

The Student Psychologist's Handbook: A Guide to Sources

**Theodore R. Sarbin
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THE
STUDENT PSYCHOLOGIST'S
HANDBOOK

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PREFACE

Like many other teaching devices, the present *Handbook* was conceived out of frustration. After assigning papers in introductory or advanced courses, the authors have been deluged with individual students requesting instruction in how to prepare a research report. For some students, it has been necessary to give a short "stand-up" course in the use of library facilities, in how to read a research article, in preparing a bibliography, etc. Individualized instruction directed to such non-substantive details is wasteful both to teacher and student. When the busy teacher and the overcommitted student are fortunate enough to interact in an individualized way, they should talk about more meaningful matters than the mechanics of beginning and developing an assignment.

It is an unfounded assumption that all college students know how to go about the business of preparing and writing a critical paper or research report for a science course. A course in English composition, although often an invaluable experience, is not sufficient preparation for a research paper or term project in psychology. To be sure, some students will have had the good luck to have encountered an English teacher who placed high value on writing research papers; however, it has been our experience (fortified by reports from colleagues) that most students need help in the fundamentals of preparing a research report.

The purpose of this *Handbook* is to provide the student with such fundamentals. It is not intended to replace the instructor's lectures and discussions, nor is it intended to replace textbooks in psychology or statistics. It is intended simply to help the student in his selection of a topic, in relating his topic to the broader field of inquiry, in using library facilities efficiently, in reading research articles before he has acquired technical competence in experimental design and statistics, and so on.

The *Handbook* is arranged so that the student can use any part without necessarily reading the whole. However, there is a rationale to our ordering of the chapters.

The first chapter presents the scope of psychology so that the student can locate his interests with reference to the broader field.

In the second chapter, the student and the teacher are reminded of the values in writing research papers, and of the benefits to be derived from actively participating in such a scholarly enterprise.

Chapter 3 discusses the sources of information — the raw data, as it were — from which the student psychologist takes his point of departure. Emphasis is placed on the importance of different sources of observation, e.g., case study, correlational analysis, and controlled experiment. The content of this chapter will help the student evaluate the source material.

The fourth chapter continues with discussions of sources of information in print, with detailed specifications. This chapter focuses on how to use the library in the search for relevant material.

Because the student psychologist must read and comprehend research articles — often without systematic preparation — the fifth chapter offers some helpful hints on reading research reports.

Chapter 6 is essentially an annotated list of journals, handbooks and similar materials that are invaluable to the student (or professional) psychologist.

Because most research articles make use of quantitative methods, and the student may not have been exposed to courses in statistics or measurement, in Chapter 7 we provide a helpful glossary of terms. This glossary is not, of course, a substitute for textbooks or courses in statistics or measurement. However, it will provide the student with the general meaning of commonly used terms and symbols.

Finally, in Chapter 8, we present some suggestions to help the student in the mechanics of writing his paper, preparing the references, etc.

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T.R.S.
W.C.C.

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The Scope of Psychological Research

The first step in writing a research report, or in performing a scholarly project, is the selection of a suitable topic. Some students assess their interests in psychology early in their careers; for these students, the choice of a topic presents no serious problem. Other students receive specific topical assignments from their instructors; for them, the topics have been pre-selected, as it were. But there are many beginning students in psychology who are faced with the confusing problem of selecting a topic when they have inadequate knowledge about the scope of the field, its internal relations, and its connections with other fields of study. In fact, some students may have been influenced by movies and television to believe that psychology is the science that deals with disordered behavior and nothing else.

Unless the student has scanned a recent textbook of general psychology, his knowledge of the breadth and scope of psychological research is bound to be limited. The content of the present chapter is designed to introduce the beginning student to the many subdisciplines studied by contemporary psychologists. Such an introduction, though necessarily brief, will help the student locate his interests with reference to the interests of other students and of other psychologists.

The following paragraphs provide an overview of the fields of psychology. The beginning student should be able to make a more intelligent choice of a research topic after he has recognized the variety of problems in psychology, the depth of analysis to which they can be subjected, and their relations to problems in other disciplines.

