

Research and Report Writing in the Behavioral Sciences

*Psychiatry, Psychology, Sociology
Educational Psychology, Cultural Anthropology
Managerial Psychology*

ROBERT L. NOLAND

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University of Dayton
Dayton, Ohio*

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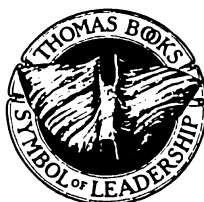
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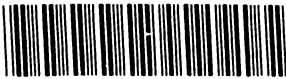
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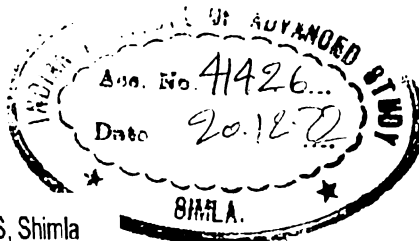


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PREFACE

THIS book is designed as a highly detailed yet practical guide to effective library research and report writing. It is intended primarily for college undergraduates, though it may be found of value up to the beginning graduate level also. While the major emphasis is placed on the literary-type report, the procedures discussed throughout are pertinent to those other forms of research typically required of both undergraduate and graduate students in the behavioral sciences area.

Despite the proliferation of disciplines which are classed as behavioral sciences, e.g. economics, ecology, information theory, cybernetics, the present manual stresses the more traditional areas. These include psychology, sociology, anthropology, education, and those business and industrial areas which utilize psychology, psychiatry, and sociology.

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**Research and Report Writing
in the Behavioral Sciences**

Chapter I

INTRODUCTION

EXPERIMENTAL AND LIBRARY RESEARCH

COLLEGE courses in the behavioral sciences have traditionally required the developing and writing of research reports by the students. As an addition to this practice, we are currently witnessing at the college level the highly accelerated growth of honors courses, reading and seminar courses, special problems courses, and library-research courses, all of which place even greater emphasis on the student's ability to do independent research of one sort or another. While the word "research" means many things to many people, it normally encompasses two types of activities: that which is *scientific*, e.g. the *experimental* type of research, and that which is *literary*, e.g. the *library* type of research. In either case, research can in general be considered as an ordered and objective search for pertinent and representative knowledge of a specific topic.

Library research is normally the more often required method which undergraduate students utilize for purposes of fulfilling course assignments. This method will be emphasized in the following chapters. However, it should be noted that even the scientific approach is preceded by an exhaustive study of the published work which has been done previously in the particular area under investigation. The hypothesis and methodological design developed by the experimental researcher are a result of a good deal of the same kind of library research that is done by the student in preparation for the writing of a paper. Thus, in the introductory phase of research design and in the eventual report of the research results, the literary type of reporting is well represented.

OBJECTIVES AND OUTCOMES OF LIBRARY RESEARCH REPORTS

The professor assigning a library-research paper may be motivated by one or a combination of major objectives. Examples of such objectives would be the following: to develop in the student habits of individual problem solving and an appreciation of the inductive method of research, to provide practice in orderly organization of subject matter and literary self-expression, and to initiate the student in the challenges and satisfactions inherent in independent study. A further objective would be to insure that the student's intellectual vision will not be restricted to the views of the instructor or of the text which may be assigned for the course.

STUDENT MOTIVATION

It is perhaps equally valuable, however, to understand the possible student reactions to such assignments. For instance, the following are some of the possible attitudes which the student may hold toward research and the resulting behavior flowing from such a frame of reference:

1. The project is seen as an undesirable but mandatory course assignment. The student uses a paper previously submitted in another course, borrows a paper written by another student, or pays for the services of a ghost writer.
2. The project is carried out in such fashion that the mechanical process of report writing has taken place but with little, if any, other benefit or result.
3. The course assignment is fulfilled and the student has worked on a valuable and pertinent topic. However, inadequate research and reporting techniques have been utilized. The student has thus gained little in the way of knowledge or of appreciation of library-research procedures in proportion to the amount of time expended on the project.
4. The course assignment has been fulfilled, although an impractical topic has been chosen. The result is a shallow

and fragmentary conception and presentation of the subject, a distorted view of usefulness of library procedures, and little or no use of the information gained.

5. The course assignment has been fulfilled, a valuable topic has been selected, and efficient research and writing techniques have been utilized. The result is a significant carryover of knowledge and a feeling of honest intellectual accomplishment and self-expression which will carry over to later research assignments.

Any successful outcome of library research would seem to be based both on the student's *motivation* and *proficiency* in library-research techniques which have been attained prior to and during the present task. Motivation may be considered as extrinsic when the student sees the term paper only as another barrier to be surmounted to satisfy course requirements. Some blame for this may certainly be laid at the feet of the professor who mechanically assigns such papers, demands "high" standards, and then pays little, if any, attention to the final product submitted by the student. If the submission of a paper is an absolute requirement for the passage of the course, then extrinsic motivation is already in effect; *how* the required assignment is presented to the student, however, may determine the extent to which intrinsic motivation is developed and manifested by the student.

Student research assignments should therefore have both extrinsic and intrinsic value. A library research report is extrinsic in worth to the degree that completion of the assignment satisfies a course requirement or leads to a grade, whether or not such a report has developed in the student either real knowledge of the research technique as an educative device or any feeling of achievement. An assignment would be of intrinsic value to the extent that it not only fulfills the course requirement but furthers the student's comprehension of the overall course objectives as well as motivating and preparing him to continue to undertake independent research on his own thereafter. What did the student get out of it? (not What did the professor see in it?). How much did the student achieve in intellectual growth and personal satisfaction? (not What grade did he get on the paper?). How much is it worth to the student? (not How much does it count

toward the final grade?). It is these issues which will perhaps determine the value of the time and effort spent in writing research reports.

While the instructor cannot *give* intrinsic motivation to the student with regard to report writing, he certainly can provide an atmosphere favorable to the development of such motivation. He can also provide the technical assistance necessary for successful attempts to write research reports. A major objective of this monograph lies in the specific direction of technical assistance.

A PREVIEW OF THE OVERALL PROJECT

Library-research reports involve two major activities. The first and normally the longest in terms of time required is that of the research activity which leads to the *accumulation of material*. The second activity is that of actually *writing the report*. The initial activity involves up to two thirds of the total time one spends on a paper, and if this activity is not well done, even excessive expenditure of time in the writing of the report will be to little avail.

Under the first phase, accumulation of material, the following representative activities would fall:

1. Key factors in the selection of the topic.
2. The initial statement of the problem or objective.
3. Preparatory reading.
4. Development of a tentative outline.
5. Development of a tentative bibliography.
6. Skimming and screening of resource materials.
7. Intensive reading and note-taking.
8. Organization of notes.

Under the second phase, that of writing the report, such steps as the following would come:

1. Analysis of the notes in relation to the tentative outline.
2. The development of the working outline.
3. The writing and documentation of the first draft of the report.
4. Reanalysis of the adequacy of coverage under each part of the outline as shown in the rough draft.

5. Revision of initial draft.
6. Accumulation and arrangement of bibliographical materials for final bibliography.
7. Rereading of entire report.
8. Writing final draft for submission.
9. Final proofreading prior to submission to professor.

While the stages in the accumulation of material and the writing of the paper as enumerated above are in logical, sequential order, the student should feel no compulsion about departure from the sequence at times. It is more important to note that each stage must be reached and dealt with sooner or later. Indeed, as a normal procedure, one should expect to return a number of times to certain stages.

The remainder of this manual will deal with the total problem of research-report writing — from the selection of a topic to the composition of the final paper. The above steps will be included, although a number of them will be found in the overall discussion rather than being subject to individual treatment. As the main emphasis will be on library rather than scientific research, no attempt will be made to deal with problems in the area of designing and conducting research projects. However, where the scientific and library methods overlap, consideration will be given to both approaches. Further, the scientific research techniques, as such, will be mentioned and exemplified wherever their use is consistent with the express aims of this manual, i.e. writing an undergraduate library research report in the behavioral sciences.

THE BEHAVIORAL SCIENCES

The behavioral sciences include a rather arbitrarily selected grouping of disciplines having essential kinship as well as basic differences when compared each with the other. It is the similarity of subject matter and aims and the compatibility of methodologies which draws these fields together under the same label. While not all the fields to be mentioned (nor all divisions within each field) satisfy all the criteria of behavioral sciences, they are so considered when a common area of study regarding the *behavior of man* is approached in a way that is consistent with the aims and

methods of these disciplines.

The behavioral sciences thus include certain areas and investigative approaches of psychology, sociology, anthropology, psychiatry, education — especially educational and developmental psychology — and certain business and industrial areas which lean heavily on psychology, psychiatry, and sociology. Other fields sometimes included in the behavioral sciences, but not emphasized in this book, are economics, history, political science, and psycholinguistics. As will be emphasized later when discussing library research, there is much overlap among these fields with regard to a large number of topics. The student working on a topic in one major area will find it absolutely necessary to search the published works in these other areas. For the sake of continuity, the major part of our discussions in this manual will involve topics of a psychological nature. However, the major bibliographic resources and research-design references of all of the behavioral science areas will be handled as an important and integral part of this monograph. Extensive bibliographical materials on research methodology in these areas will be found in the appendix.

SELECTION OF A TOPIC

In certain courses, the student is assigned a specific topic by the instructor, and hence the selection of a subject is not a problem. However, in the writer's experience, the choice of topic is at least to some extent left up to the student. In many cases, for example, the student is allowed to select a topic within certain course boundaries and then submits this to the instructor for approval prior to the time that any exploratory work is done. Perhaps the most common mistake of the student new to the activity of library-research writing is the selection of a topic which is far too broad in scope and the failure to delimit or narrow it down sufficiently to be covered in any acceptable fashion. The result may be either a highly general and amorphous treatment or an acceptable beginning but a hastily developed finish that is obvious to anyone reading the paper. The student's initial reaction to this admonition, however, may well be to the effect that he cannot think of a topic, much less delimit it. The course instructor will

normally offer suggestions and guidance in this regard. The student should take care to follow carefully the guidelines set down by the instructor. It is especially important that any required approval be obtained *before* the student expends any major effort on the paper. In addition to the aid given by the teacher, the library itself serves as a seemingly endless depository of suggestions for research. The following are representative of published works dealing with a variety of problems which are often selected as topics for both library and experimental research papers in the behavioral sciences:

- Berg, Irwin.: Cultural trends and the task of psychology. *American Psychologist*, Vol. 20 (No. 3), March 1965.
- Borgatta, Edgar F., and Cottrell, Leonard S., Jr.: Directions for research in group behavior. *American Journal of Sociology*, 63:42-48; 1957.
- Brownell, Samuel M.: Unsolved problems in american education. *School Review*, 62:519-26, 1954.
- Chamberlain, N. W., et al.: *A Decade of Industrial Relations Research, 1946-1956*. New York, Harper, 1958.
- Gallin, Eugene S.: Some research problems for developmental psychology. *Child Development*, 27:223-35, 1956.
- Hall, Oswald: Sociological research in the field of medicine: progress and prospects. *American Sociological Review*, 16:639-44, 1951.
- Harms, Ernest: Child guidance yesterday, today, and tomorrow. *School and Society*, 72:129-32, 1950.
- Hayes, Samuel P., Jr.: Some psychological problems of economics. *Psychological Bulletin*, 47:289-330, 1950.
- James, C. Evan: Trends in child development research. *Childhood Education*, 29:73-76, 1952.
- Leavitt, Harold, and Whisler, Thomas: Management in the 1980's. *Harvard Business Review*, November-December, 1958, pp. 41-48.
- Luchins, Abraham S., and Luchins, Edith H.: Some approaches to studying the individual. *Journal of Humanistic Psychology*, 5(1):82-90, 1965.
- Powell, F. De Sales: Recent trends in industrial sociology. *American Catholic Sociological Review*, 18:194-204, 1957.
- Rogers, Carl R.: Some questions and challenges facing a humanistic psychology. *Journal of Humanistic Psychology*, 5(1):1-5, 1965.
- Sanford, Nevitt: Will psychologists study human problems? *American Psychologist*, 20(No.3):192-202, 1965.
- Sarason, Seymour B.: The psychologist's behavior as an area of research. *Journal of Consulting Psychology*, 15:278-80, 1951.

Schuman, Leonard M.: Research methodology and potential in community health and preventive medicine. *Annals of the New York Academy of Science*, 107(2):471-808, 1963.

These references exemplify the vast store of similar material which is available to the interested student. A much more extensive list will be found in Appendix I. The above references, however, should suffice to indicate that the finding of a problem or the selection of a topic is by no means a difficult chore once the serious attempt has begun.

When a student has made a tentative selection of a subject or topical area, he should perhaps answer questions such as the following before making a final decision to write on that area:

1. How closely related is the topic to the specific course for which it is assigned?
2. How complex in nature is the topic as compared to his background in such area?
3. Is the subject such that it will have a high probability of being of intrinsic and lasting value to him rather than just being one that is "interesting," or "easy"?
4. What is the likelihood that sufficient bibliographical materials will be available on this particular topic?
5. How much time does he plan to schedule for this one course assignment, and does it appear from previous experience that he can cover the topic in the time available?

Once a topic has been selected, the student should take great care to try to narrow the scope of the topic to a point where a reasonably comprehensive paper can be developed. The student has a strike against him when he elects to write on topics as broad as "Child Behavior," "Conditioning," "Modern Social Problems," or "Psychoanalysis." "Child Behavior," for example, is a topic of such breadth that specific subtopics would number in the many hundreds. A more specific topic in this area might be "Effects of Different Socialization Patterns on Behavior," or the "Impact of Conditioning on the Learning of Early Emotional Responses."

INITIAL STATEMENT OF OBJECTIVE

This requirement is more for the student's own use at this stage

than it is a part of the final report. That is, a good deal of immediate thought on just what he wants to do and how extensively will save the student much time lost in unnecessary research and vacillation later on. This is a natural step following the selection of the topic. Does the student plan to “test” a hypothesis he has developed, “prove” a point of view, “trace” the history of a movement or practice, “demonstrate” a phenomenon, “critically analyze” opposing viewpoints, or “measure” student reaction to tri-semester scheduling, the “cut” system, or television courses?

The result of this focusing on the problem should be a clearly intelligible written statement of just what the student proposes to do in the paper he is going to write. This statement should be so stated that anyone could read his paper and know exactly what he tried to accomplish.

Certainly this statement may require later revision as the student gets into the literature search, but the direction and focusing of his literature search will initially be a function of his original objective. The student’s initial familiarity with the topic will, of course, affect the degree of confidence he has in phrasing the statement of objective. The less familiar the student is with the topic, the more he should undertake preliminary reading to get an overall survey of the subject. In such a case, he should also seek guidance from his professor. Although an extensive and detailed outline will be mandatory once the student initiates the bibliographic search, a preliminary outline may also be useful in “testing” the logic of the stated objective. Also, it is obvious that there should be a natural relationship between the title, the topic to be covered, and the stated objective of the research paper.

Chapter II

THE LITERATURE SEARCH

THE NEED FOR METHOD IN LIBRARY RESEARCH

BIBLIOGRAPHIC research in the behavioral sciences, in contrast to the natural sciences, involves some peculiar problems. While the researcher in chemistry or biology has many more journals and books to search, he seldom needs to leave "his" field for published material. The datum of the behavioral sciences is so general and so pervasive, however, that material of interest to the researcher is spread in a "shotgun" fashion throughout hundreds of journals in many different scientific and professional areas. This is an especially difficult problem in the field of psychology. Thus, some disciplines are overburdened by pure volume of publications, while others, such as the behavioral sciences, have the dual problem of volume and of wide scattering of data. The indexing and coding systems, designed for an earlier era of information cataloging, have rapidly become obsolete. Long alarmed by the decreasing efficiency of previous systems, scientists have recently initiated a massive effort to reverse this major research shortcoming. Indeed, an entire new series of classification methodologies are beginning to emerge under the name "information retrieval." The near future may well witness libraries with automated indexes such that the placing of an IBM card with a coded statement of the researcher's topic will lead to a return card from computers with a listing of the major bibliographic references most closely related to the topic! In the meantime, however, methodical and painstaking effort on the student's part remains the most efficient and practical means of accumulating the information required. The following section is designed to describe and to illustrate certain of the major bibliographic resources and techniques.

BECOMING FAMILIAR WITH THE LIBRARY

Role of the Library

The library can provide both printed materials and professional services to the researcher. Awareness of these sources and services is essential in terms of effective and efficient use of the student's time.

The student should try to become familiar with, and feel at ease in using, the major printed resources available. Those most important to the researcher are probably (a) general books, (b) journals and other periodicals, and (c) reference books such as abstracts, indexes, and encyclopedias. These will be discussed in some detail in the present chapter. The researcher should also know whether the library has materials on microfilm, interlibrary loan services, duplicating equipment, etc. The student should also feel free to ask assistance of the professionally trained librarians who are available in all libraries.

Library Classification Systems

The enormous number of books housed in libraries requires a system of classification that is both comprehensive and workable. The major classification systems provide for the grouping of books of similar nature according to subject matter. Most libraries use the Dewey Decimal Classification or some modification of it suitable to their individual needs. This system is based on a tenfold division of knowledge according to the following code of numbers:

000 General Works	500 Pure Science
100 Philosophy	600 Applied Science
200 Religion	700 Arts and Recreation
300 Social Sciences	800 Literature
400 Linguistics	900 History

Each of these major divisions is further divided into ten smaller parts, each of which in turn includes ten still smaller parts. Additional subdivisions can be carried out indefinitely by use of

decimal places.

The only other system used with any frequency is the Library of Congress Classification. Often used in very large libraries, this system accommodates many books under the same classification number without building into the awkwardly long and involved decimals of the Dewey system. Basing its code on the alphabet, the Library of Congress Classification divides books into the following classes:

- A General Works
- B Philosophy, Religion
- C History, Auxiliary Sciences
- D Foreign History and Topography
- E-F American History
- G Geography, Anthropology
- H Social Sciences
- J Political Science
- K Law
- L Education
- M Music
- N Fine Arts
- P Language and Literature
- Q Science
- R Medicine
- S Agriculture
- T Technology
- U Military Science
- V Naval Science
- Z Bibliography, Library Science

Each of these classes is further divided by letters and numbers to show the exact classification number of each book. Each book has its own identification, referred to as its "call number."

The Card Catalogue

Library card catalogues contain 3 x 5" index cards on every book available at a given library. The information on each book is classified alphabetically under each of the three headings: *author*, *name of book*, and *subject heading*. Because of this cross-filing, needed material is relatively easy to locate.

Although most libraries file all index cards in a single alphabet, some use a divided-catalogue system. Where this system is in

effect, the researcher will find all subject cards in one card catalogue; author and subject cards are listed in a second separate catalogue.

In searching for material on a selected topic, the researcher will probably need to use all types of cards. Generally, however, the subject cards will be found of greatest value to the researcher.

Learning how to read the information on a printed catalogue card provides the researcher with much valuable information without his even seeing the book.

