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THE CONCEPTUAL BASES OF AMERICAN PSYCHOLOGY: A CONTENT ANALYSIS OF THE PRESIDENTIAL ADDRESSES OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION, 1892-1970

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A CONTENT ANALYSIS OF THE PRESIDENTIAL ADDRESSES OF THE

AMERICAN PSYCHOLOGICAL ASSOCIATION, 1892-1970

by

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ABSTRACT

THE CONCEPTUAL BASES OF AMERICAN PSYCHOLOGY:

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This study makes use of a previously untapped source of scientific literature, the speeches given by the presidents of the American Psychological Association since its founding in 1892, as the basis for a systematic historical analysis taking Watson's prescriptive approach. The 75 APA presidential addresses were selected for analysis because (1) they express the thinking of very eminent psychologists, (2) they are likely to be sensitive to current issues and developments in the discipline, and explicit about the author's preferences and biases, and (3) they provide temporal continuity from 1892, thus making it possible to investigate trends in the history of American psychology. For these reasons, it was assumed that the APA presidential addresses constitute a body of scientific literature which reflects the major conceptions in American psychology. Watson's historical approach provided the conceptual framework for the analysis. This approach is based on the concept of prescriptions, or attitudes taken by psychologists toward matters of psychological concern. They may be thought of as intellectual dispositions, orientative assumptions, or modes of conceptualization. The ultimate goals of the study were to trace the status of the prescriptive conceptions in the development of American psychology, and to assess their

status in contemporary American psychology.

The method used to achieve the goals of the study was content analysis. Three judges, including the author, each coded each of the 75 APA presidential addresses in terms of Watson's 36 prescriptive concepts. The concepts and rules governing the coding process were made explicit in the Coding Manual, which was followed by all three judges. The prescriptions whose expression took the form of acceptance by authors were used as the basis for tracing changes in the status of contrasting prescriptions over time.

It was found that American psychology, viewed in historical perspective, may be characterized by certain accelerated prescriptive trends. These are: the use of methods open to verification by another competent observer (Methodological objectivism), the consideration of psychological data as behavior of individual (Contentual objectivism), the stress upon knowledge which is countable or measurable (Quantitativism), the emphasis upon discovering general laws (Nomotheticism), the emphasis upon changes with time (Developmentalism), and the seeking of knowledge for its usefulness in other activities (Utilitarianism).

American psychology, viewed in historical perspective, shows certain prescriptive trends which have decreased over time. These are trends in the emphasis on awareness of men-

tal structure or activity (Conscious mentalism), the viewing of psychological data as mental structure or activity of individual (Contentual subjectivism), the consideration of psychological categories as contents (Structuralism), the stress upon psychological events taking place within the body (Centralism), and the use of methods not open to verification by another competent observer (Methodological subjectivism).

In addition to increasing and decreasing prescriptive trends, findings were presented concerning prescriptions which exhibit patterns of rise and fall, and which show a consistent pattern of acceptance in the development of American psychology.

In terms of contemporary American psychology, it was found that certain prescriptions of contrasting pairs of prescriptions are so dominant that they have no counter-dominant prescription. These are Empiricism, Determinism, and Naturalism. Other prescriptive conceptions in contemporary American psychology are dominant but do have counter-dominant prescriptions: Methodological objectivism is dominant, and Methodological subjectivism counter-dominant; Quantitativism is dominant, and Qualitativism counter-dominant; Functionalism is dominant, and Structuralism counter-dominant; Developmentalism is dominant, and Staticism$_1$ counter-dominant;

Nomotheticism is dominant, and Idiographicism counter-dominant;

Contentual objectivism is dominant, and Contentual sub-

jectivism counter-dominant; and Dynamicism is dominant, and

Staticism$_2$ counter-dominant. Still other prescriptive con-

ceptions manifest no dominance, since the members of the

pair are about equally widely accepted. These are Deductivism-

Inductivism, Purism-Utilitarianism, and Molarism-Molecularism.

I. INTRODUCTION

This study has two interrelated purposes. The specific purpose is to analyze the contents of some special documents in psychology, the speeches given by the presidents of the American Psychological Association since its founding in 1892. The broader and more significant purpose is to determine the status of the conceptual bases of American psychology in historical perspective. Consequently, this introduction considers the documents of central importance and then widens in scope to include the use of those documents for a study of psychology's conceptual bases.

The Historical Documents

Each year an eminent psychologist is elected to the office of president of the American Psychological Association (APA), the major organization for psychologists in the United States (Appendix A). Until 1918, the president was nominated by the Council (a six-member body elected by the membership) and elected by the membership. Beginning in 1918, the president has been nominated and elected by the membership. Beginning in 1946, he has been elected as the president-elect, to begin office the following year.[1] Basically an honorary

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[1] J. D. Hildreth, personal communication, December 1, 1971.