As a further guide, at the end of this chapter we have presented a list relating areas of psychology to other major fields. If the student wishes to emphasize relevancy to his college major, he may examine the listings and quickly determine what psychological topics are most pertinent to his field of interest. He then can read a description of those topics in the chapter text.

However, our recommendation is to read the entire chapter first. The student should determine which topic stimulates his interest before he narrows the choices to those that have obvious relationship to his college major. An important goal of higher education is to broaden one's scope of knowledge, and such broadening is best accomplished by becoming involved in intellectual affairs whether or not they have direct relevance to ultimate vocational or professional goals.

In order to be involved in the research enterprise, the student must select a topic that engages his interest. Needless to say, the more the student is interested in his topic, the more likely he is to become involved, and the more meaningful his work. Besides being more relevant to his ultimate educational purposes, being involved will make his task more enjoyable and his final product is likely to be of high quality. The paragraphs that follow are designed to review the field of psychology so that the student can begin to assess his interests.

Psychology is relatively young for a science; it has been less than 100 years since the first psychology laboratory was established in a university. Before that, the disciplines of philosophy and physiology merged to form the core of early psychological studies, studies that dealt primarily with how stimuli from the physical world produced "sensations," the elements of "mental life." From these early beginnings the subject matter of psychology has grown immensely. As the science developed, more complex functions were included, such as learning, emotion, motivation, and thinking. World Wars I and II gave impetus to the study and practice of clinical psychology, psychological testing, and industrial psychology. Today hardly an area of human behavior is not subject to psychological scrutiny. Applied psychologists are making contributions to medicine, business, community planning, space technology, education, social issues, crime, law and other fields. While psychology has grown rapidly in many areas, its confirmed findings are still limited. Much knowledge remains to be acquired; psychology is a science open to innovation and new discoveries, a challenge to those who thrive on finding new answers, a frustration to those who seek "pat" all-or-none answers.

In examining the areas of psychology it is sometimes convenient to divide them into two major divisions: general psychology and applied psychology.

GENERAL PSYCHOLOGY

General psychology is made up of the activities of psychologists who want to learn more about how man functions. Because of increasing specialization, an investigator usually works in a particular area, e.g., learning, motivation, etc. The controlled experiment, often in laboratory settings, is his primary tool of study. Through controlled observation he seeks new understanding of human behavior. Animal experimentation often furnishes the raw data because of the ease in controlling animal environments, and the ethical issues are much less complicated than in human experimentation. A number of conventional topic areas are included under general psychology.

I. History and Systems

Some psychologists devote their talents and their energies to studying the historical development of particular areas of psychology or of psychology as a whole. Like other historians, the aim of the historian of psychology is to interpret the course of events leading to empirical discoveries or to theoretical breakthroughs. Some approach their work through analyzing the biography of an eminent contributor such as Freud, some focus on one area of study such as perception, while others examine the entire science.

Closely related to the historians of psychology are those scholars whose primary interest is in the development of the theory and the philosophy of the science. They engage in study and comparison of different theoretical systems, their historical roots, and their impact on the course of discovery. Typical questions they attempt to answer take the following form: What philosophical notions are reflected in a particular theory? How does this affect the direction of research? of explanation? What characteristics are shared in common by competing theories? How do they differ?

II. Perception

When a person interprets and reacts to events, he is perceiving. In ordinary language, perception is the act of making sense out of the jumble of stimulus events which an organism encounters. What this process is all about, how it occurs, and why it occurs is the interest of psychologists studying perception. An integral part of this process is the reception of stimuli through sensitive organs; the eyes, ears, skin, etc. One large area of study, sensation, focuses on the functioning of the receptor organs, their anatomy, physiology and biochemistry. Studies of photopigments in the cells of the eye in relationship to the sensing of colors, studies of tone threshold in relation to structures of the ear, or the location of particular nerve cells in the skin to sense heat or pain, are all examples of experiments carried out in order to understand our sensory capabilities.

Besides the organs of sensation, one must ask why particular stimuli are perceived as they are. When an object is far away and forms a small image on the eye, why is it still perceived in its normal size? What characteristics account for illusions, the perception of geometric stimuli into patterns that are not actually present, or that change at a glance? Perception interacts with personality characteristics. For instance, people seem to see what they want to see, and often distort the reality of a situation because of their belief systems.