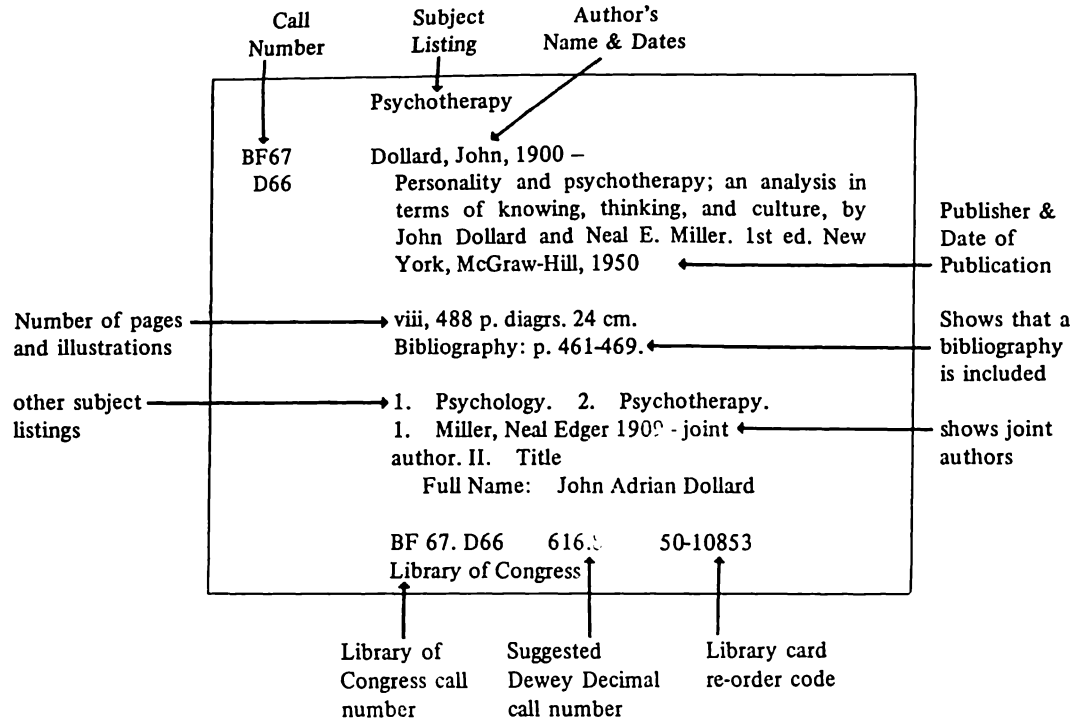
A sample card is shown on the following page. Three such cards are found alphabetized under "D" (Dollard), "P" (Psychotherapy), and "P" (Personality). The card gives all essential identifying information and also often gives a brief summary of the contents of the book. The call number at the top of the card provides information as to where the book is located in the library. Note also that the card gives information as to number of pages and extent of bibliography.

GETTING AN OVERVIEW OF THE TOPIC

Before undertaking an extensive search for material, it may be to the student's benefit to develop a general mental picture of the total topic under study. A single chapter in a text; the preface, table of contents, and chapter summaries of an entire book devoted to the topic; a review or summary of the topic in a periodical — these are examples of the sources used to get an initial overview of the topic. At a deeper level, generally, are the specialized encyclopedias, annual review yearbooks, and similar resources to be mentioned in the following pages.

KEYS TO BEHAVIORAL SCIENCES LITERATURE

The number of references of potential interest to the behavioral science researcher is astronomical, approximating one-half million titles in psychology alone! The classification of such publications may be more readily understood by discussing these bibliographic materials under three major headings: *serials*, *reference materials* (*secondary publications*), and *books*.



Serials

The name *serial* or continuation is given any type of publication that appears with some degree of continuity under the same title. There are two different types of serials. *Periodicals* are those serials, such as magazines (nontechnical) and journals (technical), which appear according to a regular publication schedule. *Monographs* are serials, normally quite extensive in subject coverage, appearing under a continuing title, but published at irregular intervals.

Guides to Serials

There are several important and useful guides to the description and location of the hundreds of thousands of different journals, magazines and monographs published throughout the world:

1. The *Union List of Serials* is the standard library reference work which supplies title and publication data for over 125,000 serials published throughout the world. The list also gives the holdings of the major libraries in the United States for each title.
2. The *Union List of Technical Periodicals* is a complementary work, covering about 5,000 technical and scientific serials. The serial holdings of technical libraries in the United States are listed.
3. In *Ulrich's Periodical Directory*, approximately 7500 selected periodicals are classified by major subject matter and subspecialty. Index and abstract location data are also presented.
4. The *Guide to Current British Periodicals* covers approximately 3,800 titles published currently in England and the British Isles.

The above guides aid in locating serials, *not* in locating specific articles contained within the serials.

Journals in the Behavioral Sciences

The serial of greatest value to the researcher is the technical periodical called the journal. It is difficult to determine the exact

number of journals published in the area of the behavioral sciences. Some approximation, however, can be made by noting that if only those journals with the word "psychology" listed in the title are considered, at least 350 such publications would be found throughout the world. Hundreds of other journals are published in other behavioral sciences. Certain journals in each science are recognized as more important and more commonly used than others. In psychology, some of the key journals are as follows:*

- Psychological Abstracts
- Journal of Experimental Psychology
- American Psychologist
- Journal of Comparative and Physiological Psychology
- American Journal of Psychology
- Psychological Review
- Journal of Applied Psychology
- Journal of Abnormal and Social Psychology
- Journal of General Psychology
- Journal of Psychology
- Psychological Bulletin
- Journal of Genetic Psychology
- Genetic Psychology Monographs
- Psychological Monographs
- Journal of Clinical Psychology
- Journal of Consulting Psychology
- Educational and Psychological Measurements
- Journal of Social Psychology
- Journal of Educational Psychology

Among the key journals in other behavioral sciences are the following:

- Behavioral Science
- Sociological Abstracts
- Education Index
- Biological Abstracts
- American Journal of Psychiatry
- American Journal of Orthopsychiatry
- American Journal of Mental Deficiency
- Journal of Social Psychology
- Journal of Conflict Resolution

*Journal names and other often used terms are frequently abbreviated in the literature. A useful glossary of abbreviations will be found in the Appendix to this manual.

Social Casework
American Journal of Correction
American Sociological Review
Annals of American Academy of Political and Social Science
Anthropological Quarterly
Interracial Review
Understanding the Child
Child Development
Sociometry
Journal American Academy of Child Psychiatry
Review of Educational Research
Education Research Bulletin
Exceptional Children
Journal of Experimental Education
Journal of Educational Method
Journal of Educational Sociology
Journal of Educational Research
American Political Science Review
Harvard Educational Review
American Personnel and Guidance Journal
Journal of Human Relations
Personnel Journal
Management Business Review
Harvard Business Review
Industrial Management
Industrial and Labor Relations Review
Journal of the American Psychiatric Association

The student engaged in library research is immeasurably aided by the different journal abstracts and indexes which are found in the behavioral science and allied areas. An understanding of, and working familiarity with, the abstracts and indexes is absolutely essential to the researcher. Abstracts normally contain a brief nonevaluative summary of an article and all necessary identifying data. Indexes, on the other hand, normally consist only of topical listings of subjects and authors of published articles. The distinction between abstracts and indexes will be made clear by reference to the examples which follow. An extensive treatment, with illustrations, of several of the following abstracts will be found on the pages to follow:

Psychological Abstracts
Sociological Abstracts
Biological Abstracts

Dissertation Abstracts
Industrial Training Abstracts
Management Guide
Personnel Management Abstracts

Abstracts in the Behavioral Sciences

THE PSYCHOLOGICAL ABSTRACTS. The *Psychological Abstracts* have been published since 1927. Over five hundred journals are regularly searched for articles of interest to psychologists. The student can readily appreciate the value of such abstracting, both in terms of thoroughness of coverage and in the vast savings in time required to explore material available on a particular topic. The student will find a "List of Journals Regularly Searched" at the beginning of the *Index*, which is always the December issue of each year.

The cover of an abstract number, showing the format for presenting the table of contents, is shown on the next page.

Psychological Abstracts are normally bound at the end of each year so that the entire issue for the year — five abstract numbers plus the index — are found in one volume. The cover might then read: *Psychological Abstracts*, (Volume) 37, 1963. It should be noted that the abstracts have been changed to a monthly publication starting with the January, 1966, issue.

As an individual number of the abstracts is sometimes used independently of the entire year's issue, the student should be familiar with the way in which a single issue, as shown on page 22, is arranged.

The following presents an abbreviated example of the new classification system of the *Psychological Abstracts* as adapted for Volume 35 Number 1, 1961. The reader is referred to exact page number rather than article number.

A further change, involving only the identification preceding the article, was made in Volume 36, Number 5, 1962; page numbers are still used with the identification numbers serving to facilitate article location.

The researcher should assume that many volumes of the *Psychological Abstracts* will need to be checked in order to obtain adequate and representative information on a specific research

THE PSYCHOLOGICAL ABSTRACTS

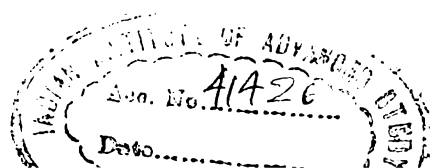
VOLUME 36

OCTOBER 1962

NUMBER 5

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AE Statistics	748	CP Decision & Information Theory	765
AF Experimental Design	750		
AG Formulas & Calculations	750	DA PHYSIOLOGICAL PSYCHOLOGY	765
AH Factor Analysis	751	DB Neuroanatomy & Physiology	766
AI General Books & Reference Works	751	DC Lesions & Behavior	767
AJ Organizations	752	DD Brain Stimulation	768
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AL Psychological Personnel	752	DF Electroshock	768
AM Training in Psychology	752	DG Electroencephalography	769
AN Psychology Abroad	752	DH Evoked Potentials	771
		DI Sensory Physiology	772
BA EXPERIMENTAL PSYCHOLOGY	753	DJ Endocrine, Biochemical, & Circulatory Effects	772
BB Psychophysics	753	DK Psychopharmacology	774
BC Perception	753	DL Environmental Effects	779
BD Illusions	754	DM Radiation	779
BE Aftereffects	754	DN Stress	779
BF Vision	755		
BG Space Perception	755	*****	
BH Color Vision	756	Other major headings are:	
BI Visual Sensitivity	756	EA ANIMAL PSYCHOLOGY	780
BJ Eye Movements	756	FA DEVELOPMENTAL PSYCHOLOGY	786
BK Chemical Senses	757	GA SOCIAL PSYCHOLOGY	795
BL Somethesis	757	HA PERSONALITY & ABILITIES	803
BM Hearing	757	IA THERAPY & GUIDANCE	812
BN Measurement	758	JA ABNORMAL PSYCHOLOGY	822
BO Speech Perception	758	KA EDUCATIONAL PSYCHOLOGY	839
BP Parapsychology	759	LA INDUSTRIAL & MILITARY PSYCHOLOGY	846
CA Environmental Effects	759		
CB Sleep & Fatigue	759	*****	
CC Motivation & Emotion	760		
CD Psychomotor Tasks	760		
CE Attention & Set	762		
CF Learning	762		
CG Conditioning	762		
CH Discrimination	763		
CI Verbal Learning	763		
CJ Reinforcement (Including Probability Learning)	763		
CK Learning Theory	763		



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Methodology & Research Technology		6096-6100
Models & Mathematical Models- Mathematics & Statistics		
Experimental Psychology		6157-
Perception-Vision-Audition-Chemical Senses-Somesthesia-Environmental Effects-Sleep & Fatigue & Dreams		
Physiological Psychology		6372-6475
Neurology-Lesions-Brain Stimulation- Electrical Activity-Sensory Physiology		
Animal Psychology		6568-6582
Comparative Psychology-Natural Observation-Early Experience		
Developmental Psychology		6716-6772
Infancy-Childhood-Adolescence		
Social Psychology		6780-6818
Culture & Social Processes-Sexual Behavior-Attitudes & Opinions		
Personality		6883-6921
Personality Traits & Processes- Intelligence-Creativity		
Clinical Psychology		6950-7048
Personnel-Psychotherapy & Analysis-Hospital Care & Institutionalization		
Educational Psychology		7239-7257
Attitude & Adjustment-Testing- Physical Education		
Personnel & Industrial Psychology		7411-7425
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General data on volume, number, and recency of the articles.

Contents of each volume are listed under twelve major headings as shown at the left margin.

Intelligence, for example, is included under the heading "Personality." Therefore, some of the articles numbered from 6883-6921 may be of value to the researcher.

topic. Using the comprehensive subject and author indexes located in the last issue of each year's publication will be the normally required procedure. The efficient use of the indexes is extremely important. Detailed treatment of good index-searching procedures will be found on pages 26-31.

THE SOCIOLOGICAL ABSTRACTS. The *Sociological Abstracts* have been published five times yearly since 1952. The method of abstracting is similar to that previously mentioned when discussing the *Psychological Abstracts*. An example of the table of contents of an individual issue and of the subject index appears on the following two pages. Shown on page 24 is the method and form used in listing the contents of the first of four issues of the 1960 volume. Page 25 shows a small portion of the subject index, which appears at the end of each yearly volume. The index contains alphabetized listings of all articles contained in the *Sociological Abstracts* for that year.

Some other abstracts which may be of value to the behavioral sciences researcher are the following.

THE BIOLOGICAL ABSTRACTS. The voluminous content of this broad area has necessitated the sectioning of each issue into nine major parts. Section B and H contain much of interest to the behavioral science researcher.

DISSERTATION ABSTRACTS. This contains the equivalent of one full-page summary of those dissertations and monographs which are available on microfilm. It includes title and other identifying data, statement of problem, sources of data, findings, and conclusions. Several volumes are published yearly.

INDUSTRIAL TRAINING ABSTRACTS. This is issued quarterly with subject index by Wayne State University Press, Wayne State University, Detroit, Michigan. Publication has ceased with Volume VII, Number 1, 1953. It contains abstracts of books and periodical articles in worker training, foremen and supervisory training, training methods and evaluation, training relations, special subjects training, and related personnel methods.

MANAGEMENT GUIDE. This guide is published monthly by Digests for Management, Inc., Washington, D. C. It presents digests of selected articles appearing in approximately seventy current management periodicals. It also has an alphabetical subject index.

SOCIOLOGICAL ABSTRACTS

Contents

July 1969

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Number 4

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03 Methodology (social science & behavioral)	D7485-D7494	679
04 Research technology	D7495-D7501	681
05 Statistical methods		683
0200 Sociology: History & Theory	D7502-D7522	683
02 Of professional interest	D7523-D7562	687
06 History & present state of sociology	D7563-D7583	694
07 Theories, ideas and systems		699
0300 Social Psychology	D7584-D7611	699
12 Personality & culture	D7612	704
09 Interaction within (small) groups	D7613-D7615	705
22 Leadership		707
0400 Group Interactions*		711
0500 Culture & Social Structure*		721
0600 Complex Organizations (Management)*		729
0700 Social Change & Economic Development*		735
0800 Mass Phenomena*		745
0900 Political Interactions*		757
1000 Social Differentiation*		767
1100 Rural Sociology & Agricultural Economics*		775
1200 Urban Structures & Ecology*		781
1300 Sociology of the Arts*		785
1400 Sociology of Education*		795
1500 Sociology of Religion*		799
1600 Social Control*		805
1700 Sociology of Science*		807
1800 Demography & Human Biology*		813
1900 The Family & Socialization*		823
2000 Sociology of Health & Medicine*		831
2100 Social Problems & Social Welfare*		837
2200 Sociology of Knowledge*		839
2300 Community Development*		843
2400 Planning, Forecasting & Speculation*		845
Subject Index		878
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Author Index		
List of Abbreviations		

This sample page includes only the abstracts found in Number 4 of Volume 17. A complete contents listing would contain similar columns of abstracts for each of the four issues.

If the researcher was looking for articles on Leadership, for example, a perusal of abstracts D7613-D7615 on page 705 of Issue Number 4 would be in order.

If searching through a number of issues, it would be much more practical and efficient to start with the yearly index, always found in the year-end issue. An example of the index is shown on the next page.

These entries show contents of the issue index

Cover III

*Subtitles deleted.

THE SOCIOLOGICAL ABSTRACTS

VOL. VIII, SUPPLEMENT SUBJECT INDEX:

Co-Cr 361

Crime

adolescent, & environment in India, 7234
adult, as a soc problem, 7711
in Africa, 7242, 8533
areas, Ur, 8308, 8749
in Calcutta, type of, 7236
effects of industrialization on, in Holland,
7084
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obscenity as a, 7145
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problem of, 7262
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as a soc fact, 8544
unemployment &, 8536
in US, 7261
adult, 8537
age & employment, 8231

Criminal,

behavior,
alcohol &, 8543
social &, 7663
urbanism, 8116
code, Korean, 7150
procedure in Japan, 7575
rates, 7666
trial decision, US,
human element in, 7583

Criminality,

in Holland, 8241
& morality among Cath's, 8742, 8743

Criminology,

problems of method in, 7257
programs in State U's, & Penal reform, 8539

The index is normally the quickest and most efficient source of information on a specific topic. A listing of some of the references in Volume 8 on Crime, etc., is shown in the left column.

If interested in the topic "social defenses against crime," the researcher would search through the front part of the same volume until abstract number 7669 was located. This abstract would read as follows:

Page 152: 7664-7670

VOL. VIII, No. II

7669 Rammurti, L., PSYCHOLOGY IN SOCIAL DEFENSE, Ind. J. Psychol., 1958, 33,3, 188-194

The paper suggests that soc defense need not necessarily be limited to defense against crime, but should cover defense against ignorance, illness, propaganda, war, immorality and idleness, determined by investigation of the psychol'al needs & readiness of the people. To promote soc defense against crime, it is suggested: (1) selection, evaluation & promotion of police personnel on the basis of intelligence, police aptitude & personality tests; (2) identification of crime-prone individuals or groups by psychol'al screening; (3) a psychodiagnostic study of the basic motives, needs, drives & anxieties of convicts & their behavior through psychotherapy; (4) recording the soc environment to provide ample opportunities for suitable achievements of satisfaction; (5) periodic evaluation of the gains achieved in the counseling of convicts through psychol'al tests; (6) psychol'al rehabilitation, consisting of determination of needs & anxieties of the convicts & insuring sufficient opportunity to satisfy them in soc ways; (7) periodic psychol'al checkups of the personality structures of ex-convicts & provision of adequate counseling when necessary. SASSA

PERSONNEL MANAGEMENT ABSTRACTS. This is published quarterly by Personnel Management Abstracts, Washington, D. C. It contains abstracts of current books, reports, special studies, and periodical articles.

Indexes in the Behavioral Sciences

In indexes, as opposed to abstracts, summaries of articles are not included. Instead, indexes provide valuable service to the researcher by including extensive alphabetical listings of a wide variety of topics. Accompanying each listing is a complete bibliographic identification which allows the researcher to quickly locate any pertinent article.

The following are major indexes of value to the behavioral sciences researcher.

APPLIED SCIENCE AND TECHNOLOGY INDEX (Formerly *Industrial Arts Index*). This is published monthly (except August) by H. W. Wilson Company. It is a cumulative subject index to periodicals, with a bound annual cumulation.