1

position, the presidency nevertheless implies an importance to a wide range of people -- the membership, the scientific community, the profession, and even the general public. The single most overt expression of this office is the presidential address delivered to the membership at the end of the year of office (Appendix B). Most of the addresses have been a scholarly discussion of some aspect of the president's own work, although some, especially those given in the early years of the Association, were a discussion of the current state of the discipline. Some of the characteristics of the APA presidential addresses which enhance their value as historical documents may be elaborated as follows.

(1) They express the thinking of very eminent psychologists. Election to the office of president of the APA is an honor received by few psychologists. A recent study of "Important Psychologists, 1600-1967" (Annin, Boring, & Watson, 1968) makes it possible to assess the relative eminence of 45 of the 78 APA presidents, both individually and collectively. This assessment (Gibson, 1972) compared the eminence of 45 deceased APA presidents with 129 of the most important deceased American psychologists since 1600 (Watson & Merrifield, in press). It was found that (a) the mean of the judgments for the APA presidents was considerably higher on a scale from 11 to 27 than that of the most important American psych-

ologists (23 vs. 19), and (b) a much higher percentage of

APA presidents was judged at the highest level of eminence

(38% vs. 13%). These comparisons testify to the eminence of

the APA presidents as operationally defined with reference to

the Annin et al. study and the Watson and Merrifield study

(Appendix C).

(2) <u>They are likely to be sensitive to current issues

and developments in the discipline, and explicit about the

author's preferences and biases</u>. Compared to journal articles

which report empirical research or make theoretical statements,

and whose underlying assumptions are deeply implicit, the APA

presidential addresses are a more personal, reflective, and

evaluative psychological document. One would thus expect to

find in the addresses, for example, concerns with the defin-

ition of psychology, with the diversity of viewpoints in

psychology, and with psychology's status as a science and pro-

fession. This characteristic of the addresses maximizes their

utility as primary source materials for a study of American

psychology.

(3) <u>They provide temporal continuity from 1892, thus

making it possible to investigate trends in the history of

American psychology</u>. The addresses have been published

annually since the first meeting in 1892. They have appeared

historically in three different journals, first the <u>Psychological</u>

Review (1892-1938), then the Psychological Bulletin (1939-1946), and then the American Psychologist (1946-1970). However, there are four exceptions to the continuity of the APA presidential addresses. (1) In 1892, G. Stanley Hall gave the first address, "The History and Prospects of Experimental Psychology in America", but it was never published, and unfortunately the manuscript cannot be located.[2] (2) In 1918, John W. Baird was too ill to prepare an address. (3) In 1924, G. Stanley Hall died early in his year of presidency. (4) In 1968, Abraham H. Maslow was too ill to prepare an address. Other than these four years, there is a published address for every year, making 75 addresses through 1970, the terminal year of this study.

As a study of presidential addresses, this study has two precedents. The first was a study of the presidential addresses of the American Historical Association, 1884-1945 (Ausubel, 1950). The second was a study of the 25 most recent presidential addresses of the American Psychiatric Association, 1944-1968 (Mora, 1969). In spite of the similarity of topic, the present study differs from these two studies by using an explicit conceptual framework for analysis and by employing quantitative methods to secure historical per-

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[2]
W. A. Koelsch, personal communication, May 11, 1972.

spective. But the present study is not only a study _of_ the APA presidential addresses, it is also a study _using_ the addresses for another purpose.

The Conceptual Framework

One of the characteristic features of psychology among the sciences is the presence of disagreement and controversy. Psychologists are not neutral toward either the subject matter or methods of their science -- they have definite preferences and biases. In 1925, Madison Bentley felt it discreditable for an "established science to sustain such radically divergent views upon the essential nature of its material" (1926, p. 75). Bentley considered that one of the APA's greatest services to psychology was the annual occasion it offered for psychologists with opposing views to meet under a truce on neutral ground. In 1929, E. G. Boring published a paper entitled "The Psychology of Controversy", in which he said that the history of science including psychology is "one long series of theses, set off by ardently advocated antitheses, with ultimate syntheses terminating controversy and making a step forward" (1929, p. 98). The ferment of the 1920's has subsided, of course, but it is still true today that psychology is characterized by a diversity of viewpoints, approaches, methods, and activities.

Much more than other scientists, psychologists rely on habits of thought which are partly a matter of temperament and partly due to the influence of their teachers, their reading, and the ethos of the school which they attended. These habits of thought, or conceptions, serve the function of orientation; they allow the psychologist to procede about his business without getting bogged down with questions about the ultimate nature of the subject matter or its proper avenue of approach. The conceptions which serve this function and which can be traced historically over an appreciable period of time, thus forming trends or themes, have recently been isolated by Watson (1967, 1971) and termed prescriptions. Prescriptions are basically attitudes toward some matter of psychological interest. They may be thought of as attitudinal perspectives, intellectual dispositions, basic orientative assumptions, or modes of conceptualization, and they play an important role in enabling the psychologist to deal with the problems of subject matter and methodology. Examples of psychological conceptions which serve as prescriptions are the tendency to view psychological data as behavior of the individual, seeking knowledge for its own sake, and stressing knowledge which is countable or measurable. These conceptions, or prescriptions, may be explicit or implicit, dominant in the Zeitgeist at a particular time or opposed to it, or

salient or non-salient in a school of psychological thought.