Extrasensory perception (ESP), the perception of stimuli with no apparent sensory input, engages the attention of many students and a number of investigators. Such topics are generally included under the label *Parapsychology*. One approach to studying these phenomena is to determine a person's accuracy in guessing cards that are being turned over in another room. Closely related phenomena involve predicting future events and influencing empirical outcomes through thought, such as "willing" a pair of dice to turn up "7."

III. Learning, Language and Thought

Psychologists have long been interested in understanding how

human and lower organisms acquire habits; how man thinks and uses language symbols. The breadth of studies conducted to expose the nature of this process have been great indeed; many have used animals, many man himself. The conditioned response was hypothesized by Pavlov to account for the observation that dogs who hear a bell several times just before they are given food, will soon salivate to the sound of the bell alone. Other stimuli can then be "conditioned" to the sound of the bell if they are presented along with it. Chimpanzees and man sometimes appear to learn without obvious trial and error, that is, no apparent conditioning precedes a sudden solution ("insight") to a problem. Other studies have shown how complex behavior patterns may be shaped by rewarding organisms in a stepwise fashion — pigeons play ping-pong, a non-verbal child talks. The ability of animals to learn and to remember has been investigated by removing anatomical structures of the brain and observing the effects upon subsequent ability. The production of biochemical substances in the brain is also being correlated with the learning process, a current example being reflected in the possibility of "memory pills," noted particularly by popular magazines. Flatworms fed other worms which had already learned a particular response seemed to learn the same response without prolonged training, an observation that suggests a biochemical basis for memory or learning.

The process of solving conceptual problems, the strategies involved, and the development of mathematical models that predict problem-solving behavior all add to our understanding of thinking.

When children have learned to use language, they appear to have gained a useful tool indeed. With linguistic skills, they are able to solve problems too difficult for their peers who have not acquired these skills. The "kind" of language a person learns affects the way in which he thinks. The language of some Indian cultures do not make the customary distinctions between past, present and future. This characteristic is also reflected in the thinking of children.

The process of arriving at new and unusual ideas can be studied by examining the way creative people respond to psychological tests or other experimental tasks. Also, attempts to examine creativity by tracing the steps that lead to a creative output have shown some

consistency in the process.

IV. Motivation and Emotion

Psychologists are interested in the antecedent and concurrent events that lead to behavior, in why people perform differently, and in "the mainsprings of action." Closely related is their interest in the subjective feelings related to behavior — the emotional response. In somewhat oversimplified form we might say that students of motivation are concerned with how people are aroused to action, and that students of emotion are interested in the pleasures or pains that are part of the behavioral act.

In this area of research, attention is often focused on the physiological bases of needs, e.g., hunger, thirst, and sex. Are contractions of the stomach necessary for the experience of hunger, or is the level of sugar in the blood the important determinant? When all physiological needs are met, why does the organism continue to explore his environment or continue to work at a puzzle? The male rat's sexual response appears satiated until a new female is introduced into the cage. He shows sexual behavior toward her, but not toward the familiar females. Why? Humans show a number of motives that are not determined by physiological deficits: need for achievement, need for status, need for deference, curiosity, etc. Human social organization seems to account for many important motives in man; biological drives take on lesser importance.

A person becomes angry, happy or fearful. Should these conditions be described as physiological changes? or does the situation determine the experience of the individual? "Emotion" may interact with motivations or be motivating factors in themselves.

With what degree of accuracy can we tell when a person is lying by measuring his physiological responses with the "lie detector"? Anxiety is a commonly used concept and there are many tests for anxiety, but they are not necessarily measuring the same process. How does the psychologist handle problems of this kind? Do we learn how to "express emotions"? Are emotional responses present at birth or do they arise out of experience? Questions of this kind

are of research interest to psychologists who study motivation and emotion.