AUTHOR INDEX TO PSYCHOLOGICAL INDEX AND PSYCHOLOGICAL ABSTRACTS. This publication is a cumulation of the author entries appearing in forty-two volumes of the *Psychological Index* covering the years 1894-1935 and the thirty-three volumes of *Psychological Abstracts* for the year 1927-1958. It consists of the actual entries which were cut out, pasted on cards, and filed alphabetically by the author's last name. Here, under the name of the author, will be found original publications in all languages in both books and periodical articles.

The compilation obviates the necessity of consulting seventy-five different volumes to find what has been published by a given author. Where a publication has more than one author, the entry is under the first author only; cross references for multiple authors have not been provided. The overlap in years covered by the two sources resulted in duplicate entries, but no attempt was made to eliminate such duplication.

BIBLIOGRAPHIC INDEX. This is basically a cumulative bibliography of bibliographies, encompassing a wide range of subjects. The use of this index may allow the student to start out

with a useful bibliography if the specific subject being studied is included in a recent bibliography.

Note also that one of the alphabetical entries in journal abstracts, such as Psychological Abstracts, is "bibliographies." Selected bibliographies will be found in the yearly indexes to such abstracts.

BULLETIN OF THE PUBLIC AFFAIRS INFORMATION SERVICE. This is published each week from September through July and fortnightly in August, by Public Affairs Information Service, Inc. It is cumulated five times a year, the fifth and final cumulation being a bound volume for permanent reference. It contains a selective subject list of the latest books, pamphlets, government publications, reports of public and private agencies, and periodical articles, relating to economic and social conditions, public administration and international relations, published in English throughout the world.

BUSINESS PERIODICALS INDEX. This index is published monthly except July and August. It is a cumulative subject index to periodicals, with a bound annual cumulation.

CURRENT LIST OF MEDICAL LITERATURE. This is published by the Armed Forces Medical Library, Washington, D. C., from 1941 to date. It contains very extensive coverage of psychological and psychoanalytical topics.

EDUCATION INDEX. This is a cumulative author and subject index to approximately 150 educational periodicals, pamphlets, and books. As an index rather than an abstract, summaries of articles are not included. Instead, the index provides an extensive alphabetical listing of a wide variety of education topics with accompanying bibliographic identifications.

ESSAY AND GENERAL LITERATURE INDEX. This is an annual subject and author index devoted to the several thousand essays and articles which appear in volumes of collections of essays and miscellaneous works for that year.

A sample of the entries found under the title "Psychiatry" (and related fields) for the year 1968 appears on the following page.

EXCERPTA MEDICA. This ambitious periodical started in 1947 and contains abstracts covering every medical journal in the world. Section 8 covers topics in psychiatry and neurology.

EDUCATION INDEX
JUNE 1969

ABILITY

Cultural background and learning in young children. J. G. Fort and others. *il Phi Delta Kappan* 50:386-8 Mr '69

Relationships among intellectual and nonintellectual variables. A. H. Ismail and others. *bibliog Am Assn Health Phys Ed Rec Res Q* 40:83-92 Mr '69

See also

Motor ability

ABILITY and achievement

Ability, opportunity and career; a 26-year follow-up. T. Husen. *Ed Res* 10:170-84 Je '68

Below grade level readers. R. G. Stauffer. *Instr* 78:75 + My '69

Correlates of school attainment at different ability levels. N. J. Entwistle and J. Welsh. *bibliog Brit J Ed Psychol* 39:57-63 F '69

Education after high school. L. F. Schoenfeldt. *Sociol of Ed* 41:350-69 Fall '68

Effect of instruction and concomitant variables on multiple-categorization ability: group instruction. J. C. Edwards. *il J Ed Psychol* 60:138-43 Ap '69

A small section of the first page of a recent index is shown in the adjacent column. To determine the usefulness of any of these articles the student would go to the respective journal in which the article is found and skim the article. If it proves useful, further perusal and note-taking would follow.

PSYCHIATRY.

See Existential psychology

PSYCHOANALYSIS.

See Existential psychology

PSYCHOBIOLOGY.

Dobzhansky, T. G. Search for meaning *In* Dobzhansky, T. G. The biology of ultimate concern p82-107

PSYCHOLOGY.

Krutch, J. W. If God is dead does human nature exist?

In Krutch, J. W. And even if you do p28-35

See also Aggressiveness (Psychology); Concepts; Human behavior; Imagination; Intentionalism; Phenomenological psychology

PSYCHOLOGY, Educational.

See Educational psychology

PSYCHOLOGY, Existential.

See Existential psychology

PSYCHOLOGY, Phenomenological.

See Phenomenological psychology

PSYCHOLOGY, Physiological.

See Color-sense; Information theory in psychology.

PSYCHOLOGY, Sexual.

See Sex (Psychology)

THE INDEX OF PSYCHOANALYTIC WRITINGS. This includes references on all articles, books, and monographs on or about psychoanalysis published in any language from 1900 through 1952, inclusive. Selected major references published prior to 1900 are also included. Over 37,000 references are included. Volume 5 is an author and subject index.

THE INDUSTRIAL ARTS INDEX. This is a cumulative subject index to several hundred selected periodicals in business, trade, and engineering areas. A surprisingly large number of articles of interest to the behavioral science researcher are included. Note that in 1958 the name was changed to the *Business Periodicals Index*. The exhibit on the following page gives a selective sample of the range of topical coverage just in the "Psychology" area of the 1957 *Industrial Arts Index*.

INTERNATIONAL INDEX. This is published four times a year by the H. W. Wilson Company, New York, New York. It is a quarterly guide to periodical literature in the social sciences and humanities, with a bound annual cumulation.

MENTAL HEALTH BOOK REVIEW INDEX. Each year, this index, which has now appeared in fifteen volumes, lists approximately 300 books in the broad field of mental health. The index cites the reviews of each book, provided the book has had at least three reviews published in English during the year. Volume 15 was published in 1970.

MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS. This is published and issued monthly, with an annual cumulation, by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. It has an alphabetical subject index.

READERS' GUIDE TO PERIODICAL LITERATURE. Published semi-monthly, this is an extremely valuable author and subject index on general and nontechnical periodicals. Approximately 130 periodicals, selected to represent all the important scientific technical and subject fields, are indexed. The following list indicates the type of periodicals included that may be of interest to the researcher in the behavioral sciences:

Scientific American
Science, and Science Digest

INDUSTRIAL ARTS INDEX 1957 (P1659)

PSYCHOLOGY

See also

Advertising-Psychology

Attitude (psychology)

Emotions

Learning, Psychology of

Motivation (psychology)

Personality tests

Accidents, Industrial-Psychological
aspects

Buying motives

Employees-Opinion polls

Employees' counselors

PSYCHOLOGY, INDUSTRIAL

Basic concepts of human effectiveness in business. J. Lazar.

Advanced Management 21:22-6 0 '56

PSYCHOLOGY, Physiological

See also

Color sense

Conditioned responses

Senses and sensation

Sleep

Space perception

PSYCHOTHERAPY

Group therapy behind locked doors; National training school for boys. S. Rubenfeld
and others. Pub Health Rep 71: 1075-80 N '56

Inpatient services for children. D. A. Bloch. Pub Health Rep 72:615-19 JI '57

Practical group psychotherapy reduces supervisors' anxiety.

G. A. Peters and J. G. Phelan. Personnel J 35:376-8 Mr. '57

Relieving personality conflicts by a kind of group therapy.

G. A. Peters and J. G. Phelan. Personnel J 36:61-4 Je '57

American Academy of Political and Social Science Annuals
 Harvard Business Review
 Fortune, Time, and Newsweek
 The Yale Review

A sample of the entries found under "Education" in a recent issue is shown below.

READERS' GUIDE	
to periodical literature	
AUTHOR AND SUBJECT INDEX	
June 10, 1969	
EDUCATION, Experimental Experiment:	
Philadelphia's school without walls; Parkway	
program. il Life 66:40-2 My 16 '69	
New kind of school day. R. A. Sponberg. Ed	
Digest 34:46-8 Ap '69	
EDUCATION and economic problems.	
See School and social and economic problems	
EDUCATION and social problems.	
See School and social and economic problems	
EDUCATION and state	
Economics of inequality. D. K. Cohen. il Sat	
R 52:64-5+ Ap 19 '69	
Inequities of school finance. A. K. Campbell.	
Ed Digest 34:10-13 Ap '69	

A key to abbreviations and a list of all periodicals indexed is printed at the beginning of each issue.

This is an example of the extensive cross-referencing found in this guide.

This guide also indexes by author as well as by subject.

Secondary Publications

The preceding discussion has dealt primarily with serials and sources of their identification and location. The content of serials, like that of books, is mainly original or of primary nature. *Secondary publications*, on the other hand, serve the purpose of selection, integration, and ordered presentation of selected material from primary publications such as serials and books. Included under this heading are general and special *dictionaries* and *encyclopedias*, specialized *handbooks*, and *yearbooks*. These publications offer valuable assistance in defining and classifying terms, summarizing large bodies of data, and annually reviewing and evaluating published materials in specific topical areas. The library researcher is greatly aided by the use of appropriate secondary publications. Fortunately, a wealth of material of this nature exists in the behavioral sciences and related areas.

DICTIONARIES

Psychology and Psychiatry

- Baldwin, J. M. (Ed.): *Dictionary of Philosophy and Psychology*, 3 Vols. New York. Macmillan, 1901-05.
- English, H. B., and English, Ava C.: *Comprehensive Dictionary of Psychological Terms*. New York, Longmans, 1958.
- English, H. B.: *A Student's Dictionary of Psychological Terms*, 4th ed. New York, Harper, 1934.
- Erdelyi, M., and Grossman, F.: *Dictionary of Terms and Expressions of Industrial Psychology*. New York, Pitman, 1939.
- Ferm, V.: *A Dictionary of Pastoral Psychology*. New York, Philosophical Lib. 1955.
- Fodor, N. and Gaynor, F.: *Freud: Dictionary of Psychoanalysis*. New York, Philosophical Lib. 1950. (also published in paperback by Fawcett World Library, 1963).
- Gould J., and Kolb, W. L.: *A Dictionary of the Social Sciences*. Riverside, Free Press, 1964.
- Harriman, P. H. (Ed.): *The New Dictionary of Psychology*. New York, Philosophical Lib., 1947.
- Hinsie, L. E., and Campbell, R. J.: *Psychiatric Dictionary*, 3rd ed. New York, Oxford University Press, 1960.
- Hutchings, R. H.: *A Psychiatric Word Book*, 7th ed. Utica, New York, State Hospital Press, 1943.
- Kahn, S.: *Psychological and Neurological Definitions and the Unconscious*. Boston, Meador, 1940.
- Stone, C. P.: *Glossary of Technical Terms: For Beginning Students in Abnormal Psychology, Mental Hygiene, and Medical Social Service*. Stanford, Stanford University, 1944.
- Winn, R. B.: *Dictionary of Hypnosis*. New York, Philosophical Library. 1965.

Sociology

- Fairchild, H. P., (Ed.): *Dictionary of Sociology*. New York, Philosophical Lib., 1944.
- Gould, J. & Kolb, W. L.: *A Dictionary of the Social Sciences*. Riverside, Free Press, 1964.
- Leach, Maria. (Ed.): *Standard Dictionary of Folklore, Mythology, and Legend*, 2 Vols. New York, Funk & Wagnalls, 1949-1950.
- Nice, R. W.: *Dictionary of Criminology*. New York, Philosophical Library, 1965.

- Panunzio, C.: *A Student's Dictionary of Sociological Terms*. Berkeley, University of California, 1941.
- Winick, C.: *Dictionary of Anthropology*. New York, Philosophical Lib. 1956.
- Young, E. F. (Ed.): *The Dictionary of Social Welfare*. New York, Interscience, 1948.

Education

- Dewey, J.: *Dictionary of Education*, (Edited by R. B. Winn). New York, Philosophical Lib. 1959.
- Good, C. V. (Ed.): *Dictionary of Education*, 2nd ed. New York, McGraw, 1959.

Other

- Dorland, W. A. N. (Ed.): *The American Illustrated Medical Dictionary*, 22nd ed. Philadelphia, Saunders, 1951.
- Dunner, J.: *Dictionary of Political Science*. New York, Philosophical Lib. 1964.
- Kurtz, A. K., and Edgerton, H. A.: *Statistical Dictionary*. New York, Wiley, 1939.
- Pleasants, Helene (Ed.): *Biographical Dictionary of Parapsychology*. New York, Garrett, 1964.
- Robbins, S. D.: *A Dictionary of Speech Pathology*. Cambridge, Sci-Art, 1951.

It is noteworthy that many of the above dictionaries contain quite extensive explanations and descriptions of the term defined.

ENCYCLOPEDIAS

- Beigel, H. G. (Ed.): *Encyclopedia of Sex Education*. New York, Stephen Daye, 1952.
- Berger, H. I.: *Encyclopedic Diagnosis of Nervous and Mental Diseases*, 9th ed. St. Louis, Peacock-Sultan, 1943.
- Deutsch, A. (Ed.): *The Encyclopedia of Mental Health*, 6 Vols. New York, Watts, 1963.
- Ferm, V.: *Encyclopedia of Religion*. New York, Philosophical Lib. 1945.
- Gruenberg, S. M. (Ed.): *The Encyclopedia of Child Care and Guidance*, rev. ed. New York, Doubleday, 1963.
- Harriman, P. L. (Ed.): *Encyclopedia of Psychology*. New York, Philosophical Lib. 1946.

- Harris, C. W. *Encyclopedia of Educational Research*, 3rd ed. New York, Macmillan, 1960.
- Kaplan, O. J. (Ed.): *Encyclopedia of Vocational Guidance*, 2 Vols. New York, Philosophical Lib., 1948.
- Monroe, W. S. (Ed.): *Encyclopedia of Educational Research*, 2nd ed. New York, Macmillan, 1950.
- Radford, E.: *Encyclopedia of Superstitions*. New York, Philosophical Lib., 1949.
- Rivlin, H. N., and Schueler, H. (Eds.): *Encyclopedia of Modern Education*. New York, Philosophical Lib. 1943.
- Seligman, E. R. A.: *Encyclopedia of Social Sciences*. 12 Vols. New York, Macmillan, 1969.
- Winn, R. B. (Ed.): *Encyclopedia of Child Guidance*. New York, Philosophical Lib. 1943.

In addition to specialized encyclopedias, the student should also consider the more general encyclopedias. The *Encyclopaedia Britannica*, for instance, has been outstanding in its coverage of topics in the behavioral sciences.

HANDBOOKS

- Andrews, T. G. (Ed.): *Methods of Psychology*. New York, Wiley, 1948.
- Arieti, S. (Ed.): *The American Handbook of Psychiatry*. New York, Basic Books, 1959.
- Carmichael, L. (Ed.): *Manual of Child Psychology*, 2nd ed. New York, Wiley, 1954.
- Dorcus, R. M., and Jones, Margaret H.: *Handbook of Employee Selection*. New York, McGraw, 1950.
- Eysenck, H. J. (Ed.): *Handbook of Abnormal Psychology*. New York, Basic Books, 1961.
- Freeman, H. E., Levine, S., and Reeder, L. G. (Eds.): *Handbook of Medical Sociology*. Englewood Cliffs, Prentice-Hall, 1964.
- Fryer, D., and Henry, E. R. *Handbook of Applied Psychology*. 2 Vols. New York, 1950.
- Gage, N. L. (Ed.): *Handbook of Research on Teaching*. Chicago, Rand-McNally, 1963.
- Harms, E. (Ed.): *The Handbook of Child Guidance*, 2nd ed. New York, Child Care, 1947.
- Harriman, P. L.: *Handbook of Psychological Terms*. Paterson, Littlefield, 1961.

- Hunt, J. M. (Ed.): *Personality and the Behavior Disorders*, 2 Vols. New York, Ronald, 1944.
- Koch, S. (Ed.): *Psychology: A Study of a Science*. New York, McGraw, 1959.
- Lindner, R. M., and Seliger, R. V. (Eds.): *Handbook of Correctional Psychology*. New York, Philosophical Lib. 1947.
- Lindzey, G. (Ed.): *Handbook of Social Psychology*, 2 Vols. Cambridge, Addison-Wesley, 1954.
- Murchison, C. (Ed.): *A Handbook of Child Psychology*, 2nd ed. Worcester, Clark University, 1933.
- Mussen, P. H. (Ed.): *Handbook of Research Methods in Child Development*. New York, Wiley, 1960.
- Osgood, C. E.: *Method and Theory in Experimental Psychology*. New York, Oxford University, 1956.
- Stevens, S. S. (Ed.): *Handbook of Experimental Psychology*. New York, Wiley, 1951.
- Wells, F. L., and Ruesch, J.: *Mental Examiner's Handbook*. 2nd ed. New York, Psychological Corporation, 1945.

YEARBOOKS

Certain publications serve the important purpose of providing to the reader an integrated review of material available on selected topics during the preceding year. Yearbooks on general topics often become dated; this is less true of most of the yearbooks of interest to the behavioral science researcher. In some cases there is little clear distinction between yearbooks and handbooks. Representative yearbooks of interest to the behavioral sciences reader appear below.

- National Society for the Study of Education Yearbook*. University of Chicago Press. 1902. to present. Buros, O. K. (Ed.):
- Buros, O.K. (Ed.): *The Sixth Mental Measurements Yearbook*. Highland Park, N. J., Gryphon Press, 1965.

THE ANNUAL REVIEW OF PSYCHOLOGY. Merely having journals readily available is not enough. The time-consuming task of locating and assembling that which is of vital interest to one's research still remains. For this purpose, the *Annual Review of Psychology* meets a real need since it annually examines and reviews noteworthy papers appearing in approximately eighteen fields of psychology. Through these reviews, the scientists assist

each other in keeping abreast of current literature which is of enough significance to deserve being incorporated as soon as possible in their work as teachers, counselors, clinicians, or investigators. Volume I was published in 1950, and a new volume is published yearly. Certain topics are reviewed yearly, while others are treated either every other year or every third year. As an example, Volume XVI (1965) contains the following subject reviews:

Developmental Psychology, Richard Q. Bell
 Human Abilities, George A. Ferguson
 Learning: Operant Conditioning and Verbal Learning, Donald S. Blough and Richard B. Millward
 The Comparative Psychology of Learning, J. M. Warren
 Personality Structure, Wayne H. Holtzman
 Hypnosis, Ernest R. Hilgard
 Psychotherapeutic Processes, Joseph D. Matarazzo
 Physiological Correlates of Mental Disease, J. A. Stern and D. G. McDonald
 Consumer Psychology, Dik Warren Twedt
 Personnel Selection, S. Biesheuvel
 Audition, Willard R. Thurlow
 Visual Acuity, Gerald Westheimer
 The Chemical Senses, Robert M. Benjamin, Bruce P. Halpern, David G. Moulton, and Maxwell M. Mozell
 Psychological Aspects of Ageing in Man, Sheila M. Chown and Alastair Heron
 Scaling, Gosta Ekman and Lennart Sjöberg
 Mass Communication and Educational Media, A. A. Lumsdaine and Mark A. May

In addition to the *Annual Review of Psychology*, there are three other reviews set up on the same basis by the publishers. The following selected reviews may be of considerable value to the behavioral science researcher:

Annual Review of Medicine
 Annual Review of Physiology
 Annual Review of Pharmacology

THE REVIEW OF EDUCATIONAL RESEARCH. Published five times annually since 1931, this review is designed to report the major educational research findings during a designated period, organized by areas of interest. The more active fields of educational research are reviewed every three years; the less active

fields are included in alternate cycles.