One of the ways prescriptions may be conceived as functioning is in contrasting pairs. Since the opposition of prescriptions is sometimes present in history, it is one of the meaningful ways of using the prescriptions in approaching historical material. This approach makes it possible to compare the relative strength of contrasting prescriptions empirically. Watson wrote: "At some time, past or present, when both of the opposed prescriptions had or have supporters, it is possible to make some sort of an estimate of their relative strength; in other words, we may speak of dominant and counterdominant prescriptions" (p. 439). A dominant prescription is one which, compared with the contrasting prescription, is held by a significantly larger portion of the psychological community. A counter-dominant prescription is one which is held by a portion of the psychological community but is less widely accepted than the contrasting prescription. In this study an attempt will be made to trace changes in dominance and counter-dominance of contrasting prescriptions over time.

Prescriptions influence and are inextricably bound up with the more formal procedures of scientific practice. Watson has selected and defined the most historically important psychological conceptions. These conceptions were

selected on the basis of knowledge of the whole history of

psychology, and no claim is made that they are all relevant

to any one historical period. The group is selective in that

it includes only those conceptions which meet the criteria

of serving an orientative function and existing over an

appreciable period of time; it is also comprehensive in that

it is based upon the history of psychology from ancient times

on and is intended to encompass the whole history of psychology.

For these reasons, Watson's prescriptive conceptions will be

adopted as the conceptual framework for this study. Watson's

entire list of 36 prescriptions arranged in contrasting pairs

follows. Elaborations of these definitions were made by the

writer for the purposes of this study, and these elaborated

definitions are contained in Appendix D.[3]

Conscious mentalism - Unconscious mentalism (emphasis on
        awareness of mental structure or activity --
        unawareness)

Contentual objectivism - Contentual subjectivism (psychologi-
        cal data viewed as behavior of individual -- as
        mental structure or activity of individual)

Determinism - Indeterminism (human events completely explicable
        in terms of antecedents -- not completely so explicable)

Empiricism - Rationalism$_1$ (major, if not exclusive source of
        knowledge is experience -- is reason)

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[3]
    In the case of Mechanism, an additional meaning was given
to supplement Watson's original definition. This was the
only substantive change in the prescriptive system.

Functionalism - Structuralism (psychological categories are
         activities -- are contents)

Inductivism - Deductivism (investigations begun with facts
         or observations -- with assumed established truths)

Mechanism - Vitalism (activities of living beings completely
         explicable by physiochemical constituents -- not so
         explicable)

Methodological objectivism - Methodological subjectivism (use
         of methods open to verification by another competent
         observer -- not so open)

Molecularism - Molarism (psychological data most aptly de-
         scribed in terms of relatively small units --
         relatively large units)

Monism - Dualism (fundamental principle or entity in universe
         is of one kind -- is of two kinds, mind and matter)

Naturalism - Supernaturalism (nature requires for its operation
         and explanation only principles found within it --
         requires transcendent guidance as well)

Nomotheticism - Idiographicism (emphasis upon discovering
         general laws -- upon explaining particular events or
         individuals)

Peripheralism - Centralism (stress upon psychological events
         taking place at periphery of body -- within the body)

Purism - Utilitarianism (seeking of knowledge for its own
         sake -- for its usefulness in other activities)

Quantitativism - Qualitativism (stress upon knowledge which is
         countable or measurable -- upon that which is different
         in kind or essence)

Rationalism$_2$ - Irrationalism (emphasis upon data supposed to
         follow dictates of good sense and intellect -- intrusion
         or domination of emotive and conative factors upon
         intellectual processes)

Staticism$_1$ - Developmentalism (emphasis upon cross-sectional
         view -- upon changes with time)

<u>Staticism$_2$ - Dynamicism</u> (emphasis upon enduring aspects --
upon change and factors making for change)

The ultimate goal of this study is to trace the status
of the prescriptive issues in the development of American
psychology by using quantitative methods. Thus, this study
assumes that the APA presidential addresses constitute a body
of scientific literature which reflects the prescriptions in
American psychology, and it aspires to derive an empirically-
based characterization of the dominant prescriptions in con-
temporary American psychology by viewing them in historical
perspective. Qualitative exposition based on the addresses
and additional materials will be used to supplement the quan-
titative analysis.

