain hidden in the review. Larry T. Brown of Oklahoma State University wrote:

It has been my experience that most psychologists say they accept evolution mostly, I think, because the biological sciences force them to do so. In actuality, this amounts to little more than lip service. The problem, I suspect, is that evolution is seen to clash with many cherished sociopolitical views. "We" must cling to the view that humans are totally products of their environment and that, by straightening out the environment, human behavior is perfectable. This kind of view is extremely deep-seated and often emotionally-based. I am not sure that there is too much in the rational realm that is capable of uprooting it.

What appears to be needed for psychology is what is always needed for the study of nature: The naturalist who by marveling at the disarray of the universe comes to appreciate the grand pattern. Psychology has rejected the need for any grand pattern by choosing to cast aside the one obvious pattern that unites the organisms on this planet: how natural selection works on the genetic pool to shape behavior.

Evolution as Dehumanizing

The view that evolution is dehumanizing remains with psychology, as Brown noted in his review, perhaps because those who would practice psychology are concerned with proximate problems and satisfied with proximate answers. They see no special need to grasp the beauty of the detail or the map of the landscape so convincingly provided by evolution. The chief principle of evolution, that natural selection determines genetic transmission, is evident, but how natural selection does so is theoretical, empirical, and exciting. Psychologists, as a subspecies with special traits, are as ignorant of the workings of evolution as are wallaroos. A result is the numerous correlational reports that fill our texts and journals (not to mention the numerous generalities from inappropriate samples). Psychology has never found its place among the maps of knowledge; rather, it remains unchartered and unfocused because there is no consistent key with which to grasp the map. Psychology has failed to be propaedeutic because it has been satisfied, and has been made profitable, by being derivative.

Goals of the Teacher

Those who would teach comparative psychology have at least three goals, two of which are demonstrated by the presentations in this symposium. First, we must make evident to colleagues and the public that comparative psychology provides the utility and beauty of a central epistemological premise, the premise of ultimate causality.

Second, we must demonstrate the importance of the his-

tory of comparative psychology to our present understanding of behavior. It is good news that psychologists of many persuasions are discovering and rediscovering Romanes's (1889) sometimes insightful applications of evolution to behavior, Baldwin's (1902) powerful synthesis of developmental and comparative psychology, Gross's (1898, 1901) understanding of the evolution of play, Spencer's (1896) perception of how all of science and social behavior are related to evolution (Spencer got there before Wilson; the similarities and differences are instructive), and the new analyses of history by Dewsbury (1984) and Brozek (1984). Even Bitterman, Wodinsky, and Candland's (1958) work, "Some Comparative Psychology," can now be seen as an evolutionary bridge.

Third, and most important, it is a duty of the comparative psychologist to discuss ethics. I am aware that ethics, like virtue, cannot be taught due to the lack of teachers, or so Plato warned. But those of us who would teach the continuity of life and the importance of comparing living organisms with one another cannot be idle or quiet. We may not agree as to the nature of the rights of animals, but we may be sure that the silence will be filled by voices less knowledgeable than our own.

We have a responsibility to ourselves, to our students, and surely to those animals to whom Walker (1964) dedicated *Mammals of the World*: "to the mammals (great and small), who contribute so much to the welfare and happiness of man, another mammal, but receive so little in return, except blame, abuse, and extermination" (p. v).

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Notes

1. This article is based on a paper presented as part of the symposium, "Teaching Comparative Psychology: Its Nature and Role in Undergraduate Education," conducted at the convention of the American Psychological Association in Toronto, Canada, on August 26, 1984.
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Phases of Feminist Re-Vision in the Psychology of Personality

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Recent literature argues that psychology should include the distinctive and often neglected feminist perspective. McIntosh (1983) proposed five interactive phases in the development of a scholarship that incorporates the more recent and subsequent insights from the psychology of women. This article documents McIntosh's sequence of five phases by using pertinent references to the psychology of personality. The article elaborates on Phase III in which investigators study women as inherently different or deviant from men. Teachers of personality psychology should find the article helpful in recognizing other examples of the phases and in familiarizing themselves and their students with this feminist perspective.

McIntosh (1983) argued that feminism requires more than a fringe of women's studies courses added to the usual curriculum; it requires a new vision as well as a remaking of all scholarship. As a first step, she asked the following question to define the goals of this "re-vision": "How would the discipline need to change to reflect the fact that women are half the world's population and have had half the human experience?" (p. 1). She identified five "interactive phases" in the process of change beginning with a scholarship that entirely ignores women (Phase I) and progressing to one that includes those few women whose work or behavior meet the usual criteria of importance (Phase II). In the third phase, writers study women but as deviants, inherently different from men. In Phase III, the feminist scholar confronts the biases that explain why few or no women have been mentioned before. Phase III inspires a move to Phase IV in which for the first time there is a study of women as normal

people whose affairs are worthy of attention. McIntosh describes Phase V as scholarship "redefined and reconstructed to include us all" (p. 1). The sequence of phases is logical rather than temporal so that a given theory may reflect more than one phase.

If we examine the psychology of personality to determine where the field and our particular courses stand in relation to the goal of a sex-integrated subject matter, we find that the status of the field varies. Data collected only from males form the basis of some theories. Other theories assume a pattern of motivation that is more characteristic of males in our society than of females, whereas still others deal with women, but as a special category of not quite normal people. Transformation of the field requires that we do more than simply "add women and stir." We need new perspectives in theory, new methods in research, and imaginative pedagogy to appreciate the existence and importance of women. The purpose of this article is to document McIntosh's sequence of five interactive phases of a feminist revision of scholarship by using pertinent references to the psychology of personality. Illustrations of the phases should help teachers of personality psychology to recognize additional examples and acquaint their students with the feminist perspective.

Phase I: Womanless Psychology

That women's perspectives are all but ignored in some areas of personality indicates how the field of personality theory is in the initial phase. Nearly all the theorists in the