The review identifies the significant studies, summarizes them, and within limitations of space, critically analyzes them.

Books and Book Reviews

Many thousands of books have been written on behavioral sciences topics. The writer is unaware of the existence of a comprehensive listing of all books published either in the behavioral sciences or in separate fields. This should not be considered a major limitation to research however, although such a listing would be useful on the graduate or professional level.

Although the author and subject catalogue cards provide the most extensive source of information on the availability of books on specific topics, the researcher also finds very practical and informative the available listings, digests, and reviews of books in selected areas. The *Book Review Digest* is an excellent source of general information and reviews on books published since 1942. Three prime sources of information for the behavioral sciences researcher are *Contemporary Psychology: A Journal of Reviews*; *Harvard List of Books in Psychology*, and the *Mental Health Book Review Index* (previously listed under "Indexes").

BOOK REVIEW DIGEST. This monthly publication contains digests of several different reviews of books published since 1942. The original reviews from which the digests are made are found in over seventy other periodicals. Behavioral sciences books are well covered in this digest.

CONTEMPORARY PSYCHOLOGY. This is a monthly journal publication of the American Psychological Association devoted exclusively to extensive and evaluative reviews of books in psychology and closely related areas.

When a particular book seems especially pertinent to the subject under investigation, the reading of several reviews of the book may provide a useful orientation for the reader.

Reviews of books are also found regularly in a number of journals. The yearly index will provide information on the identification and location of books reviewed.

HARVARD LIST OF BOOKS IN PSYCHOLOGY. This is an annotated listing of over seven hundred books considered to be

important and valuable representatives of the psychological literature available at the time. Compiled and annotated by Harvard University psychologists, the books are listed and discussed under thirty-one major subject headings. Many references are in areas of interest to other behavioral science researchers, such as sociology and anthropology, education, and industrial psychology. The most recent revision was published in 1964.

Chapter III

THE SELECTION AND ANALYSIS OF SOURCE MATERIAL

IN the preceding chapter, considerable attention was devoted to the problem of becoming aware of and locating bibliographical materials pertinent to the topic being researched. Becoming familiar with the library and being able to tap its treasures of information in an efficient manner are highly desired and valued accomplishments. The student who has developed this library-search skill is now presumably able to locate and obtain any type of printed material available on his topic. Yet the major task is hardly begun; there remains the crucial job of selecting from the extensive literature available only the information which is most useful. The accompanying task is that of writing notes to be used in the actual written report. The present chapter will deal with these vital activities, and the following chapter will be concerned with the form and content of the actual report.

IMPORTANCE OF EFFICIENT READING SKILLS

As the activities involved in research-report writing involve a considerable amount of time — mostly requiring reading — the student should make every use of his particular reading skills. He should be especially prepared to read at the rate of speed and level of comprehension demanded by the situation. He should keep always in mind the different uses of *skimming*, *rapid reading*, and reading for *understanding* and *analysis*. Our point here is that many students spend far more time than they should in slow and exacting searching of the abstracts, journals, and other written materials when they should still be in the skimming or rapid-reading stage of preparation. Reading for understanding and analysis should be the student's objective only after considerable skimming and rapid reading has taken place. The presumed result

is the elimination from consideration of many journal articles, books, etc., and the consequent narrowing down of the material to be studied in great detail. This point will be amplified and exemplified in the pages to follow.

IMPORTANCE OF SELECTIVITY OF MATERIALS

Early in this book, we urged that great care be given the selection and focusing of the topic to be studied. As the student begins to select and read the literature, it again becomes important that he consider the topic he has chosen and the objective he has in mind. The tentative outline also assumes an important and useful place here. As the researcher begins his preliminary reading of indexes, reviews, or specific articles, he should continually relate the material to his topic and his objective and note its relevance to the tentative outline. Much valuable time and effort is often expended in building up too strong or lengthy a section of the paper, with the result that other sections suffer by comparison. In other cases, valuable time is wasted on superfluous or digressive material which serves only to confuse or weaken the overall presentation. Exercising care in the selection of reading materials will reduce the amount of collected material that must be dropped from the student's notes as he begins to compose the paper itself. However, the student must guard against the temptation to use every note he has taken in his final research paper. Indeed, we should expect that changes in the outline and revisions of the paper would involve some deletion of material.

THE SELECTION OF SOURCE MATERIALS

Just where and at what level the researchers should start depends upon factors too variable to allow more than a generalization: the less familiar and secure he is with the topic, the more general should be his initial reading. In such cases, initial reading should be designed to give one a better overall view of the topic and to assist in the formulation of an outline which is intelligent and comprehensive. Later reading should further this overall view while at the same time providing more specific material for the

various subparts of the outline.

Sources of initial reading could include any of the following:

1. Chapter(s) from a book,
2. General or technical encyclopedias,
3. Annual reviews which include the topic,
4. Yearbooks which include treatment of the topic,
5. Journal articles which are intended as reviews, histories, or summaries of current thought on the topic.

The above sources may also provide the kind of detailed material needed in later phases of the literature search. Thus they should not be considered as simplified treatments of the subject under investigation.

A major source of material in the behavioral sciences will be the journals and their indexes, abstracts, and reviews. The *Psychological Abstracts*, *Sociological Abstracts*, *Education Index* and *Review of Educational Research*, *Readers Guide to Periodical Literature* must be perused thoroughly but intelligently. An example of the process of selectively searching publications such as these is shown below and on the following pages.

Selecting, Skimming, and Perusing Materials

As an illustration, let us assume that the student is interested in writing a research report on the general area of "Psychosomatic Illness." Applying our earlier caution, it is obvious that the topic is far too broad to be explored in a single paper. Preliminary reading will offer many leads to the selection of a specific and more restricted subtopic. Perusing a chapter on psychosomatic illness in a textbook on abnormal or clinical psychology — or studying the subtopics listed under the heading "psychosomatic" in the *Psychological Abstracts* — should aid in narrowing down the subject. Perhaps the final topic selected focuses on a specific type of psychosomatic illness such as peptic ulcer, migraine, or asthma. Thus the topic and title of the paper might be "The Psychosomatic Basis of Peptic Ulcer." Here the student should again turn to general, rather than highly detailed or complex, treatments of the topic in order to acquire quickly a general overview of the topic. It is only after this level of reading that the student is in a position to

formulate an overall objective and a tentative outline of the proposed paper.

Selecting Materials

Dictionaries

An initial step of great importance is the acquisition of a definitive and comprehensive understanding of the major terms relating to the topic itself, e.g. psychosomatic, peptic ulcer. The technical nature of these terms would suggest the use of a dictionary of psychiatric terms; books on the topic will often contain descriptive definitions as well. It is quite likely that other technical terms will occur repeatedly in the student's reading and will need to be defined.

Books

A perusal of the card catalogue in the library under subject headings such as "psychosomatic" and "ulcer" will show you the extent of available *books* on the topic (see page 16 for an example of one such card). The degree of selectivity to be exercised by the student is somewhat a function of the number of library holdings in that area. While the use of various journals will normally contribute substantially to the report, the value of selected books in providing a more comprehensive treatment of the topic cannot be overemphasized. An additional use of the book is in providing a check as to the adequacy and logical organization of the tentative and final outlines of the report. The actual process of taking notes on the material will be explained after the following discussion of the use of journals in the search for materials.

Journals

Journals important in the behavioral sciences area and their makeup were discussed and exemplified in some detail in the preceding chapter. An illustration will now be given of the use of journals and their abstracts for information on the present topic,

i.e. psychosomatic basis of peptic ulcer. The nature of this topic is such that considerable use should be made of the *Psychological Abstracts*. As mentioned in our earlier discussion, the most effective use of the abstracts requires the use of the annual index. The first several pages of the index provide a quick survey of the pages in each of the five yearly issues of the abstracts which cover the topic of "Psychosomatics." For example, the December, 1963, index (No. 6) contains the following references on page v:

	Issue Number					This means that abstracts on psychosomatic topics start on page 831 of the 5th issue of the 1963 <i>Psychological Abstracts</i> .
	1	2	3	4	5	
Psychoneurosis	178	366	546	704	831	
Psychosomatics	179	368	546	705	831	

While the above provides a quick guide to the location of the general area of "Psychosomatics" in abstracts, a more exhaustive search of all articles pertinent to the topic would still require the use of the subject index (and perhaps the author index). A search of the alphabetized subject index would require that the student look under the words "psychosomatic," "ulcer," and any others suggested as cross-reference topics. A section of the subject index under "ulcer" is shown on the next page. This is followed, on page 45, by a section of the listing under "psychosomatic." Here the student must keep his specific topic, objectives, and course outline in mind as he studies these entries.

An index search such as we have exemplified should have resulted in the selection of certain abstract titles as of possible value. The next step is to locate and read each of these abstracts. Note that references numbered 5114 and 5521 (among others) on page 45 seemed pertinent and should therefore be read. Referring to these abstracts, it is found that they give the information shown on page 46.

READING AND NOTE-TAKING

Having chosen those books and articles which are directly related to the research topic, the student must now begin the

SUBJECT INDEX [1963, p. 954]	
Psychosomatic disorder (See also next heading)	
& accelerated, development, in youth, 8201	Should be checked.
& age, 5524	Should be checked.
allergy, historical resume of, 7093	
& attitude, associated with 5527	Should be checked.
bronchial asthma, 1834	
& cancer, of lung, 3761	
cardiovascular, review, 3759	
in children, hospitalization for, 6897	
colitis, remission through crisis, case report, 5529	A case report.
in development, 1838	Should be checked.
& dichotomous thinking, 3624	
Jungian view of, 1841	A specific theory. If you use theories, should you find others also?
of mental patients, significance for therapy, 6837	
multiple sclerosis as, 3760	
neurodermatitis, & MMPI profile, 5525	
research in, appendicitis patients, as controls, 3749	
& social class, in urban groups, 5535	Should be checked.
speculations on, 5118	Another view?
thyrotoxicosis, & traumatic neurosis, case report 5260	
& traffic accidents, 8375	
ulcer, & dependency, & conformity, 5540	This is cross-indexed under "ulcer."
understanding & treatment of, 1377	
& vasomotor rhinorrhea, 7097	
vocal nodules & poplyps, 3496	
Psychosomatic medicine, of ancient Greece, 5114	Good reference for historical background?
& cancer, 3762	
Cornell Medical Index, & social & psychological factors, 8030	
development of, 3748	Good reference for historical background?
& handicapped views on, 1843	
hypertension, & hives, attitude suggestion for, 3758	
influence of, 7094	
symbol, motive, & expression, 3320	

SUBJECT INDEX [1963, p. 981]

Ulcer, & body image, & physiological reactivity,
3773

& cardiovascular responses, to TAT, 5539

colitis in children, 1835

colitis, observation on, & treatment of,
3752

colitis, & homosexual assault, in adolescent
boy, 3751

colitis, remission through crisis, case report,
5529

colitis & carbon dioxide therapy, 1383

colitis, & psychoanalysis, 8213

& conflict, & shock stress, in rat, 5541

peptic, & autonomic functions, 5541

peptic, 7 cancer, lung, 3761

perforation of,

emotional antecedents of, 5521

psychosomatic, & dependency, &
conformity, 5540

& motor reactions to stimuli, 5519

mute, psychotherapy for, 3357

& shock schedule & deprivation length, rat,
809

& traffic accidents, 8375

Below are examples of critical evaluation of titles.

Too specialized for the topic?

What is colitis? How related to the topic? Here is immediate need for use of medical-psychiatric dictionary in order to intelligently include or exclude these articles.

If "colitis" is to be included, did student plan to cover the "treatment" issue?

All of these articles appear pertinent and, with certain of the above items, should be investigated further by jotting each number down then finding this number in the abstract issues just preceding the index. Note that the abstracts and the related index are normally found in one bound volume.

These appear too specialized and thus should probably be ignored.

Author

5114. Kouretas, D. Aspects modernes des cures psychotherapeutiques pratiquées dans les sanctuaires de la Grèce antique. (Modern aspects of psychotherapeutic cures practised in the sanctuaries of ancient Greece.) Rev. Franc. Psychanal., 1962, 26 (203), 299-309.—Illness was seen as punishment of divine origin. The limitations of medical science allowed only psychosomatic treatment by the priesthood. Starvation for the induction of trance states, liberal ablutions for purification, diverse fumigations to induce torpor and dreams suggestion, distractions and games, sleeping in places sacred to the ill and near revered statues, apparitions, oracles, visions, etc., were part of the therapeutic armamentarium.—G Rubin-Rabson.

5521. Castelnovo-Tedesco, P. (Harbor General Hosp., Torrance, Calif.) Emotional antecedents of perforation of ulcers of the stomach and duodenum. Psychosom. Med., 1962, 24(4), 398-416.—20 ulcer patients were studied psychiatrically. It was concluded that, generally, emotional factors were intimately involved. However, the importance of diet, alcohol, activity, and other concurrent disease also was noted. Particularly where no other serious disease coexists, perforation should be taken as presumptive evidence that the patient has tried unsuccessfully to resolve an emotional crisis. The authors suggest appropriate psychiatric help as part of the total treatment. (133 ref.)—W. G. Shipman.

Title of an article written in French.

English translation.

Here is identification material on journal containing entire article.

This article may have been useful for the introductory section of the research paper but the fact that the original article is in French may preclude its use unless one reads French.

Name of reviewer.

This appears to be a useful article. Thus, the entire article should be located and studied.

The article will be found in the journal *Psychosomatic Medicine* 1962, issue 4 of Volume 4, from pages 398-416.

Note the extensive references located at the end of the article.

important task of reading-for-information; also involved is the complimentary task of taking notes for use in the paper itself.

The importance of organization and consistency, both of procedure and of note-taking, cannot be overemphasized. Two major note-taking forms are suggested; one for bibliographical entries and the other for notes to be used in writing the research report.

The bibliography card should be a separate 3 x 5" index card (or equivalent) which contains complete bibliographical material for each reference selected for use in the research paper. A sample bibliography card appears below. Such cards must be made out for every book, journal, review, dictionary, etc. The card should be made out completely the first time the publication is used. The two most common occasions when cards would be filled out are when either the library card catalogue or the journal abstracts are used.

The information in the boxed part of the cards is needed for the final bibliography. It is also useful in first locating the publication and, in combination with other references, for determining the adequacy of coverage of subtopics of the paper.

The note-taking card should be large enough for extensive but

<p>Garrow, Ann M., Charles Werner, et. al. <u>The Mother-Child Interaction</u> <u>in Psychosomatic Disorders,</u> Urbana; University of Illinois Press, 1959. Pp. viii + 290.</p>	<p>(Use your own numbering system here, matching it with Note-Taking cards) _ _ _ (Library call number here)</p>
<p>(This space can be used for additional guidance, e.g., sources of reviews of this book, or tentative evaluation of use- fulness of book for research paper.)</p>	

legible entries. A 5" x 8" card is especially recommended, since it can be used interchangeably (if necessary) with half-sheets of regular lined or typing paper.

The student should work out a coding procedure, keying the note cards to the bibliographical cards. Any uniform procedure is acceptable; perhaps just the author's name in the top corner, followed by the number 1 for the first card, 2 for the second, etc. It is important that different subtopics be listed on separate cards for ease of arrangement of notes for writing purposes and for checking on adequacy of coverage of different parts of the report. Additional coding might involve letter symbols to show relative value of different materials. Some space at the top of the card should allow for a statement of the part of the paper where notes would be used. Referring to the abstract on page 46, the top line of the card might read something like this:

Kouretos - 1 - C		
Author of article	Card 1 of notes	On A-B-C basis, C might mean "of secondary interest: may help in introduction or for historical treatment, but other sources may be more fruitful."

As the student begins to read for information, he must continually keep in mind the major topic and objective of his paper. Doing this, he can more readily apply what we might call the "test of pertinence" to the material to be read. Without doubt, hundreds of pages from a variety of sources must be skimmed; some read, fewer analyzed, and a comparatively small amount copied on note cards. Judgment, conscious application of material to the topic of the paper, and effort are required if adequate notes on all aspects of the problem being researched are to be obtained. The student must later resist the compulsion to use everything collected (regardless of applicability). He should also be prepared to engage in further research on those parts of the topical outline which are shown to have been inadequately covered.

When the library researcher finds content that is directly related to his topic, he is faced with making two main decisions: (a) *How*

much of this material should be represented in the final paper? (b) In *what form* should the material be copied on note cards for presentation in the final research report?

With regard to the former question, the availability of other pertinent material and the judged value of the article being read are the major determining factors. It should be noted, however, that a research paper which ends up as a near-copy of the entirety of one or more sources reflects poorly on the research writer's understanding of what is expected of him. Ability to exercise critical selectivity — to the point of parsimony — is a highly valued characteristic of the good researcher.

Concerning the latter question — that of form — the various ways in which material can be transcribed and used may be described as follows:

1. *Plagiarism* refers to the deliberate copying (or close imitation) of the unique ideas and language of the author and incorporating them in the research paper as one's original work.

As this is both unethical and highly unacceptable behavior, the student should take great care to give credit where due by unmistakable reference to its original source.

2. *Quotation* involves the exact replication of the author's language, on a point judged by you to be important and involving direct credit to the author.

The clear admission that these are the author's words is manifested both by an introductory statement using the author's name and the use of quotation marks or if the statement is lengthy, by indenting and single spacing the material. Either form also involves an accompanying reference number.

When used sparingly, quotations can add strength both to the form and content of your paper. They are also valuable in bringing the weight of authority to the support of a major contention or position. The student should guard against the common practice of overreliance on quotations, however.

3. *A paraphrase* is a restatement of the author's ideas, views, or material in the report writer's own words.

This free and personal rendering of a passage allows the liberty of condensing the material and of making it more pertinent to the

topic. Paraphrasing also serves the important function of forcing the writer to understand the passage well enough to put it in his own words. Note that unless this statement is now so general as to be common knowledge, reference should still be made to the original author and the page(s) from which the material was taken. Paraphrasing is a highly accepted form of writing and should be found in the final paper much more often than direct quotations.

4. *Summary statements* include some material from the source being perused, but are more the report writer's summary of a large body of information than a repetition of the author's specific or unique view.

Personal interpretation and expression are dominant enough that no credit needs to be given to the author. Cases may occur where it is difficult for the writer to decide on whether what he has summarized falls under this category or that of paraphrasing. When in doubt, mention of the author and reference is desirable.

When deciding on the relative merits of the above alternatives of note-taking and final report writing, the student should perhaps recall the earlier discussion (pp. 4-6) regarding objectives of library research papers. It is hoped that a high level of intrinsic motivation will manifest itself in the student's literary efforts.