Relevant Literature

Although there are several quantitative studies taking
the prescriptive approach, at least in part (Ross, 1970;
Mirabito, 1970; Fuchs & Kawash, 1971), none is directly
relevant to the present study. There are, however, two quan-
titative studies of historical trends in psychology which are
relevant to the present study, one based on an analysis of
journal articles (Allport, 1940; Bruner & Allport, 1940) and
the other based on ratings of psychological theorists (Coan
& Zagona, 1962; Coan, 1968).

The first major study was a joint project by Gordon
W. Allport and Jerome S. Bruner, who classified the contents
of the 14 leading psychological journals in America at ten-year
intervals from 1888 to 1938 to assess changes in the nature
of psychology. The total number of articles classified was
1,627. The classifiers disregarded the titles and delved
into the body of each article. There were 32 categories em-
ployed in the content analysis. These covered type of subjects,
fields, techniques, conceptual modes, and issues. The number
of articles classified under each category for each of the
years 1888-1898, 1908, 1918, 1928, and 1938, was converted to
percentages to facilitate comparison. While an article could
in theory be entered under all 32 categories or none at all,
in practice most of the articles were entered in from 5 to 15
categories. This study, including the findings from each of
the 32 categories, was published in 1940 as "Fifty Years of
Change in American Psychology". Nine of the categories em-
ployed in this study are essentially the same as prescriptive
conceptions or similar enough to prescriptions to be compared
with them. For example, the category named "Use of statistics"
can be compared with the quantitative prescription, the cate-
gory "Applied psychology" compared with Utilitarianism, and
"Articles dealing with the single case" with Idiographicism.

When Allport gave his presidential address before the

APA in 1939, "The Psychologist's Frame of Reference", he chose

to present some of the most representative findings from the

study undertaken with Bruner and to discuss the implications

of those findings. As it happens, the categories which Allport

chose to present in his address included all but one of the

nine categories which are relevant to the present study.

Allport's summary thus provides a preview of the findings

which will later be discussed in relation to the present study.

> Reviewing the evidence, we find mental faculties
> and hypostasized psychic processes vanishing
> rapidly, though here and there still masquerading
> behind new terms. The body-mind problem, never
> solved, has been declared popularly null and void.
> Dualism evokes rejection responses of considerable
> vehemence. (Indeed, of all philosophical pollens,
> psychologists seem most allergic to this.) The
> appeal of the unconscious is dwindling. Higher
> mental processes as exhibited in the speech of
> human beings are relatively neglected, marked pre-
> ference being shown for studies of non-verbal be-
> havior and for animal subjects. A schism is
> apparent between pure and applied psychology, and
> there is a growing disregard for studies of single
> cases. It also looks as if modern psychology were
> becoming appreciably unhistorical.
> Among accelerated trends we find a striking
> rise in the employment of statistical aids, in the
> use of animal subjects, in the spread of physio-
> logical research. At the same time there is a
> growing recognition of the importance of context,
> which has led to many fruitful studies of dynamic
> segregation. Methodological studies have mounted,
> characterized especially by philosophical theorizing
> concerning the nature of psychological constructs.
> Operationism is the current watchword of an austere
> empiricism. Synoptic systems, such as those of
> McDougall and Stern, have given way to miniature
> systems, and embracing theories expounded in the
> grand manner have yielded to diminutive theories

> implemented with great precision. Immediate ex-
> perience is rigidly excluded from most modern
> systems, and in its place surrogate operational
> functions are sought (1940, pp. 11-12).

The findings of the Bruner-Allport study were also summarized
by Allport at a more general level than the specific categories
which were employed. Strong support was found for Bills'
(1938) characterization of the psychology of 1938 as increasingly
empirical, mechanistic, quantitative, nomothetic, analytic,
and operational.

The second relevant study (Coan & Zagona, 1962; Coan,
1963) was designed to investigate both historical trends in
psychological theory and dimensions independent of time. The
study tested several hypotheses made earlier by Brunswik (1952).
Brunswik hypothesized that there are two independent dimensions
of psychological theory, the subjectivity-objectivity dimension
and the molar-molecular dimension. Beyond the issue of the
number of dimensions of psychological theory, Brunswik made
two other hypotheses: (1) "There seems to be a continuous
change-over from subjectivism to objectivism in psychology",
and (2) "Within each of these two avenues of approach there
seems to be a development . . . from a static and molecular
to a dynamic and molar type of approach" (1952, p. 50).

In order to test these hypotheses, Coan used a rating
method in which the names of 54 psychological theorists were
rated on 34 variables by 42 psychologists with appropriate

background in the area of history and systems of psychology. The data were subjected to centroid analysis and six factors emerged. The first two factors were interpreted as Subjectivistic versus Objectivistic and Holistic versus Elementaristic, thus confirming Brunswik's two basic dimensions. However, the four additional factors were needed to account adequately for the structure of psychological theory.