V. Growth and Development

Many psychologists are intrigued by the change in organisms as they grow and develop. Physical changes are of interest as they affect the development of human characteristics. With the development of the nervous system increasingly complex behavior becomes possible, i.e., sitting, walking, talking, conceptual thinking. The development of social skills and the way a child interacts with others seems to follow a fairly stable sequence, as does his ability to think logically and to solve problems. There appear to be critical periods of development when a particular skill or pattern is learned. If all the conditions to learn it are not available, the behavior pattern may never be acquired. For example, puppies that were not handled by humans before 14 weeks of age became "wild" dogs even though their mothers were tame. Ducklings learn to follow their mother shortly after hatching; if another object (a decoy, or a person) is present during this interval they will follow it instead and later ignore adult ducks. Do such periods exist for human infants? What are the effects of early experiences on later development? Children raised with little human contact may show progressive physical and intellectual deterioration even though their physical needs are met. Other questions arise when attempts are made to explain the development of personality characteristics such as conscience or morality.

Psychological development reflects common problems at specified ages. For instance, the adolescent must adjust to increased sexual needs, separation from the family, and the formation of a value system while the middle aged person must adjust to family life, occupational productivity, and aging parents. Observing and testing a group of children over a number of years provides some answers toward the understanding of this change. Another method is to compare groups of children who have had different backgrounds, or experiences, in order to examine the differences in their subsequent development.

VI. Personality

A broad area of interest is covered under the label personality. The emphasis of the personality psychologist is on the whole person. Questions are asked about styles of conduct, individual differences in ways of handling problems, in preferences, in choice of mate, etc. Types are invented and traits are constructed to explain stable characteristics of persons, e.g., introvert-extrovert types, traits of dominance, flexibility, conformity. Some psychologists see personality as a dynamic, changing process that follows patterns determined by an inner "self" or some other hypothetical concept.

The study of personality overlaps and intertwines with the study of psychological development. Theories of personality development, and research in support of the theories, answer questions about how and why a person becomes what he is in later life, his beliefs, likes, dislikes, and characteristic ways of responding to the world in which he lives.

The need to assess and measure personality has led to the development of a number of tests and inventories. These instruments are designed to indicate the presence of "personality traits" in different individuals, such as dominance, responsibility, and masculinity. By themselves, studies of personality inventories form a large body of literature. Among questions of concern to contemporary psychologists are the following: Does the subject's response to the test items allow the psychologist to say what the subject is "really like," or does it mainly reflect a bias in the way he has answered the test items? Are "lie" scales effective in separating those subjects who respond truthfully from those who do not? Why are so many traits with different names highly related? Perhaps they all measure a larger, more significant characteristic of people. Other tests are used that supposedly show the unconscious wishes of people — ink blots, picture stories, drawings, etc. How accurately do these procedures reveal aspects of a person of which he is unaware? How useful are they for predicting his behavior in different situations? Or, to turn the research design around, can the test responses be predicted from the person's history?

VII. Abnormal

The study of abnormal behavior and the study of personality are often but two sides of the same coin. Similar methods are used to examine personality functioning, but the student of the abnormal focuses on behaviors generally categorized under the misleading term “mental illness” or “mental disorder.” Seeking the cause and development of these infrequent behavior patterns leads to studies examining genetic background, body chemistry, family interactions, personal interactions and other social relationships. The question of what is normal and what is abnormal remains open. Are the patterns of persons called “mentally ill” the same patterns as those called “normal” except for degree? Are they different? Why does one person feel compelled to wash his hands 100 times a day? What leads a person to believe he is Christ? “Symptoms” such as those described in the previous sentence take different meanings and expression depending on one’s culture – an observation which leads to questions about the relativity of abnormal behavior. At different times in history the same behaviors could be labeled differently, e.g., “saintly,” “demon possession,” “witchcraft,” “lunacy,” “insanity,” “creativity,” “mental illness,” “incompetence.” The study of social expectations, values, and mores in relation to abnormal behaviors offers a large area of study in this field.

VIII. Social

The social psychologist has focused his interest on the behavior of groups, the relation of the individual to the group, and how group characteristics are reflected in the conduct of individuals. What processes are involved in establishing group solidarity? Leadership evolves in nearly all groups; what conditions lead to one person assuming the leadership role rather than another? What are the effects of group climate, e.g., authoritarian, democratic, *laissez faire* on productivity, on harmony, on problem solving?

Prejudice is not only an individual phenomenon, but is also greatly affected by group affiliation and changing group allegiance. Does bringing together different groups reduce prejudice? Or does it encourage it?