It is important that the student keep his topic outline before him as he engages in the literature search, reading, and note-taking. Normally, the above mentioned activities will lead to revisions of the outline. Continued checking of the outline also insures adequate and representative coverage of all subtopics. Of course, if extensive revisions are needed after the student is well into the topic, a reanalysis of the entire title and objective of the paper may be needed.

PRELIMINARY WRITING AND ORGANIZING

As note cards are accumulated and coded, they can be arranged in relation to the topical outline. This will allow the student a continuing check on the extent of progress and the degree of adequacy of notes.

A good research paper is a product of the gradual development of rough drafts and revisions of parts of the paper as the material

is acquired. Rather than waiting until all resource material has been collected, the student should consider writing the rough draft on the section of the paper he has most recently or thoroughly researched. "Cramming" in report writing is just as likely to lead to poor productivity as it does in preparing for an examination. Writing as the material for each major part of the paper is accumulated also adds the advantage of having fresh in the memory both the material that the student read and the smaller amount that he took down on note cards. On the other hand, the student should feel no compulsion to complete all earlier parts of the outline before starting on later areas. When productivity is slowed down on one part, a change to another phase of either resource reading or writing may be more efficient.

Chapter IV

WRITING THE REPORT

CONTENT AND FORMAT

IT is obvious that the reading of this chapter will not teach one how to develop and express the *content* of the paper. Yet some attempt in this direction appears a logical accompaniment to a discussion on the technical aspects of *format*. This chapter will therefore aim at a consideration both of format and of the literary content of the paper itself. The topics treated will follow the logical order in which they would arise in writing the report from start to finish.

The Problem of Format

There is no single standardized format accepted at all colleges and universities. It is therefore of utmost importance that the student determine the format style required by his institution and peruse it even before he takes his first notes! The format required at many universities is presented in *A Manual for Writers of Term Papers, Theses and Dissertations*, by Kate L. Turabian. (Chicago, University of Chicago Press, 1955).

The present discussion of format and content will be in keeping with the above manual. The reader should note, however, that this treatment will not substitute for use of the school's own manual or any other manual which is designed solely to deal with the technical aspects of format. Indeed, most such manuals run at least one hundred pages in length; we will devote only one chapter to both form and content. The student is urged, therefore, to procure and use the style manual prescribed by his school.

Students using this manual on the graduate level should also keep in mind the fact that there will often be available a style manual in their area of professional specialization. If they have a

choice, they may desire to follow the style manual used in professional journals in their area, e.g.:

Publication Manual of the American Psychological Association, 1967 revision. Washington, American Psychological Association, 1967.

Shannon, J. R.: Tips to writers from seventy-five editors of educational periodicals. *Journal of Educational Research*, 44:241-68, 1950.

Acceptable Style

TYPEWRITER STYLE. There is rarely a specific requirement in this regard. However, all things considered, a typewriter having pica type is probably a good choice. If available, an electric typewriter will insure clearer and more even print.

TYPING PAPER. Follow the directions of your school or course professor in selecting typing paper. However, if the choice of paper is optional, 20 pound weight and 50 per cent rag-content quality is suggested. Lighter weight paper is allowable for carbon copies.

PAGINATION. All pages preceding the start of the paper proper, (e.g. table of content, preface, etc.) should be numbered with small Roman numerals. Use lower-case letters, as i, ii, iii, iv, etc., and center the number three-fourths of an inch from the bottom of the page. The title page is page i, but this number is *not* shown; the numbering, therefore, begins with "ii."

Arabic numerals are used for *all* remaining pages. On the initial page of each major section (e.g. chapter, appendix, etc.), the number is centered at the bottom of the page three-fourths of an inch above the edge. On all other pages, the number is centered three-fourths of an inch from the top of the page.

MARGINS. Leave a margin of one and one-half inches on the left side (allowing room for binding) and one and one-quarter inches elsewhere.

FOOTNOTE PLACEMENT. The writer must plan carefully for proper placing of footnotes. The text is separated from the footnotes by typing an unbroken line from margin to margin and on the second line down from the text. The footnote begins on the second line below this and is indented in the same fashion as a paragraph beginning. (Form of footnote will be discussed later.)

MARGIN GUIDE. In order to insure proper margins and correct placement of footnotes, a guide sheet should be used. To make a guide sheet, take a sheet of onion-skin paper and using a ruler, mark off and draw lines around all margins. Then, from the bottom of page, type the last fifteen line numbers along the left margin. Then type consecutive numbers across the top line from left to right margins. (The final number will depend on whether pica or elite type is used.) Now start at top right margin and number each double-space line from 1 to 25. These line numbers will show through if the guide sheet is placed between the top sheet of the typing paper and the carbon paper. Wherever footnotes are required, the number of lines needed can be counted, and this number can be observed in one's typing. A margin guide is shown on page 55.

SPACING. The text may be typed either double space or a space and one-half. When lengthy quotations are used, they are indented and single spaced. Footnotes are also typed single-space.

TITLE PAGE. As there is no uniform style, the student should follow the format in use at his institution. If the style is optional, one such as shown on page 56 may be used.

PREFACE. This should contain a clear and concise statement regarding the purpose, scope, and content of the paper. If pertinent, the writer's reasons for investigating the topic should be included. In a more formal paper such as a thesis, acknowledgments of assistance received from advisors would be included. Note that the preface should not end up as an introduction to the topic under study.

As the preface is often relatively short in length, it should be centered on the page. The heading is typed in capital letters. The page number is centered at the bottom of the page and typed in lower case Roman numerals.

CONTENTS. The purpose of the table of contents is to give a reasonably thorough outline of the major topical area covered in the paper. The writer has a certain amount of freedom in deciding on the extent to which subtitles should be included. Chapter titles are always typed in capital letters; if subtitles are used, they are indented and the first letter of each major work is capitalized. All titles and subtitles should be listed exactly as they appear in the

A MARGIN GUIDE

12345678910111213141516171819202122232425262728293031323334353637383940

1

↑
These numbers aid in centering, keeping indentations uniform, checking right margins, etc.

2

3

These numbers tell you how many double spaced lines you have used. The number of lines left on the page is determined by subtracting this number from 25, the last line.

→ 4

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6
5
4
3
2
1
↙ If you had two footnotes for this page, you would count the number of lines needed for both footnotes, add a line for a space between them, and then add two more lines for separation from text of paper. This total number would then be counted up, from scale at left margin to the point where you would have to stop typing the text in order to add footnotes.

(This is last possible line of type.)

(Sample Title Page)

**THE ETIOLOGY AND SOCIAL FUNCTION OF
ANXIETY AMONG THE OJIBWA INDIANS**

**Submitted in partial fulfillment
of course requirements in
GENERAL ANTHROPOLOGY**

**by
Mary Robertson
University of Dayton
1964**

(Sample)

CONTENTS

	<i>Page</i>
<i>PREFACE</i>	ii
<i>LIST OF TABLES</i>	vii
<i>LIST OF ILLUSTRATIONS</i>	xii
<i>INTRODUCTION</i>	1
<i>Chapter</i>	
I. (Chapter Title Capitalized)	3
Subheadings } these headings are <i>not</i> followed	
Subheadings } by dotted lines or page numbers	
Subheadings }	
II. (Chapter Title Capitalized)	29
Subheadings } these headings are <i>not</i> followed	
Subheadings } by dotted lines or page numbers	
Subheadings }	
III. (as above)	41
<i>APPENDIX</i>	59
<i>BIBLIOGRAPHY</i>	66

text of the paper.

The heading is typed in capital letters and centered two or more inches from the top of the page. Like the preface, the entire table of contents should be centered on the page. A sample table of contents appears on page 57.

CHAPTERS. The paper is usually divided into chapters, each of which contains a major section of material previously blocked out in logical form and sequence in the writer's outline. If the paper is unusually long, a number of related chapters may be combined into parts. In such cases, the paper has several parts, each of which contain a number of chapters. Chapters are always started on a new page and are appropriately titled.

CHAPTER SUBTITLES. As lengthy chapters are often sectioned, with each part containing its own title, a consistent organizational format should be followed. Subtitles should be chosen both from the standpoint of logical division of the material and from a consideration of desired attention value of the heading.

Care must be taken that there is no excessive subtitling resulting in a disruptive or distracting effect. An acceptable plan would be this:

1. Centered heading, underlined.
2. Side heading, underlined (i.e. flush with left margin).
3. Underlined paragraph heading, followed by a period and a dash and continuing the sentence.

INTRODUCTION. This is the first formal division of the paper, as opposed to the earlier parts comprising the preliminary section. A very lengthy paper may have an introduction separate from the first chapter, but in most research papers the introduction will constitute the initial portion of Chapter 1.

An adequate introduction may involve several paragraphs, pages, or even one or more chapters. When the introduction is going to be lengthy, it is advisable to state the purpose and scope of the study in the opening paragraph; thus, instead of wading through several pages before the purpose of the study is stated, attention should be drawn by a suitable title and on each statement of the problem and purpose of the paper "The Problem and Its Setting."

The introductory section should contain a treatment of these

sequential topics: (a) a specific statement of the problem, (b) purpose and scope of the study, (c) definition of technical terminology, (d) need for study, (e) historical background, (f) literature, sources of data, and (g) methodology.

BODY OF THE PAPER. Despite the brevity of length of the introduction, the body of the paper is still the key to the comprehensiveness and quality of the research report. Here the writer carries out his plan, marshalls pertinent material and evidence, or conducts reports on his original investigation. A logical outline, adequate source materials, and the student's ability to integrate and amplify resource materials are the keys to success in this endeavor. Beyond these points, little can be taught here about literary style.

QUOTATIONS. The judicious use of quotations may add weighty support to the paper. Generally speaking, quotations must correspond exactly with the originals both in wording and in punctuation. The few exceptions to this rule are incorporated in the remarks that follow.

A quotation which can be typed in less than two full lines should be made a part of the text of the paper and enclosed in double quotation marks. The footnote reference normally follows the quotation. If more lengthy quotations are used, they shall be separated from the body of the text by being single spaced and indented four spaces at the right and left margins. Quotation marks are *not* used. It often happens that only a portion of an extended quote is pertinent to the topic. When certain words or parts of an extended quotation are omitted, this omission (called "ellipsis") is signified by the use of three spaced periods. If the ellipsis is followed by a new sentence, a fourth period is added to the preceding three. If an entire line of material is omitted, this should be shown by an entire new line of spaced periods. If a quotation occurs within a single-spaced quotation, it is signified by the use of double quotation marks.

FOOTNOTES. While a footnote serves a variety of purposes, its two main functions are (a) the acknowledgment of sources of quotations made in the text and (b) the amplification of textual materials in a way that will not disrupt the plan of the text. Footnotes are numbered consecutively beginning with "1"

throughout the entire paper, having each footnote number identical with the related text quotation and reference number. In lengthy papers comprising many chapters, it is permissible to start the footnote numbers over at "1" at the beginning of each new chapter.

Footnote Style. Examples of acceptable footnote style for a book and a periodical are as follows:

¹ Pauline V. Young: *Scientific Social Surveys and Research*, 2nd ed. New York, Prentice-Hall, 1949, p. 39.

² Edward Rose and William Felton: Experimental Histories of Culture. *American Sociological Review*, XX:384, 1955.

³ *Ibid.*, 395.

⁴ Young, p. 42.

(Note that two short footnotes may be placed on the same line; see footnotes 3 and 4 above.)

The entire reference, as exemplified above, must be given the first time it is used. Note that when references to the same work follow each other consecutively, even though on the next typed page, only the abbreviation *ibid.* (meaning "in the same place") is used. If a different page is cited, the number follows. See footnote number 3 above for example of proper use of *ibid.* When a different reference is cited in between it and the original reference, only the last name of the author and the page number need be given. This is illustrated in reference number 4 above. When more than one book or article by the same author has already been mentioned in full in the footnotes and is referred to later in the text, the author's surname and a shortened form of the title is acceptable. For example, if the author of reference 1 above (Young) has written another book and it has been fully presented in a previous footnote, any further reference to either book must show last name and some part of the title. A later reference to the book shown in reference 1 above would be as follows:

⁵ Young, *Scientific Social Surveys* . . . , p. 42.

Thus, where only one book by an author appears in your paper, reference 4 above is the proper form; where more than one book by the same author appears, then reference 5 is the proper form.

Note that when the above style is used there is no need for the use of forms like *op. cit.* or *loc. cit.*

This writer prefers not to use footnotes at all, substituting instead a system of cross-reference to a consecutively numbered bibliography which has been set up in alphabetical order. This procedure is often found in publications in the behavioral sciences. Whether the student uses it depends, of course, on its acceptability by the course instructor or advisor. When used, the bibliography is complete before the final typing of the paper is begun. The reference is placed in the body of the text following the author's name or any proper noun where it is applicable. For example, the reference (22:201-203) identifies the preceding material as coming from pages 201-203 of bibliography reference number 22. No other referencing is required.

Publications of the American Psychological Association follow this system of referencing, but with the following change. Instead of (22:201-203), the author's last name is listed, followed by a comma and the year of publication, e.g., [Young, 1956]. If a direct quote is included, the page number is placed in brackets at the end of the quote. An acceptable alternate procedure would be to include the page number in the original citation, e.g., [Young, 1965, p. 116].

The use of either of these reference systems usually reduces substantially the student's concern over the problem of footnoting.

TABLES. If the table is being copied as part of source material, it should be presented in the same form as found in the reference.

Proper acknowledgment of the source, as well as any explanation that may be necessary, should be contained in the body of the paper as close to the table as form will permit, i.e. adjoining or preceding page.

When the table is intended to present data developed by the student, a certain amount of flexibility is allowed. Certain rules, however, should be adhered to:

1. The word "table" is always capitalized and centered between the right and left margins. At least three spaces should separate the top and bottom of the table from the rest of the text.
2. All words in the table caption should be capitalized.
3. If footnotes accompany the table, they should be placed in indented form two spaces below the table. Then three

spaces should be allowed before continuing the text.

4. Horizontal lines should be typed, while vertical or other lines should be drawn in black India ink.

An example of table form is presented in Table I.

TABLE I

CORRELATION BETWEEN FIRST SEMESTER GRADE
POINT AVERAGES AND T-SCORES ON THE ACE

Division	N	Value of r	Value of t	Significance Level s
A & S	311	.33	7.22	1%
Business	263	.45	9.09	1%
Engin.	344	.36	6.03	1%

SUMMARY. The final section of the text of the library research is devoted to a brief restatement of the major objectives, methods, and content of the paper. No new material should appear in the summary unless it appears in the form of recommendations for further action or research.

BIBLIOGRAPHY. Every relevant source used in the preparation of the paper should appear in the bibliography, whether it has been directly quoted in the paper or not. Entries may be listed in alphabetical order or in order of occurrence in the paper. The listing must, of course, be consistent with the reference system included in the body of the paper. It is permissible to list entries under separate sections, e.g. books, periodicals, and unpublished materials. The form of the entry is quite similar to that of the footnote but with the following exceptions:

1. The surname appears first, followed by first name or initials (as taken from the source itself) and then followed by a colon. Also, the inclusive pages are shown. There are no other changes required if the entry is a journal or other periodical.
2. Book titles should be followed by a period, and no parentheses are used for the publication facts.

As a final example, the first *footnote* example on page 60 of this manual would appear in the bibliography as follows:

Young, Pauline V.: *Scientific Social Surveys and Research*, 2nd ed.
New York, Prentice-Hall, 1949, xiv, 425.

Addendum

METHODS OF RESEARCH

"People don't usually do research the way people who write books about research say that people do research."*

THE major topic treated in this manual has been the *library-research* type of report. It was noted earlier that this kind of literature search is basic to other kinds of research. Such studies normally involve an extensive analysis of the pertinent literature prior to the design and conduct of the current study. The actual investigative technique might be the experimental method, clinical or case-study technique, survey or developmental approach, or one of the several other techniques used in the behavioral sciences.

Certain of these investigative approaches require extensive training and experience for their proper and efficient utilization. With others, a basic degree of proficiency can be attained through the study of selected publications and some related course work or guidance by one's mentor. While the purpose of this section is not the treatment of research techniques per se, there does follow an extensive listing of articles and books dealing directly with a variety of research techniques. These resources have been selected because of their excellence in presenting both theoretical and practical "how-to-do-it" information. A perusal of the sources under the different research techniques listed should provide valuable assistance to the student who decides to go beyond the library-research method and undertake a study of a more original nature.

*Professor Arthur Bachrach calls this his First Law of Research in his book *Psychological Research: An Introduction* (New York, Random, 1962, p. vi). His Second Law, emphasizing the time needed to design and conduct research studies, is that "things take more time than they do."

REPRESENTATIVE REFERENCES ON SCIENTIFIC METHOD AND RESEARCH DESIGN

- Ackoff, Russell L.: *The Design of Social Research*. Chicago, University of Chicago, 1953. pp. xi, 420.
- Adams, E. W., and Fagot, R.: A model of riskless choice. *Behavioral Science*, 4:1-10, 1959.
- Altman, I., and McGrath, J. E.: A Conceptual Framework for the Integration of Small Group Research Information. *Human Sciences Research*, 1959, p. 45.
- Anderson, John E.: Methods of child psychology. In Carmichael, Leonard (Ed.): *Manual of Child Psychology*, 2nd ed. New York, Wiley, 1954, pp. 44-52.
- Andrews, T. C. (Ed.): *Methods of Psychology*. New York, Wiley 1948, pp. xiv, 716.
- Anthony, J. An experimental approach to the psychopathology of childhood; sleep disturbances. *British Journal of Medical Psychology*, 32:19-37, 1959.
- Asthana, H. S.: Psychological methodology. *Educator*, 10:203-206, 1956.
- Astin, A. W., and Holland, J. L.: The environmental assessment technique: a way to measure college environments. *Journal of Educational Psychology*, 52:308-16, 1961.
- Atkinson, R. C.: A Markov model for discrimination learning. *Psychometrika*, 23:309-22, 1958.
- Atkinson, R. C.: The Use of Models in Experimental Psychology. *Synthese*, 12:162-61, 1960.
- Back, K., Festinger, L., Hymovitch, B., Kelley, H., Schacter, S., and Thibaut, J.: The methodology of rumor transmission. *Human Relations*, 3:307-12, 1950.
- Bass, B. M.: Further evidence on the dynamic character of criteria. *Personnel Psychology*, 15:93-97, 1962.
- Baymur, F. B., and Patterson, C. H.: A comparison of three methods of assisting underachieving high school students. *Journal of Counseling Psychology*, 7:83-89, 1960.
- Beattie, John: *Aims, Methods and Achievements in Social Anthropology*. New York, Brunner, 1964.
- Becker, H., et al.: *For a Science of Social Man*. New York, Macmillan, 1954, pp. 289.
- Bennis, W. G., and Shepard, H. A.: A theory of group development. *Human Relations*, 9:415-37, 1956.
- Berg, I. A.: The use of human subjects in psychological research. *American Psychologist*, 9:108-11, 1954.