To test Brunswik's hypotheses concerning trends, ratings of the 10 most important theorists per decade from 1880 to 1959, were obtained (Coan & Zagona, 1962). After obtaining ratings of these theorists on the 34 variables, the factor scores for each set of 10 theorists were averaged and a comparison made of the resulting means across decades. The results supported Brunswik's first historical hypothesis but not his second. There was a progressive increase in objectivism, but the trend in holism showed a rise and then fall, with the peak in the 1920's. Further evidence concerning changes in these two dimensions may be obtained from the present study. In addition, two other of Coan's factors are relevant to the present study: the Quantitative versus Qualitative factor and the Dynamic versus Static factor.

Predictions

Before tracing the status of the prescriptive issues in the development of American psychology, it is possible to

make some predictions regarding the evolution of certain pre-

scriptions. The predictions which follow were formulated on

the basis of general knowledge of the history of psychology

and a list of the titles of the presidential addresses, but

before reading or coding the addresses. Although some are

conventional beliefs and others are original propositions, all

are genuine contingent statements. The first few predictions

concern the nature and scope of the addresses, while the

others concern the status of the prescriptive issues in the

development of American psychology. Predictions are made con-

cerning trends in seven of the 18 pairs of contrasting pre-

scriptions. The status of the other 11 pairs is not predicted.

The findings with respect to temporal changes will be dis-

cussed in two chapters: one devoted to predicted prescriptive

trends (Chapter IV) and one devoted to descriptive prescriptive

trends (Chapter V).

Prediction 1: There will be a decrease over time in

addresses characterized as expository, whose burden does not

directly depend upon empirical data, and a simultaneous in-

crease in addresses characterized by the presentation of

information based upon empirical or even experimental data,

or the presentation of a viewpoint deriving from empirical

data. Furthermore, this transition will occur around 1930,

so that the addresses before about 1930 will be predominantly

expository-oriented and those after about 1930 will be predominantly research-oriented. The rationale for this prediction is that 1890 through the early 1930's was the particularly controversial period of schools in psychology, and the 1930's to the present the somewhat more tolerant factual period in American psychology.

Prediction 2: Fewer prescriptions will be expressed in the research-oriented addresses than in the expository addresses. The rationale for this prediction is that expository addresses provide more freedom for an author to comment on issues and viewpoints than do research-oriented addresses.

Prediction 3: The proportion of prescriptions which are expressed implicitly, whatever its value relative to those expressed explicitly, will be larger in the research-oriented addresses than in the expository addresses. The rationale for this prediction is that many prescriptions are implicit in the activities of psychologists as research workers, and therefore research-oriented addresses would be expected to be based upon more underlying assumptions and conceptions than expository addresses.

Prediction 4: There will be a decrease over time in addresses which encompass psychology as a whole, or treat a problem which transcends specific areas and is significant for psychology as a whole, and a simultaneous increase in

addresses which are limited to a specialized area or problem within psychology. Furthermore, this transition will occur around 1930, so that the addresses before about 1930 will be predominantly broad in scope and those after about 1930 will be predominantly narrow in scope. The rationale for this prediction is that before the early 1930's was the period in the history of American psychology in which the various schools each claimed comprehensiveness for its psychological system, and after the early 1930's the more specialized factual period in American psychology.

Prediction 5: Since the prescriptive approach was formulated to encompass the history of psychology from ancient times on, there is undoubtedly extreme variation in the expression of prescriptions in the relatively short history of American psychology. In this period, the following prescriptions will be among the most prominent of the 36 prescriptions, irrespective of temporal considerations: Conscious mentalism, Contentual objectivism, Contentual subjectivism, Empiricism, Methodological objectivism, Methodological subjectivism, and Nomotheticism. The following prescriptions will be among the least prominent of the group: Vitalism, Monism, Dualism, Naturalism, Supernaturalism, Idiographicism, $Rationalism_2$, Irrationalism, $Staticism_1$, and $Staticism_2$. This prediction is based on the writer's general background

reading and personal judgments.

Prediction 6: Contentual objectivism will be increasingly accepted after 1913, the date of the formal founding of behaviorism with the publication of John B. Watson's article "Psychology as the Behaviorist Views It," to the point where it is so pervasive a conception in contemporary American psychology that it is the major ingredient in the definition of psychology. Contentual subjectivism will decrease in acceptance after 1913 but will recover to the point where it is an important part of contemporary American psychology, although still overshadowed by Contentual objectivism. In other words, Contentual objectivism is dominant and Contentual subjectivism counter-dominant in contemporary American psychology. The aspect of this prediction concerning Contentual objectivism is based on general reading of standard sources in the history of psychology (Heidbreder, 1933; Boring, 1950; Brunswik, 1952; Marx & Hillix, 1963; Watson, 1971) and the findings of other studies (Allport, 1940; Coan, 1968), while the aspect concerning Contentual subjectivism is based on the writer's own speculation.

Prediction 7: Methodological objectivism and Methodological subjectivism will follow roughly the same pattern as Contentual objectivism and Contentual subjectivism in the history of American psychology, except that Methodologi-

cal subjectivism will show a progressive decline after 1913 rather than gradual recovery. The basis of this prediction is general reading of standard sources in the field (e.g., Heidbreder, 1933; Boring, 1950; Brunswik, 1952; Marx & Hillix, 1963; Watson, 1971) and the findings of other studies (Allport, 1940; Coan, 1968).

Prediction 8: Peripheralism and Centralism will show roughly the same pattern as Contentual objectivism and Contentual subjectivism in the history of American psychology (Allport, 1940; Coan, 1968), although they will not be as widely accepted as the latter.

Prediction 9: Functionalism will increase in acceptance after the turn of the century and continue its pervasive influence up to and including the present. The most explicit expression of this prescription occurred shortly after the turn of the century in the form of a broad, loosely articulated movement known as functional psychology. Functionalism does not exist as a system of psychology today; it has been absorbed into the mainstream of American psychology. For this reason it has often been said that contemporary American psychology is functional in character (Heidbreder, 1933; Marx & Hillix, 1963; Watson, 1965; Chaplin & Krawiec, 1968; Watson, 1971). Structuralism in the form of the school of structural psychology will collapse around the turn of the

century, but Structuralism as a prescription will continue
to be a viable conception, regardless of whether the data of
psychology are conceived as mentalistic, behavioral, or
physiological. This last aspect of the prediction is based
on the writer's speculations stemming from prescriptive theory.

Prediction 10: Quantitativism will increase in accept-
ance (Bills, 1938; Allport, 1940; Watson, 1965), with a con-
current decrease in acceptance of Qualitativism.

Prediction 11: Nomotheticism will be dominant and
Idiographicism counter-dominant throughout the history of
American psychology up to the present (Allport, 1940; Watson,
1965).

Prediction 12: Purism will be accepted throughout
the history of American psychology. Utilitarianism will be-
come accepted shortly after the turn of the century and then
will increase steadily in acceptance, but will remain counter-
dominant in contemporary American psychology (Misiak & Sexton,
1966).

Prediction 13: There will tend to be a higher pro-
portion of explicitly accepted prescriptions before 1930 than
after, because during the period of the schools of psychology
the issues were controversial, whereas afterward psychologists
became more tolerant of alternative viewpoints and less likely

to defend their own. Therefore, the proportion of implicity accepted prescriptions will increase as one moves closer to the present.

Prediction 14: The following prescriptions will be among the most widely accepted prescriptions in comtemporary American psychology (1951-1970), irrespective of temporal considerations: Conscious mentalism, Contentual objectivism, Contentual subjectivism, Empiricism, Methodological objectivism, Nomotheticism, Purism, Utilitarianism, and Quantitativism. This prediction is based on the writer's background reading and personal judgments.

II. METHOD

This chapter contains information pertaining to five aspects of the method used in the study: (1) the general procedure of content analysis, (2) the coding system: definition of categories, (3) the training period and pilot study, (4) the reliability of the judges, and (5) the treatment of the data.

General Procedure of Content Analysis

This study assumes that history can be approached using some of the same methods as are used in scientific research. One of such methods is known as content analysis. According to a recent evaluation, content analysis is "<u>any technique for making inferences by systematically and objectively identifying specified characteristics of messages</u>" (Holsti, Loomba, & North, 1968).

In this content analysis, the messages were 75 APA presidential addresses, and the specified characteristics to be identified were the 36 prescriptive concepts. Each address was studied to see which prescriptions the author expressed and how they were expressed. The results of this process were systematically recorded on a coding form.

The writer's procedure for studying the addresses had

two aspects, one qualitative and one quantitative. As each address was read, beginning with Ladd's address in 1893, the writer noted particularly forceful expressions of prescriptions and any other statements of particular significance, such as expressions of wisdom, humor, or prediction. Addresses which stood out for reason of clarity or originality were also noted. The data from this qualitative study were recorded in a special notebook with the intention that it would later be integrated with the quantitative findings.

After each individual address was read, the writer filled out the formal coding form, and this data constituted part of the quantitative data in the study. The rest of the quantitative data was obtained from two other judges, who were paid for their services. Each of the three judges read and coded the entire set of 75 addresses. It was assumed that by using three judges, each contributing one-third to the total pool of data, the study would be based on a firmer foundation than if only one judge was used.

All three judges had been students in the Department of Psychology at the University of New Hampshire. In addition to the writer, the other judges were Elizabeth S. Goodman and Marilyn Merrifield. All three of the judges possessed an initial familiarity with the history of psychology in general and prescriptive theory in particular, although a

pilot study to be discussed later showed that this background was not essential to achieve reliable codings.

Three xeroxed copies of each address were made, one for each judge. The judges were instructed to note the expression of prescriptions in the text, if possible, by putting an abbreviation for the prescription in the margin. After reading the entire article, each judge filled out a coding form to provide data on that address.