- Bijou, S. W.: A systematic approach to an experimental analysis of young children. *Child Development*, 26:161-68, 1955.
- Bindra, D., and Scheier, I. H.: The relation between psychometric and experimental research in psychology. *American Psychologist*, 9:69-71, 1954.
- Bingham, W. V.: Psychology as a science, as a technology and as a profession. *American Psychologist*, 8:115-18, 1953.
- Blumer, H.: Sociological analysis and the 'variable.' *American Sociological Review*, 21:683-90, 1956.
- Bogardus, E. S.: Experimental research in sociology. *Sociology and Social Research*, 33:33-40, 1948.
- Boring, E. G.: *A History of Experimental Psychology*, 2nd ed. New York, Appleton, 1950, pp. xxi, 777.
- Borow, H.: Vocational development research: some problems of logical and experimental form. *Personnel Guide Journal*, 40:21-25, 1961.
- Bowman, M. J. (Ed.): *Expectations, uncertainty, and business behavior*. New York, Social Science Research Council, 1958, pp. 202.
- Brown, C. W., and Ghiselli, E. E.: *Scientific Method in Psychology*. New York, McGraw, 1955, pp. xii, 368.
- Brown, C. C., and Saucer, R. T.: *Electronic Instrumentation for the Behavioral Sciences*. Springfield, Thomas, 1958, pp. 176.
- Brownell, W. A.: Critique of research on learning and on instruction in the school. *Graduate Study in Education*. pp. 52-66. Fiftieth Yearbook National Society for the Study of Education, Part I. Chicago, University of Chicago, 1951, pp. 369.
- Brunswik, E.: *Perception and the Representative Design of Psychological Experiments*. Berkeley, University of California Press, 1956, pp. xii, 154.
- Brunswik, E.: *Systematic and Representative Design of Psychological Experiments*. Berkeley, University of California, 1947, p. 60.
- Bush, R. R., and Mosteller, F.: *Stochastic Models for Learning*. New York, Wiley, 1955, p. 365.
- Campbell, D. T.: Factors relevant to the validity of experiments in social settings. *Psychological Bulletin*, 54:297-312, 1957.
- Catheart, R. S.: An experimental study of the relative effectiveness of four methods of presenting evidence. *Speech Monographs*, 22:227-33, 1955.
- Chapanis, A., and Safren, M. A.: Of misses and medicines. *Journal of Chronic Diseases*, 12:403-8, 1960.
- Chapanis, A.: *Research Techniques in Human Engineering*. Baltimore, John Hopkins, 1959, p. 316.
- Chapanis, A.: Men, machines, and models. *American Psychologist*, 16:113-31, 1961.
- Chapin, R. S.: *Experimental Designs in Sociological Research*, Rev. Ed. New

- York, Harper, 1955, p. xxii, 295.
- Chapin, F. S.: Experimental design in sociology: limitations and abuses. With rejoinders by J. E. Hulett, Jr. and S. A. Queen. *Social Forces*, 29:25-32, 1950.
- Christensen, J. M.: A sampling technique for use in activity analysis. *Personnel Psychology*, 3:361-368, 1950.
- Churchman, C. W.: *Theory of Experimental Inference*. New York, Macmillan, 1948.
- Cicourel, A. V.: *Method and Measurement in Sociology*. New York, Brunner, 1964.
- Cochran, W. G., and Cox, Gertrude M.: *Experimental Designs*, 2nd ed. New York, Wiley, 1957, pp. xiv, 611.
- Crites, J. O.: A model for the measurement of vocational maturity, *Journal of Counseling Psychology*, 8:255-59, 1961.
- Crowne, D. P., and Stephens, M. W.: Self-acceptance and self-evolutive behavior: A critique of methodology. *Psychology Bulletin*, 58:104-21, 1961.
- Davies, O. L. (Ed.): *Design and Analysis of Industrial Experiments*. London, Oliver and Boyd, 1954.
- Doby, J. T. (Ed.): An Introduction to Social Research. *Harrisburg, Stackpole*, 1954, 101-22.
- Eckman, D. P. (Ed.): *Systems: Research and Design*. New York, Wiley, 1961, p. 310.
- Edwards, A. L.: *Experimental Design in Psychological Research*. New York, Holt, 1950, pp. xiv, 445.
- Edwards, A. L.: Experiments: their planning and execution. In Lindzey, Gardner: *Handbook of Social Psychology: Theory and Method*, Cambridge, Addison-Wesley, 1954, Vol. I, pp. 259-88.
- Edwards, A. L., and Cronbach, L. J.: Experimental design for research in psychotherapy. *Journal of Clinical Psychology*, 8:51-56, 1952.
- Edwards, W.: Behavioral decision theory. *Annual Review of Psychology*, 12:473-98, 1961.
- Emmerglick, L. J.: Open vision in science. *Main Currents of Modern Thought*, 18(3): 51-54, 1962.
- Estes, W. K.: Learning theory and the new mental chemistry. *Psychology Review*, 67:207-23, 1960.
- Estes, W. K.: New developments in statistical behavior theory: differential tests of axioms for associative learning. *Psychometrika*, 26:73-84, 1961.
- Federer, W. T.: *Experimental Design: Theory and Application*. New York, Macmillan, 1955, pp. xix, 544, 557.
- Festinger, L., and Katz, D., (Eds.): *Research Methods in the Behavioral*

- Sciences*. New York, Dryden, 1953, pp. 98-172.
- Finney, D. J. *Experimental Design and Its Statistical Basis*. Chicago, University of Chicago, 1955, pp. 169.
- Fisher, R. A. *The Design of Experiments*, 6th ed. New York, Hafner, 1951, pp. xv, 244.
- Fisher, R. A., and Yates, F.: *Statistical Tables for Biological, Agricultural and Medical Research*. London, Oliver and Boyd, 1949.
- Flanagan, J. C.: The critical incident technique. *Psychological Bulletin*, 51:327-358, 1954.
- Gee, W.: *Social Science Research Methods*. New York, Appleton, 1950, p. 330-60.
- Ghiselli, E. E.: Dimensional problems of criteria. *Journal of Applied Psychology*, 40:1-4, 1956.
- Glanzer, M., and Glaser, R.: Techniques for the study of group structure and behavior: I. analysis of structure. *Psychology Bulletin*, 56:317-32, 1959.
- Goldfarb, W.: A method for appraising children in in-patient psychiatric treatment: ranking for normality. *Journal of Genetic Psychology*, 95:203-6, 1959.
- Goldstein, P.: *How to Do an Experiment*. New York, Harcourt, 1957, pp. 192.
- Gollin, E. S.: Observations on method in child psychology. *Merrill-Palmer Quarterly*, 6:250-60, 1960.
- Good, C. V., and Scates, D. E.: *Methods of Research: Educational, Psychological, Sociological*. New York, Appleton, 1954.
- Goode, W. J., and Hatt, P. K.: *Methods in social research*. New York, McGraw, 1952, pp. 74-102.
- Greenwood, E.: *Experimental Sociology: A Study in Method*. New York, King's Crown, 1954, pp. xiii, 163.
- Hammond, K. R., Householder, J. E.: *Introduction to the Statistical Method*. New York, Knopf, 1962.
- Harlow, H. F.: Experimental analysis of behavior. *American Psychologist*, 12:485-90, 1957.
- Hays, W. L. *Statistics for Psychologists*. New York, Holt, 1963.
- Hilgard, E. R.: *Theories of Learning*, Revised ed. New York, Appleton, 1956, pp. 563.
- Jahoda, Marie, et al. *Research Methods in the Study of Social Relations*, 2 Vols. New York, Dryden, 1951.
- Jeffreys, H.: *Scientific Inference*. 2nd ed. Cambridge, England: Cambridge University, 1957, pp. 236.
- Kaplan, A.: *The Conduct of Inquiry: Methodology for Behavioral Science*. San Francisco: Chandler Pub., 1963, pp. xix, 428.

- Kaplan, B.: "Dissemination of primary research data in psychology." *American Psychologist*, 13:53-55, 1958.
- Kemphorne, O.: *The Design and Analysis of Experiments*. New York, Wiley, 1952.
- Kerlinger, F. N.: *Foundations of Behavioral Research: Educational and Psychological Inquiry*. New York, Holt, 1964. p. 739.
- Kogan, L. S.: Applications of variance-covariance designs in educational research. In statistical methodology in educational research. *Review of Educational Research*, 24:439-47, 1954.
- Lacey, O. L.: *Statistical Methods in Experimentation: An Introduction*. New York, Macmillan, 1953, pp. xi, 249.
- Lazarsfeld, P. F., and Rosenberg, M., (Eds.): *The Language of Social Research: A Reader in the Methodology of Social Research*. Glencoe, Free Press, 1955, pp. xiii, 590.
- Leshan, L. L., and Brame, J. B.: A note on techniques in the investigation of accident-prone behavior. *Journal of Applied Psychology*, 37:79-81, 1953.
- Lev, J.: Research methods and designs. *Review of Educational Research* 18:410-23, 1948.
- Levitt, E. E.: *Clinical Research Design and Analysis*. Springfield, Thomas, 1961, pp. xxii, 199.
- Lindquist, E. F.: *Design and Analysis of Experiments in Psychology and Education*. Boston, Houghton 1953, pp. xix, 393.
- Luchins, A. S.: Towards an Experimental Clinical Psychology. *Journal of Personality*, 20:440-56, 1952.
- Lumsdaine, A. A., Glaser, R. (Eds.): *Teaching Machines and Programmed Learning: A Source Book*. Washington, National Education Association, 1960, pp. 724.
- Lundberg, G. A.: Alleged obstacles to social science. *Scientific Monthly*, 70:299-305, 1950.
- Luski, Margaret B. Team research in social science: major consequences of a growing trend. *Human Organization*, 16(1):21-24, 1947.
- Madge, J.: *The Tools of Social Science*. New York, Longmans, 1953. pp. 254-89.
- Mann, H. B.: *Analysis and Design of Experiments*. New York, Dover, 1949, pp. x, 198.
- Martin, W. E.: Rediscovering the mind of the child: a significant trend in research in child development. *Merrill-Palmer Quarterly*, 6:67-76, 1960.
- Maxwell, A. E.: *Experimental Design in Psychology and the Medical Sciences*. New York, Wiley 1958, p. 144.
- McCandless, B. R., and Rosenblum, S.: Psychological theory as a determiner of experimental pattern in child study. *Review of Educational Research*,

- 22:496-525, 1952.
- McCandless, B. R., and Spiker, C. C.: Experimental Research in Child Psychology. *Child Development*, 27:75-80, 1956.
- McCormick, T. C., and Francis, R. G.: *Methods of Research in the Behavioral Sciences*. New York, Harper, 1958, chap. 1.
- McGrath, J. E., and Altman, I.: *A Model for Integration of Small Research Information*. Arlington, Human Sciences Research, 1958, p. 82.
- Miller, D. C.: The shaping of research design in large-scale group research. *Social Forces*, 33:383-90, 1955.
- Moreno, J. L.: *Sociometry, Experimental Method and the Science of Society*. New York, Beacon, 1951, pp. xiv, 220.
- Mowrer, O. H. *Learning Theory and Behavior*. New York, Wiley, 1960, p. 555.
- Murdock, G. P.: Anthropology as a comparative science. *Behavioral Science*, 2:249-54, 1957.
- Norton, D. W., and Lindquist, E. F.: Applications of experimental design and analysis. *Review of Educational Research*, 21:350-67, 1951.
- Osgood, C. E.: *Method and Theory in Experimental Psychology*. New York, Oxford U. P., 1953, pp. vi, 800.
- Peters, C. C., Townsend, Agatha, and Traxler, A. E.: Research methods and designs. *Review of Educational Research*, 15:377-93, 1945.
- Price, G.: A Method for analyzing newspaper campaign coverage. *Journalism Quarterly*, 30:447-88, 1954.
- Ramy, I.: Research aspects of psychoanalysis. *Psychoanalytic Quarterly*, (1):58-76, 1963.
- Reiss, A. J., Jr.: Unraveling juvenile delinquency: II, an appraisal of the research methods. *American Journal of Sociology*, 57:115-20, 1961.
- Research design in clinical psychology: symposium. *Journal of Clinical Psychology*, 8:3-98, 1952.
- Rheingold, H. S., and Bayley, N.: The later effects of an experimental modification of mothering. *Child Development*, 30:363-72, 1959.
- Rose, A. M.: *Theory and Method in the Social Sciences*. Minneapolis, University of Minnesota, 1954, pp. xii, 351.
- Rose, E., and Felton, W.: Experimental histories of culture. *American Sociological Review*, 20:383-92, 1955.
- Roseborough, Mary E.: Experimental studies of small groups. *Psychological Bulletin*, 50:275-303, 1953.
- Rubin, S.: Unraveling juvenile delinquency: I: illusions in a research project using matched pairs. *American Journal of Sociology*, 57:107-14, 1951.
- Rummel, J. F.: *An Introduction to Research Procedures in Education*. New York, Harper, 1958. pp. 203-24.

- Russell, W. A.: An experimental psychology of development: pipe dream or possibility? In Harris, D. B.: *The Concept of Development*. Minneapolis, University of Minnesota, 1957, pp. 162-74.
- Safren, M. A., and Chapanis, A. A.: Critical incident study of hospital medication errors. *Hospitals*, 34:32-34, 34:53, 1960.
- Schaefer, E. S., Bell, R. Q., and Bayley, N.: Development of a maternal behavior research instrument. *Journal of Genetic Psychology*, 95:83-104, 1959.
- Scheier, I. H.: The method of natural variation in applied educational research. *Journal of Educational Research*, 52(17):7-70, 1959.
- Scheier, I. H.: Two orientations in psychological research: effect-centered and combination-centered. *Canadian Journal of Psychology*, 12:247-252, 1958.
- Schutz, W. C.: *FIRO: a three-dimensional theory of interpersonal behavior*. New York, Holt, 1958, pp. 267.
- Selltiz, C., Jahoda, M., Deutsch, M., Cook, S. W.: *Research Methods in Social Relations*. New York, Holt, 1962.
- Simon, H. A.: A behavioral model of rational choice. *Quarterly Journal of Economics*, 69:99-118, 1955.
- Solomon, L. N.: The Paradox of the Experimental Clinician. *American Psychologist*, 10:170-71, 1955.
- Spence, K. W.: *Behavior Theory and Learning*. Englewood Cliffs, Prentice-Hall, 1960, p. 403.
- Stanley, J. C.: A partially annotated supplemental bibliography of research methodology in experimental design. New York. *Psychology Newsletter*, 9:108-117 (137 refs.), 1968.
- Stephan, F. F.: Must a researcher tell the truth? *Public Opinion Quarterly*, 22:83-90, 1958.
- Stevens, S. S. (Ed.): *Handbook of Experimental Psychology*. New York, Wiley, 1951. pp. xi, 1436.
- Stevenson, H. W., and Stevenson, Nancy G.: A method for simultaneous observation and analysis of children's behavior. *Journal of Genetic Psychology*, 99:253-60, 1961.
- Tinker, M. A., and Russell, W. A.: *Introduction to Methods in Experimental Psychology*, 3rd ed. New York, Appleton, 1958, pp. x, 282.
- Tourlentes, T. I., Pollock, S. L., and Himwich, H. E. (Eds.): *Research Approaches to Psychiatric Problems: A Symposium*. New York, Grune, 1962, pp. ix, 238.
- Townsend, J. C.: *Introduction to Experimental Method: For Psychology and the Social Sciences*. New York, McGraw, 1953, pp. ix, 220.
- Travers, R. M. W.: *An Introduction to Educational Research*. New York,

- Macmillan, 1958. chap. 1-3.
- Underwood, B. J.: *Experimental Psychology: An Introduction*. New York, Appleton, 1949, pp. vii, 638.
- Underwood, B. J.: Research design. In *Psychological Research*. New York, Appleton 1957, pp. 85-173.
- Walker, Helen M.: Methods of research. *Review of Educational Research*, 26:323-343, 1956.
- Wasserman, P. S. and Silander, F. S.: *Decision-making: an annotated bibliography*. Ithaca, New York: Cornell Graduate School of Business and Public Administration. 1958, p. 111.
- Wilson, E. B.: *Introduction to Scientific Research*. New York, McGraw, 1952, p. 375.
- Wolfe, D. et al.: Standards for appraising psychological research. *American Psychologist*, 4:320-28, 1949.
- Youden, W. J.: The Fisherian revolution in methods of experimentation. *Journal of the American Statistical Association*, 46:47-50, 1951.
- Young, Pauline V.: *Scientific Social Surveys and Research*, 3rd ed. Englewood Cliffs, Prentice-Hall, 1956, pp. xx, 540.

REPRESENTATIVE REFERENCES ON SURVEY STUDIES

- Adkins, Dorothy C.: Principles underlying observational techniques of evaluation. *Educational and Psychological Measurement*, 11:29-51, 1951.
- Angell, R. C., and Freedman, R.: Use of documents, records, census materials, and indices. In Festinger, Leon, and Katz, Daniel (Eds.): *Research Methods in the Behavioral Sciences*. New York, Dryden, 1953, chap. 7.
- Bogart, L.: Measuring the effectiveness of an overseas information campaign: a case history. *Public Opinion Quarterly*, 21:475-98, 1958.
- Borgatta, E. F., and Cottrell, L. S., Jr.: Directions for research in group behavior. *American Journal of Sociology*, 63:42-48, 1957.
- Burroughs, G. E. R.: A Study of the Interview in the Selection of Students for Teacher Training. *British Journal of Educational Psychology*, 28:37-46, 1958.
- Caplow, T.: The dynamics of information interviewing. *American Journal of Sociology*, 62:165-71, 1956.
- Cocking, W. D.: The school survey and its social implications. *Educational Research Bulletin*, 30:169-78, 196, 1951.
- Corbally, J. E., Jr.: The critical incident technique and educational research. *Educational Research Bulletin*, 35:57-62, 1956.

- Corey, S. M.: Action research in education. *Journal of Educational Research*, 47:375-80, 1954.
- Cornell, F. G.: Sample surveys in education. In Statistical methodology in educational research. *Review of Educational Research*, 24:359-74, 1954.
- Frank, L. K.: Research for what? *Journal of Social Issues*, Suppl. 10:22, 1957.
- Gee, W.: *Social Science Research Methods*. New York, Appleton, 1950.
- Gorden, R. L.: Dimensions of the depth interview. *American Journal of Sociology*, 62:158-64, 1956.
- Hare, A. P., and Davie, J. S.: The group interview: its use in a study of undergraduate culture. *Sociology and Social Research*, 39:81-87, 1954.
- Hyman, H. H.: *Survey Design and Analysis: Principles, Cases and Procedures*. Glencoe, Free Press, 1955, pp. xxviii, 425.
- Katona, G.: The function of survey research in economics. In Komarovsky, Mirra: *Common Frontiers of the Social Sciences*. Glencoe, Free Press, 1957.
- Katz, E.: The two-step flow of communication: an up-to-date report on an hypothesis. *Public Opinion Quarterly*, 21:61-78, 1957.
- Keating, Elizabeth, et al.: Validity of work histories obtained by interview. *Journal of Applied Psychology*, 34:6-11, 1950.
- Kincaid, H. V., and Bright, Margaret.: Interviewing the business elite. *American Journal of Sociology*, 63:304-11, 1957.
- Kutner, B., et al.: *Five Hundred Over Sixty: A Community Survey on Aging*. New York, Russell Sage, 1956, p. 345.
- Lewis, H.: *Blackways of Kent. Field Studies in the Modern Culture of the South*. Chapel Hill: University of North Carolina, 1955, Vol II. pp. xxiv, 337.
- Litwak, E.: A classification of biased questions. *American Journal of Sociology*, 62:182-86, 1956.
- Mack, R. W., Freeman, L., and Yellin, S.: *Social Mobility: Thirty Years of Research and Theory*. Syracuse, Syracuse University, 1957, p. 31 (annotated bibliography covering years 1924-1953).
- Macrae, D. G.: Social theory: retrospect to prospect. *British Journal Sociology*, 8:97-105, 1957.
- Manniche, E., and Hayes, R. P.: Respondent anonymity and data matching. *Public Opinion Quarterly*, 21:384-388, 1957.
- McCloskey, J. F., and Copping, J. M. (Eds.): *Operations Research for Management. Case Histories, Methods, Information Handling*. Baltimore, Johns Hopkins, 1956, Vol. II, pp. xxxvi, 563.
- Merton, R. K.: The role-set: problem in sociological theory. *British Journal of Sociology*, 8:106-120, 1957.