It was decided to make the codings of the other two judges as objective as possible. Two methods of control were employed. (1) The addresses being coded were not identified by author, title, or year of publication. This information was clipped off each address prior to coding, and the address identified by a number. (2) The order of the addresses was randomized prior to coding, to avoid sequence effects. By using these methods, codings based solely on the contents of the individual addresses were assured from the other two judges.

In order to standardize the coding procedure, it was necessary to be as explicit as possible about the basis upon which the judges were to make their decisions. With this aim in mind, a manual was written and distributed to the judges. The <u>Coding Manual</u> (Appendix D) contained the coding system, an illustrated dictionary of prescriptions,

and some general guidelines for coding. In the illustrated dictionary each prescription was defined in the original way by Watson (1967) and then elaborated by the writer. Sometimes additional definitions, which were taken from standard dictionaries of psychology, were also included. Further clarification of each prescription was attempted by the use of multiple examples -- an average of about eight examples per prescription -- culled from the literature. Each judge was given a copy of the <u>Coding Manual</u> to serve as a basis for learning the coding procedure and for future reference.

In sum, the experimental design of the study consisted of three judges each coding each of 75 presidential addresses in terms of 36 prescriptive concepts. The results of this coding process were systematically recorded on coding forms. The concepts and rules governing the coding process were made explicit in the <u>Coding Manual</u>, which was followed by all three judges. The next section describes the coding system as it was presented in the <u>Manual</u>.

<u>The Coding System: Definition of Categories</u>

The initial task of the judge was to determine, for a given address, whether each of the 36 prescriptions was Present or Absent. This initial judgment took priority over all other judgments. If a prescription was judged Present, the judge immediately made some further judgments about it.

If judged Absent, the prescription was left blank on the coding form.

If the prescription was Present, the judge made three additional judgments about it. In order of occurrence these judgments concerned the author's position or attitude toward the prescription, its degree of centrality, and its form of expression.

First, the judge indicated which of three possible categories (existing along a single dimension) best described the author's position. These categories were Acceptance, Neutral, and Rejection. Definitions of these categories follow.

Acceptance - The prescription is supported, advocated, or otherwise accepted by the author.

Rejection - The prescription is disapproved, repudiated, or otherwise rejected by the author.

Neutral - The prescription is expressed, but the author does not take a position or reveal an attitude of acceptance or rejection. This does not mean that the author has no position, but rather that the prescription, as expressed, is not accepted or rejected. If the author neither accepts nor rejects the prescription, then it is neutral in status with respect to that particular manifestation.

The second judgment was an attempt to determine the

importance, significance, or emphasis of a prescription in
an address. Each prescription was scaled on the Dimension
of Centrality. The assumption underlying the Centrality Di-
mension was that the more central a prescription is, the
greater the amount of evidence for it in the address. The
Centrality Dimension was presented as follows.

<u>Central</u>   <u>Peripheral</u>

1	2	3	4
Salient	Notable	Moderate	Incidental

The specific meaning of the categories on this scale is as
follows.

(1) <u>Salient</u> - This category is reserved for prescrip-
tions which stand out conspicuously from the others in terms
of their centrality to the address.

(2) <u>Notable</u> - This category is for prescriptions
whose expression is notable but not salient in the address.

(3) <u>Moderate</u> - This category is for prescriptions
whose expression is moderate in comparison to the overall
significance of the address.

(4) <u>Incidental</u> - This category is for prescriptions
expressed incidentally in the address, <u>i.e.</u>, as a minor
concomitant.

The third judgment concerned the form of expression
of a prescription. Some prescriptions are verbalized explicitly.

Others are not explicit but nevertheless present in the ac-
tivities of the psychologist, including the activity of sci-
entific writing. In addition to identifying explicit prescrip-
tions, this study aimed to identify prescriptions which the
author took for granted, but in doing so to be sensitive only
to stimuli presented in the address. With this aim in mind,
the following criterion was suggested.

> An author accepts a given prescription implicitly
> if the ideas expressed in the address are logically
> dependent upon the prescription or if his view-
> point could not reasonably be maintained without
> assuming the prescription.

This criterion called for the judicious use of inference on
the part of the judges, so that the communication being coded
was not limited to manifest or surface meaning, but included
latent meaning as well.

Although it was recognized that explicit and implicit
forms of expression of a prescription are extremes on a con-
tinuum, the judges were instructed to indicate toward which
extreme the prescriptions fell. Was it primarily explicit or
primarily implicit in mode of expression? To help answer
this question, some additional meaning was attached to the
Explicit and Implicit categories.

Explicit - In this form of expression of a prescrip-
tion the writer shows recognition that there is an issue in-
volved, or that the concept he is using needs to be defined

(not necessarily labeled). If the concept is named, it should be included in this category -- but the name need not be the "formal" name of the prescription. For example, a writer may describe himself as a behaviorist, in which case the description warrants a coding of "Contentual objectivism -- Acceptance -- Explicit" even though that name (Contentual objectivism) is not used.