- Pace, C. R., and Browne, A. D.: Trend and survey studies. *Review of Educational Research*, 21:337-49, 1951.
- Parten, Mildred: *Surveys, Polls, and Samples: Practical Procedures*. New York, Harper, 1950, pp. 1-23, 82-85, 157-228, 331-484.
- Phillips, W. M., Jr.: Weaknesses of the mail questionnaire. *Sociology and Social Research* 35:260-67, 1951.
- Piltz, A., and O'Regan, W.: Non-response and non-quantifiable data in sample surveys. *Journal of Educational Research*, 51:143-47, 1957.
- Quinn, J. A.: Concluding comments, symposium on viewpoints, problems, and methods of research in urban areas. *Scientific Monthly*, 73:37-50, 1951.
- Reimer, S.: Pre-hypothetical studies in sociology. *Sociology and Social Research*, 42:37-43, 1957.
- Rosen, H., and Rosen, R. A. H.: The validity of 'undecided' answers in questionnaire responses. *Journal of Applied Psychology*, 39:178-81, 1955.
- Safren, M. A., and Chapanis, A. A.: Critical incident study of hospital medication errors. *Hospitals*, 34:32-34 *et passim*, 34:53 *et passim*, 1960.
- Scott, J. P.: The place of observation in biological and psychological science. *American Psychologist*, 10:61-64, 1955.
- Shyne, Ann W.: Telephone interviews in casework. *Social Casework*, 35:342-47, 1954.
- Sitgreaves, R., and Solomon, H.: Research methods in status studies and sample surveys. *Review of Educational Research*, 27:460-470, 1957.
- Slocum, W. L. *et al*: Increasing response to questionnaires and structured interviews. *American Sociological Review*, 21:221-25, 1956.
- Stephan, F. F., and McCarthy, P. J.: *Sampling Opinions: An Analysis of Survey Procedure*. New York, Wiley, 1958, p. 451.
- Strodtbeck, F. L., and Hare, A. P.: Bibliography of small group research from 1900 through 1953. *Sociometry*, 17:107-78, 1954.
- Tannenbaum, P. H.: The indexing process in communication. *Public Opinion Quarterly*, 3:292-302, 1955.
- Toops, H. A.: Questionnaires. In Monroe, Walter S.: *Encyclopedia of Educational Research*. 2nd ed., New York, Macmillan pp. 948-51, 1950.
- White, R. K.: *Value-Analysis: The Nature and Use of the Method*. New York, Society for the Psychological Study of Social Issues, Columbia University, 1951, p. 87.
- Williams, W. M.: *Gosforth: The Sociology of an English Village*. Glencoe, Free Press, 1956, pp. x, 246.

REPRESENTATIVE REFERENCES ON DEVELOPMENTAL STUDIES

- Anderson, J. E. and Harris, D. B.: *A Survey of Children's Adjustment Over Time: A Report to the People of Nobles County*. Minneapolis, University of Minnesota, 1959, p. 42.
- Baldwin, A. L.: Indications and contraindications for the longitudinal strategy. In G. Nelson (Ed.): *Proceedings of the XIV International Congress of Applied Psychology*. vol. 3, *Child and Education*. Copenhagen, Munksgaard, 1962, pp. 42-49.
- Barker, R. G., and Wright, H. F.: *One Boy's Day: A Specimen Record of Behavior*. New York, Harper, 1951, pp. x, 435.
- Bayley, Nancy.: Individual patterns of development. *Child Development*, 27:45-74, 1956.
- Bayley, Nancy,: On the growth of intelligence. *American Psychologist* 10:805-18, 1955.
- Braine, M. D. S.: The ontogeny of certain logical operations: Piaget's formulation examined by nonverbal methods. *Psychological Monographs*, 73(5):43, 1959.
- Breen, L. Z.: Some problems of research in the field of aging. *Sociology and Social Research* 41:412-16, 1957.
- Bromley, D. B.: Some effects of age on the quality of intellectual output. *Journal of Gerontology*, 12: 318-323, 1957.
- Burlingham, Dorothy: *Twins: A Study of Three Pairs of Identical Twins*. New York, International Universities pp. x, 92, (30 developmental charts), 1953.
- Denenberg, V. H., and Bell, R. W.: Critical periods for the effects of infantile experience on adult learning. *Science*, 131:227-28, 1960.
- Donahue, W., and Tibbitts, C. (Eds.): *The New Frontiers of Aging*. Ann Arbor, University Michigan, 1957, pp. x, 209.
- Escalona, S., and Heider, G. M.: *Prediction and Outcome: A Study in Child Development*. New York, Basic Books, p. 319, 1959.
- Esman, A. H., Kohn, M., and Nyman, L.: The family of the 'schizophrenic' child. *American Journal of Orthopsychiatry*, 29:455-59, 1959.
- Fish, B.: Longitudinal observations of biological deviations in a schizophrenic infant. *American Journal of Psychiatry*, 116:25-31, 1959.
- Fisher, S., and Fisher, R. L.: A developmental analysis of some body-image and body-reactivity dimensions *Child Development*, 30:389-402, 1959.
- Gesell, A.: *Infant Development: The Embryology of Early Human Behavior*. New York, Harper, 1952, p. 108.
- Gesell, A. *Studies in Child Development*. New York, Harper, 1948, pp. x, 224.

- Gesell, A., and Amatruda, Catherine S.: *Development Diagnosis: Normal and Abnormal Child Development, Clinical Methods and Practical Applications*. Revised Edition. New York, Harper, 1947, pp. xvi, 496.
- Govatos, L. A.: Relationships and age differences in growth measures and motor skills. *Child Development*, 30:333-40, 1959.
- Haggerty, A. D.: The effects of long-term hospitalization or institutionalization upon the language development of children. *Journal of Genetic Psychology*, 94:205-9, 1959.
- Havighurst, R. J.: Research on the development-task concept. *School Review*, 64:215-21, 1956.
- Hess, E. H.: Imprinting, an effect of early experience. *Science*, 130:133-41, 1959.
- Hunt, M. M.: Doctor Kallmann's 7000 twins. *Saturday Evening Post*, 227:20-21, 80-82, 1954.
- Johoda, G.: Development of the perception of social differences in children from 6 to 10. *British Journal of Psychology*, 50:159-75, 1959.
- Koch, Helen L.: Methods of studying the behavior and development of young children. In Andrews, T. G. (Ed.): *Methods of Psychology*. New York, Wiley, 1948, pp. 624-663.
- Landy, D.: *Tropical Childhood: Cultural Transmission and Learning in a Rural Puerto Rican Village*. Chapel Hill, University of North Carolina, 1959, p. 291.
- Line, W., and King, Margery R.: Cross-cultural research. *Journal of Educational Sociology*, 29:281-91, 1956.
- Lyketsos, G. C.: On the formation of mother-daughter symbiotic relationship patterns in schizophrenia. *Psychiatry*, 22:161-66, 1959.
- Meier, G. W., and McGree, R. K.: A re-evaluation of the effect of early perceptual experience on discrimination performance during adulthood. *Journal of Comparative Physiological Psychology*, 52:390-95, 1959.
- Merry, F. K., and Merry, R. V.: *The First Ten Decades of Life* 2nd ed. New York, Harper, 1958, pp. xvii, 642.
- Millard, C. V.: *Case Inventory for the Study of Child Development*. Minneapolis, Burgess, 1950, p. 29.
- Mussen, P., and Distler, L.: Childrearing antecedents of masculine identification in kindergarten boys. *Child Development*, 31:89-100, 1960.
- Northway, Mary L.: A plan for sociometric studies in a longitudinal program of research in child development. *Sociometry*, 17:272-81, 1954.
- Parsons, T. S.: A longitudinal approach to the study of cultural growth. *Social Forces*, 34:34-41, 1955.
- Peel, E. A.: Experimental examination of some of Piaget's schemata

- concerning children's perception and thinking, and a discussion of their educational significance. *British Journal of Educational Psychology*, 29:89-103, 1959.
- Schlanger, B. B.: A longitudinal study of speech and language development of brain-damaged retarded children. *Journal of Speech and Hearing Disorders*, 24:354-60, 1959.
- Stott, L. H.: *The Longitudinal Study of Individual Development*. Detroit, Merrill-Palmer, 1955, pp. x, 115.
- Strang, Ruth: *Introduction to Child Study*, 3rd ed. New York, Macmillan, 1951, pp. xi, 705.
- Terman, L. M., and Oden, Melita H.: *The Gifted Child Grows Up: Genetic Studies of Genius*. Stanford, Stanford University, 1947, pp. xiv, 450.
- Terrell, G.: The need for simplicity in research in child psychology. *Child Development*, 29:303-10, 1958.
- White, R. W.: *Lives in Progress: A Study of the Natural Growth of Personality*. New York, Dryden, 1952, pp. 376.
- Whiting, J. W. M.: The cross-cultural method. In Lindzey, Gardner (Ed.): *Handbook of Social Psychology: Theory and Method*, Cambridge, Addison-Wesley, 1954, Vol. I, pp. 523-31.
- Wolff, W. (Ed.): *Projective and Expressive Methods of Personality Investigation*. New York, Grune and Stratton, 1950, p. 76.
- Zaleznik, A.: *Worker Satisfaction and Development: A Case Study of Work and Social Behavior in a Factory Group*. Boston, Harvard University Graduate School of Business Administration, 1956, pp. xv, 148.

REPRESENTATIVE REFERENCES ON THE USE OF CASE STUDY AND CLINICAL TECHNIQUES

- Adamson, L., and Dunham, H. W.: Clinical treatment of male delinquents: a case study in effort and result. *American Sociological Review*, 21:312-20, 1956.
- Alexander, V. D.: A case study of a multiple personality. *Journal of Abnormal and Social Psychology*, 52:272-76, 1956.
- Andrew, Gwen: An investigation of methods for follow-up of child-guidance clinic cases. *Social Service Review*, 31:74-80, 1957.
- Apostal, R. A.: Two methods of evolving vocational counseling. *Journal of Counseling Psychology*, 7:171-75, 1960.
- Argyris, C.: *Diagnosing Human Relations in Organization: A Case Study of a Hospital*. New Haven: Labor and Management Center, Yale University, 1956, pp. vii, 120.
- Bendig, A. W.: Ranking methodology: the development of a judgmental

- criterion with clinical case histories. *Journal of Consulting Psychology*, 20:75-78, 1956.
- Bendig, A. W.: The reliability of adjustment ratings and the length of case histories. *Journal of Consulting Psychology*, 19:563-67, 1955.
- Berenda, C. W.: Is clinical psychology a science? *American Psychologist*, 12:725-29, 1957.
- Berg, I. A.: The use of human subjects in psychological research. *American Psychologist*, 9:109-11, 1954.
- Berkowitz, S.: Some specific techniques of psychosocial diagnosis and treatment in family casework. *Social Casework*, 36:399-406, 1955.
- Berwich, M.: The semantic method for testing vocabulary. *Journal of Experimental Education*, 28:123-41, 1959.
- Blenkner, Margaret: Obstacles to evaluative research in casework. *Social Casework*, 31:54-60, 97-105, 1950.
- Boehm, W. W.: The terminology of social casework: an attempt at theoretical clarification. *Social Service Review*, 28:381-91, 1954.
- Britton, Clare: Casework techniques in child care services. *Social Casework*, 36:3-13, 1955.
- Buhler, Charlotte B.: Techniques for studying individual children. *California Journal of Elementary Education*, 21:58-63, 1953.
- Carter, Genevieve W.: Theory development in social work research. *Social Service Review*, 29:34-42, 1955.
- Carter, L. F.: Recording and evaluating the performance of individuals as members of small groups. *Personnel Psychology*, 7:477-84, 1954.
- Cattell, R. B.: Concepts and methods in the measurement of group syntality. *Psychology Review*, 55:48-63, 1948.
- Cattell, R. B., and Peterson, D. R.: Personality structure in four- and five-year-olds in terms of objective tests. *Journal of Clinical Psychology*, 15:355-69, 1959.
- Clifford, E.: discipline in the home: a controlled observational study of parental practices. *Journal of Genetic Psychology*, 95:45-82, 1959.
- Connery, M. F.: The measure of effective recording. *Social Casework*, 35:445-58, 1954.
- Cregan, R. F.: Case methods 'unlimited'? *School and Society*, 74:214-16, 1951.
- Daugherty, W. E., and Janowitz, M.: *A Psychological Warfare Casebook*. Baltimore, John Hopkins Press, 1959, p. 880;
- Davol, S. H.: An empirical test of structural balance in sociometric triads. *Journal of Abnormal Social Psychology*, 59:393-98, 1959.
- Dittmann, A. T.: The interpersonal process in psychotherapy: development of a research method. *Journal of Abnormal and Social Psychology*,

- 47:236-44, 1952.
- Dupuis, A. M.: Group dynamics: philosophical presupposition. *Journal of Social Psychology*, 50:247-60, 1959.
- Edwards, A. L., and Cronbach, L. J.: Experimental design for research in psychotherapy. *Journal of Clinical Psychology*, 8:51-59, 1952.
- Evans, Jean: *Three men: an experiment in the biography of emotion*. New York, Knopf, 1954, pp. xviii, 298.
- Fitzelle, G. T.: Personality factors and certain attitudes toward child rearing among parents of asthmatic children. *Psychosomatic Medicine*, 21:208-17, 1959.
- Friedlander, W. A. (Ed.): *Concepts and Methods of Social Work*. Englewood Cliffs, Prentice-Hall, 1958, pp. ix, 308.
- Gay, Eleanor: Collecting data by case recording. *Social Work*, 3:76-80, 1958.
- Gesell, A., and Amatruda, Catherine S.: *Development Diagnosis: Normal and Abnormal Child Development, Clinical Methods and Practical Applications*, rev. ed. New York, Harper, 1947, pp. xvi, 496.
- Gilbert, Jeanne G.: *Understanding Old Age*. New York, Ronald, 1953, pp. 442. (Twenty-six case histories based on the author's professional experience.)
- Glueck, S., and Glueck, Eleanor: *Delinquents in the Making: Paths to Prevention*. New York, Harper, 1952, pp. viii, 214.
- Gottschalk, L. A. and Auerbach, A.: *Methods of Research in Psychotherapy*. New York, Appleton, 1965, pp. xviii, 654.
- Green, H. R.: Hanson, J. J., and Seeman, J.: A stereophonic sound system for play therapy observation. *Journal of Consulting Psychology*, 21:499-500, 1957.
- Greenwood, E., and Massarik, F.: Some methodological problems in social work research. *American Sociological Review*, 15:546-50, 1950.
- Griffiths, D. E. and Hobday, A. F.: A new kind of case study. *Educational Research Bulletin*, 31: 19-21, 28, 1952.
- Hamilton, G.: *Principles of Social Case Recording*. New York, Columbia University, 1946. pp. vii, 142.
- Hamlin, R. M., et al.: The clinician as judge. *Journal of Consulting Psychology*, 18:233-50, 1954.
- Harris, J. P. The senatorial rejection of Leland Olds: a case study. *American Political Science Review*, 45:674-92, 1951.
- Herzog, Elizabeth G.: What social casework wants of social science research. *American Sociological Review*, 16:68-73, 1951.
- Hochwald, Hilde L.: The use of case records in research. *Social Casework*, 33:71-76, 1952.
- Hollingshead, A. B.: *Elmtown's Youth: The Impact of Social Classes on*

- Adolescents*. New York, Wiley, 1949, pp. xi, 480.
- Hunt, J. McV.: Toward an integrated program of research on psychotherapy. *Journal of Consulting Psychology*, 16:237-46, 1952.
- Jahoda, Marie, and Havel, Joan: Psychological problems of women in different social roles: a case history of problem formulation in research. *Educational Record*, 36:325-35, 1955.
- Johnson, Marjorie S.: A study of diagnostic and remedial procedures in a reading clinic laboratory school. *Journal of Educational Research*, 48:565-78, 1955.
- Karsh, B., et al.: The union organizer and his tactics: a case study. *American Journal of Sociology*, 59:113-22, 1953.
- Kinsey, A. C., et al.: *Sexual Behavior in the Human Female*. Philadelphia, Saunders, 1953, pp. xxx, 842.
- Kinsey, A. C., et al.: *Sexual Behavior in the Human Male*. Philadelphia, Saunders, 1948, pp. xvi, 804.
- Kogan, L. S., et al.: Validation of caseworker impressions by verbatim interview recording. *Social Casework*, 32:376-81, 1951.
- Kostlan, A.: A method for the empirical study of psychodiagnosis. *Journal of Consulting Psychology*, 18:83-88, 1954.
- Kubie, L. S.: Research in psychiatry is starving to death. *Science*, 116:239-43, 1952.
- Lebo, D.: A formula for selecting toys for non-directive play therapy. *Journal of Genetic Psychology*, 92:23-34, 1958.
- Lebo, D.: The present status of research on non-directive play therapy. *Journal of Consulting Psychology*, 17:177-83, 1953.
- Levitt, E. E.: *Clinical Research Design and Analysis*. Springfield, Thomas, 1961, pp. xxii, 199.
- Lombard, G. F. F.: *Behavior in a Selling Group. A Case Study of Interpersonal Relations in a Department Store*. Boston, Harvard University, 1955, pp. xx, 259.
- Meares, A.: *The Medical Interview: A Study of Clinically Significant Interpersonal Reactions*. Springfield, Thomas, 1957, pp. x, 117.
- Merenda, P. F., and Rothney, J. W. M.: Evaluating the effects of counseling — eight years after. *Journal of Counseling Psychology*, 5:163-68, 1958.
- Millard, C. V.: *Case Inventory for the Study of Child Development*. Minneapolis, Burgess, 1950, p. 29.
- Phillips, L., Kaden, S., and Waldman, M.: Rorschach indices of developmental level. *Journal of Genetic Psychology*, 94:267-85, 1959.
- Pollack, O.: Relationships between social science and child guidance practice. *American Sociological Review*, 16:61-67, 1951.
- Prall, R. C. (Chrm): Observational research with emotionally disturbed

- children: symposium, 1958. *American Journal of Orthopsychiatry*, 29:223-48, 560-91, 1959.
- Preston, M. G., et al.: An experimental study of a method for abstracting the content of social case records. *Journal of Abnormal and Social Psychology*, 45:628-46, 1950.
- Ramy, I.: Research aspects of psychoanalysis. *Psychoanalytic Quarterly*, (1):58-76, 1963.
- Research design in clinical psychology: symposium. *Journal of Clinical Psychology*, 8:3-98, 1952.
- Shyne, Ann W.: Telephone interview in casework. *Social Casework*, 35:342-47, 1954.
- Shyne, Ann W.: What research tells us about short-term cases in family agencies. *Social Casework*, 38:223-31, 1957.
- Smith, J. C.: Casework on the campus, *Social Casework*, 33:423-29, 1952.
- Stott, D. H.: Infantile illness and subsequent mental and emotional development. *Journal of Genetic Psychology*, 94:233-51, 1959.
- Tourlentes, T. I.; Pollach, S. L., and Himwich, H. E., (Eds): *Research Approaches to Psychiatric Problems: A Symposium*. New York: Grune, 1962, pp. ix, 238.
- Warren, J. V.: *Methods in Medical Research*. Chicago: Educational Year Book, 1958, Vol. 7, p. 250.
- Watson, R. I.: A brief history of clinical psychology. *Psychological Bulletin*, 50:321-46, 1953.
- Watson, R. I.: *The Clinical Method in Psychology*. New York, Harper, 1951, pp. xii, 779.
- Watson, R. I.; Mensh, I. N., and Gildea, E. F.: The evaluation of the effects of psychotherapy: III, research design. *Journal of Psychology*, 32:293-308, 1951.
- Webb, E. J.; Campbell, D. T.; Schwartz, R. D., and Sechrest, L.: *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. Chicago, Rand McNally, 1966, p. 240.

Appendix I

REPRESENTATIVE SOURCES OF INFORMATION ON RESEARCH PROBLEMS

- Abel, T., Bock, K. E., and Reed, S. W.: The present status of social therapy. *American Sociological Review*, 17:156-67, 1952.
- Ackerman, N. W.: Mental hygiene and social work today and tomorrow. *Social Casework*, 36:63-70, 1955.
- Ausubel, D. P.: Relationships between psychology and psychiatry: the hidden issues. *American Psychologist*, 11:99-105, 1956.
- Borgardus, E. S.: Forty years of 'sociology and social research.' *Sociology and Social Research*, 40:426-32; July-August 1956.
- Bowen, H. R. *The Business Enterprise as a Subject for Research*. Social Science Research Council Pamphlet II. New York, Social Science Research Council, 1955. pp. viii, 103.
- Bowman, C. C.: Research in family dynamics: A criticism and a proposal. *Social Forces*, 34:201-7, 1956.
- Breen, L. Z.: Some problems of research in the field of aging. *Sociology and Social Research*, 41:412-16, 1957.
- Brown, H., Bonner, J., and Weir, J.: *The Next Hundred Years: Man's Natural and Technological Resources*. New York, Viking Press, 1957, pp. xi, 193.
- Burgess, E. W.: Seven significant changes in sociology. *Sociology and Social Research*, 40:385-386, 1956.
- Burgess, E. W., et al.: Symposium: important changes in sociology during the past forty years. *Sociology and Social Research*, 40:383-432, 1956.
- Champlin, N. L.: Some neglected philosophic problems of education. *Educational Theory*, 7:122-27, 1957.
- Chase, F. S.: The status of research in education. *School Review*, 62:457-64, 1954.
- Cottrell, W. F.: Research to establish the conditions for peace. *Journal of Social Issues*, 11, 1:13-20, 1955.
- Dennis, W., et al.: *Current Trends in Psychological Theory*. Pittsburgh, University of Pittsburgh, 1951, p. 213.
- Dushkind, D. S.: Special problems in sociological research. *Sociology and Social Research*, 41:42-45, 1956.
- Farber, M. L.: Psychoanalytic hypotheses in the study of war. *Journal of*

- Social Issues*, II, 1:29-35, 1955.
- Felix, R. H.: New scientific developments in the mental health field. *Social Service Review*, 31:123-34, 1957.
- Festinger, L.: *A theory of cognitive dissonance*. Evanston, Row, Peterson, 1957, p. 291.
- Finn, J. D.: Television and education: a review of research. *Audio-Visual Communication Review*, 4:200-15, 1956.
- Gagne, R. M.: Training devices and simulators: some research issues. *American Psychologist*, 9:95-107, 1954.
- Gaskill, Evelyn R., and Mudd, Emily H.: A decade of group counseling. *Social Casework*, 31:194-201, 1950.
- Geldard, F. A.: Some neglected possibilities of communication. *Science*, 131:1583-88, 1960.
- Gittler, J. B. (Ed.): *Review of Sociology: Analysis of a Decade*. New York, Wiley, 1957, p. 588.
- Greenwood, E.: Recent trends in social work research. *Sociology and Social Research*, 35:250-59, 1951.
- Greenwood, E.: Social work research: a decade of reappraisal. *Social Service Review*, 31:311-20, 1957.
- Halpern, B.: History, sociology, and contemporary area studies. *American Journal of Sociology*, 63:1-10, 1957.
- Hamilton, C. H.: Some current problems in the development of rural sociology. *Rural Sociology*, 15:315-21, 1950.
- Harlow, H. F.: Current and future advances in physiological and comparative psychology. *American Psychologist*, 11:273-77, 1956.
- Herrnstein, R. J. and Boring, E. G. (Eds.): *A Source Book in the History of Psychology*. Cambridge, Harvard University, 1965.
- Hill, R.: A critique of contemporary marriage and family research. *Social Forces*, 33:268-77, 1955.
- Hoselitz, B. F.: The social sciences in the last two hundred years. *Journal of General Education*, 4:85-103, 1950.
- Koch, S.: The current status of motivational psychology. *Psychological Review*, 58:147-54, 1951.
- LaBrant, L.: Needed research in language expression. *Elementary English*, 29:35-38, 1952.
- Larson, O. F., and Hay, D. G.: Hypotheses for sociological research in the field of rural health. *Rural Sociology*, 16:225-37, 1951.
- Maas, H. S., and Gould, R. F.: Psychiatric clinic services for children: unanswered questions and research strategy and possibilities. *Social Service Review*, 30:276-99, 1956.
- McCarthy, Dorothea: Trends in the psychological appraisal of children. *Child*

- Development*, 26:213-22, 1955.
- McCormick, T. C., and Francis, R. G.: *Methods of Research in the Behavioral Sciences*. New York, Harper, 1958, chap. 2, 3.
- McLean, Dorothy.: Child development: a generation of research. *Child Development*, 25:3-8, 1954.
- Meisels, J. F.; Loeb, M. B., and Brieland, D.: Foster-care and adoption: unanswered questions about foster-care and current research on adoption. *Social Service Review*, 30:239-59, 1956.
- Melton, A. W.: Present accomplishment and future trends in problem-solving and learning theory. *American Psychologist*, 11:278-81, 1956.
- Morrison, J. C., et al.: Twenty-five years of educational research. *Review of Educational Research*, 26:199-344, 1956.
- Mowrer, O. H.: Learning theory: historical review and reinterpretation. *Harvard Educational Review*, 24:37-58, 1954.
- Mowrer, O. H.: Some philosophical problems in psychological counseling. *Journal of Counseling Psychology*, 4:103-II, 1957.
- O'Shea, Harriet E., et al.: Needed research on gifted children. *American Psychologist*, 9:77-78, 1954.
- Pool, I. deS. (Ed.): *Trends in Content Analysis*. Urbana, University of Illinois, 1959, p. 244.
- Penniman, T. K.: *A Hundred Years of Anthropology*, rev. ed. London, Duckworth, 1952, p. 512.
- Riemer, S.: Prehypothetical studies in sociology. *Sociology and Social Research*, 42:37-43, 1957.
- Russell, R. W.: Contemporary issues of concern to psychologists. *American Psychologist*, 13:199-216, 1958.
- Sherer, Lorraine M.: Some implications from research in arithmetic. *Childhood Education*, 29:320-24, 1953.
- Smith, M. B.: A perspective for further research on cross-cultural education. *Journal of Social Issues*, 12:56-58, 1956.
- Snyder, L. H.: What we most need to know. *Scientific Monthly*, 84:17-23, 1957.
- Stone, L. J.: A critique of studies of infant isolation. *Child Development*, 25:9-20, 1954.
- Traxler, A. E.: Emerging trends in guidance. *School Review*, 58:14-23, 1950.
- U. S. Children's Bureau: *Research Relating to Children: Studies in Progress*. Washington, D. C., 1958, p. 145.
- Watson, R. I.: Measuring the effectiveness of psychotherapy: problems for investigation. *Journal of Clinical Psychology*, 8:60-64, 1952.
- Webster, H.: Dynamic hypotheses in psychology. *Psychological Review*, 59:168-71, 1952.

Appendix II

REPRESENTATIVE REFERENCES ON REPORT WRITING

- Alexander, C., and Burke, A. J.: *How to Locate Educational Information and Data*, 3rd ed. New York, Bureau of Publications, Teachers College, Columbia University, 1950, pp. xix, 441.
- Baker, J. R.: English style in scientific papers. *Science*, 123:713-14, 1956.
- Ball, J., and Williams, C. B.: *Report Writing*. New York, Ronald, 1955, p. 417.
- Barzun, J., and Graff, H. F.: *The Modern Researcher*. New York, Harcourt, 1957, p. 386.
- Decker, F. W.: Scientific communications should be improved. *Science*, 125:101-5, 1957.
- Dugdale, Kathleen: *A Manual of Form for Theses and Term Reports*. Bloomington, Indiana University, 1950, pp. vi, 58.
- Dvorak, E. A.: General guide to a study of research reports. *Peabody Journal of Education*, 34:141-44, 1956.
- Festinger, L., and Katz, D. (Eds): *Research Methods in the Behavioral Sciences*. New York, Dryden, 1953, pp. xi, 660.
- Flesch, R., and Lass, A. H.: *The Way to Write*, rev. ed. New York, Harper, 1949, pp. x, 342.
- Good, C. V., and Scates, D. E.: *Methods of Research: Educational, Psychological Sociological*. New York, Appleton, 1954, p. 920.
- Goode, W. J., and Hatt, P. K.: *Methods in Social Research*. New York, McGraw, 1952. chap. 3, 4, 21.
- Hammond, K. R., and Allen, J. M.: *Writing Clinical Reports*. New York, Prentice-Hall, 1953, pp. xii, 235.
- Hebb, D. O., and Bindra, D.: Scientific writing and the general problem of communication. *American Psychologist*, 7:569-73, 1952.
- Hilbish, Florence M. A.: *The Research Paper*. New York, Bookman, 1952, p. 292.
- Hodgson, J. G.: Bibliographical citations for modern scholars. *School and Society*, 73:289-91, 1951.
- Leggett, G., and Yaggy, Elinor: *Writing a Paper: From Idea to Finished Copy*. New York, Ronald, 1955, p. 192.
- McCormick, T. C., and Francis, R. G.: *Methods of Research in the Behavioral Sciences*. New York, Harper, 1958, chap. 8, 10.

- Publication Manual of the American Psychological Association*, 1967, rev. Washington, The American Psychological Association, 1967, p. 61.
- Ruja, H., and Johnson, S.: *Citing reference accurately. American Psychologist*, 10:306-7, 1955.
- Schoenfeld, C. A.: Communicating research findings. *Journal of Educational Research*, 59(1):13-16, 1965.
- Shannon, J. R.: Tips to writers from seventy-five editors of educational periodicals. *Journal of Educational Research*, 44:241-68, 1950.
- Sheffield, E. F.: That Thesis Outline. *Educational Forum*, 17:355-64, 1953.
- Symonds, P. M.: A research checklist in educational psychology. *Journal of Educational Psychology* 47:100-9, 1956.
- Turabian, Kate L.: *A Manual for Writers of Term Papers, Theses and Dissertations*. Chicago, University of Chicago, 1955, pp. vii, 110.
- Tuttle, R. E., and Brown, C. A.: *Writing Useful Reports: Principles and Applications*. New York, Appleton, 1956, pp. xiv, 635.
- Walker, Helen M.: Statistics, sense and nonsense. *Teachers College Record*, 56:68-73, 1954.
- Weld, W. E.: *How to Chart: Facts from Figures with Graphs*. Norwood, Codex, 1947. pp. xiv, 218.
- Williams, C. B., and Stevenson, A. H.: *A Research Manual for College Studies and Papers*. rev. ed. New York, Harper, 1951, p. 194.

Appendix III

GLOSSARY OF ABBREVIATIONS ENCOUNTERED IN THE BEHAVIORAL SCIENCES

PSYCHOLOGICAL TERMS

AE	average error
AL	adaptation level
AP	action potential
BMR	basal metabolic rate
Bp	blood pressure
CCP	Chief Clinical Psychologist
CE	constant error
CFF	critical flicker frequency
C-group	control group
cns	central nervous system
CP	Clinical Psychologist
CR	conditioned response
CS	conditioned stimulus
CV	controlled variable
D	drive (Hull)
DI or ΔI	increment of intensity
DL	difference limen
DQ	development quotient
DR or R	increment of response
DT	delirium tremens
DV	dependent variable
E	environment
E, Es,	experimenter, experimenters, etc.
Es', E's	
ECT	electroconvulsive therapy
EEG	electroencephalography, -gram, -graph
E-group	experimental group
EKG	electrocardiogram

ESP	extrasensory perception
EST	electroshock therapy
exp.	experiment
F ₁ , F ₂ , etc.	successive generations (genetics)
FAE	figural after-effects
FFF	flicker fusion frequency
F-G	figure-ground
GG	goal gradient
gp	group
GSR	galvanic skin response (see also PGR)
H	heredity
ind.	individual
IV	independent variable
IV	intervening variable
JND	just noticeable difference
L Sp.	Life space (Lewin)
MD	manic depressive, mental deficiency
N	number (of cases or observations)
NP	neuropsychiatric
O	observer (and variants as in the case of E)
P	person (Lewin)
P or p	probability
PGR	psychogalvanic reflex (see also GSR)
p-n	press-need (Murray)
R	responses
RI	retroactive inhibition
RT	reaction time
S	standard stimulus
S	subject
SOR or	stimulus-organism-response
S-O-R	
S-P	
SR	sensation and perception
T and C	stimulus-response (relationship)
TE	trained and control Ss (co-twin control studies)
T-M	trial and error (learning)
UCR or UR	tests and measures
UCS or US	unconditioned response
UCV	unconditioned stimulus
VTE	uncontrolled variable
	vicarious trial and error

PSYCHOLOGICAL TESTING TERMS

ACE

American Council on Education (test)

AGCT	Army General Classification Test
AQ	achievement, or accomplishment, quotient
CA	chronological age
CAVD test	Thorndike test of completion, arithmetic, vocabulary, and directions
CQ	conceptual quotient
CTMM	California Test of Mental Maturity
DAT	Differential Aptitude Test
DQ	Deterioration quotient (Wechsler-Bellevue)
DRQ	Discomfort-relief quotient (Dollard-Mowrer)
EQ	educational quotient
GAMIN	Guilford-Martin Inventory (of personality factors)
GATB	General Aptitude Test Battery
GPA	Grade-point average
GZTS	Guilford-Zimmerman Temperment Survey
H-K test	Hanfmann-Kasanin Concept Formation Test
H-T-P test	House-Tree-Person Test
IQ	intelligence quotient
ITED	Iowa Tests of Educational Development
Kent EGY	Kent Emergency Intelligence Scales
MA	mental age
MAPS	Make-A-Picture-Story (test)
MAT	Miller Analogies Test
MCAT	Medical College Admission Test
MDI	Mental deterioration index (Wechsler)
MMPI	Minnesota Multiphasic Personality Inventory
OSPE	Ohio State Psychological Examination
P-F test	Picture-Frustration test (Rosenzweig)
PMA	Primary Mental Abilities (test) (Thurstone)
PR or %ile	percentile rank
PVT	Picture Vocabulary Test (Ammons)
SAT	Scholastic Aptitude Test
SB	Stanford Binet (Intelligence Test)
SS	standard score
TAT	Thematic Apperception Test
WAIS	Wechsler Adult Intelligence Scale
WISC	Wechsler Intelligence Scale for Children

Appendix IV

STANDARD ENGLISH-LATIN ABBREVIATIONS

ABBREVIATIONS are useful and acceptable devices to eliminate extensive repetition in footnotes and bibliographic entries. A complete listing will be found in any good dictionary or, if available, in Schwartz, R. J.: *Complete Dictionary of Abbreviations*. New York, Crowell, 1959.

Some of the more commonly used English and Latin abbreviations appear below. Note that a more descriptive explanation of the use of certain of these words (e.g. *loc. cit.*, *op. cit.*) will be found in the body of this manual (see index). It should be emphasized that abbreviations do not normally occur in the body of the paper; they should be used only for footnotes and in the bibliography.

anon., anonymous

art., article

[], brackets; used to enclose insertions within quoted material; also around bibliographical information which does not appear on the title page of a book

ca. or c., circa: about, approximately

c., copyright

cf., confer: compare

chap(s). or ch., chapter (s)

col(s)., column(s)

ed., editor, edition, edited

ed. cit., edition already cited.

e.g., *exempli gratia*: for example

et al., *et alii*: and others

et seq., *et sequens*: and the following

fig(s)., figure(s)

ibid., *ibidem*: in the same place. When two or more successive footnotes refer to the same work, it is not necessary to repeat complete reference for the second footnote. *Ibid.* may be used. If different pages are referred to, pagination reference must be shown.

- id.*, *idem*: the same
ill., *illus.*, or *illust(s)*, illustrated, illustration(s)
infra., below
Intro., *intro.*, introduction
l. or *ll.*, line(s)
loc. cit., *loco citato*: in the place cited; used as *op. cit.*, when new reference is made to the same pagination as cited in the previous note
n.d., no date
n.n., no name
n.p., no place
no pub., no publisher
n. or *nn.*, note or notes
no(s), number (s)
op. cit., *opere citato*: in the work cited. If reference has been made to a work and new reference is to be made, *ibid.*, may be used; if intervening reference has been made to different works, *op. cit.* must be used. The name of the author must precede.
p. or *pp.*, page(s)
passim. (*et passim*): here and there; used when the reference is to something vague or not specific.
pseud., pseudonym
q.v., *quod vide*: which see
rev., revised
[sic], "thus;" indicates an error of which you are aware; especially in quoted matter
tr., *trans.*, translator, translated, translation
vid or *vide*: see, refer to
v. or *vol(s)*, volume(s)
vs., versus: against
 Suspension points (three periods) . . . are used to indicate material, regardless of extent, omitted from quotations.

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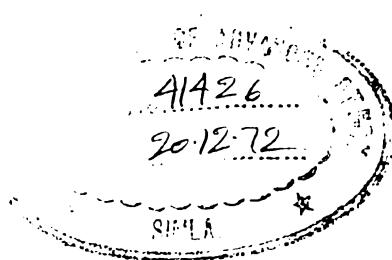
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