Implicit - This form of expression of a prescription means that the writer thinks in a certain way without clarifying the concept which he is employing and without using a special name to designate his position. Thus in the implicit form of expression the prescription is simply taken for granted, but it is capable of being understood from the author's language. For example, a writer talks about co-efficients of correlation, etc., or presents numbers as data, but does not articulate his commitment to the quantitative prescription. Or an author presents some kind of evidence or data but does not show recognition that he is following the empiricistic prescription. Or an author bases his study on many subjects but does not say he is interested in general laws (Nomotheticism). Or an author contributes to knowledge but does not make explicit that he is interested in knowledge for its own sake (Purism).

In addition to the coding system, the judges were

supplied with some general guidelines for coding. The most

important guideline specified:

> The prescriptions should be treated singly and
> individually. This means that when a judge is
> coding an address he should consider each of the
> 36 prescriptions separately as much as possible,
> so that whatever relations exist among prescrip-
> tions are permitted to emerge from the data.

In sum, a judge was to decide on the Presence or

Absence of each of the 36 prescriptive concepts. Prescrip-

tions which were judged to be expressed in the addresses were

considered further in terms of the author's position (Accep-

tance, Neutral, Rejection), the Centrality Dimension, and

their form of expression (Explicit or Implicit). The results

were systematically recorded on the Coding Form (Appendix E).

Training Period and Pilot Study

Special considerations were followed to see that the

judges were properly informed about their task. A training

period was initiated which consisted of two phases, study

of the Coding Manual and actual practice coding of psycho-

logical articles. Each of the judges was given a Manual to

study, and discussion sessions were held to raise questions

about its contents or about any phase of the coding task.

Then followed practice coding of selected articles. The

articles used were not the APA presidential addresses but

similar in nature to them. Two presidential addresses of

another psychological society, the Southern Society for Philosophy and Psychology, published in the same journals as the APA presidential addresses during roughly the same years were used. These two addresses were chosen for practice coding because they expressed many prescriptions and therefore afforded many opportunities to make judgments.

There were four reasons for undertaking the training period. (1) To provide some "feedback" to the judges on how their codings compared with each others', as a means of maximizing the initial agreement on concepts. (2) To compare methods used to compute reliability, and program the computer to follow these methods. (3) To get an idea of the level of reliability among the judges before they began coding the APA presidential addresses. (4) To measure the extent to which the codings could be made solely on the basis of information in the Coding Manual, exclusive of any prior psychological knowledge.

The training period made possible the achievement of the four goals. (1) Informal discussion sessions were held to analyze and discuss agreements and disagreements in the codings, and these sessions contributed to the judges' under-standing of the task. (2) Scott's Index of Inter-Coder Agree-ment (1955), which measures the extent to which the coding reliability exceeds chance, proved to be a satisfactory method

for determining reliability (See Appendix F), and the data were computer-analyzed. (3) Initial levels of reliability were high enough to procede with the coding of the APA presidential addresses. (4) The extent to which the codings could be made solely on the basis of information in the Coding Manual, exclusive of prior psychological knowledge, was measured. The last two of these goals provided the basis of a pilot study and therefore require elaboration.

Some measure of the reliability among judges was needed before they began coding the APA presidential addresses. The two articles used in the pilot study provided for 72 possible Present or Absent codings. All three judges were in agreement on 50 of the 72 decisions, or a percentage of agreement of .69. In terms of inter-judge reliability between each combination of two judges, the finding, expressed in terms of average percentage agreement, was .80. Expressed in terms of Scott's Index of Inter-Coder Agreement (1955), which measures the extent to which the coding reliability exceeds chance, the corresponding average value was .60. These reliability levels, .80 and .60, were considered sufficient to warrant coding the APA presidential addresses.

The final purpose of the pilot study was to measure the extent to which codings could be made solely on the basis of information in the Coding Manual, exclusive of prior

psychological knowledge. This was felt to be necessary because the three judges all had some initial knowledge of the history of psychology in general and prescriptive theory in particular. A person was selected who did not possess a formal background in psychology beyond two courses (Meribeth Simpson), and she underwent the same training experience, had the same coding practice, and was paid the same rate as the other three judges. The findings were that the "non-psychologist" judge obtained slightly lower inter-judge reliabilities than the "psychologist" judges did among themselves, but far greater than would be expected by chance alone. This was true when reliability was measured using both the conventional percentage agreement and Scott's Index. With the conventional percentage agreement the "non-psychologist" versus "psychologist" reliabilities were .75 versus .80, and with Scott's Index they were .50 versus .60. These findings suggest that a "non-psychologist" can be trained to perform the coding task almost as reliably as "psychologist" judges. The implication of this finding is that the results of the APA study are not esoteric but are objective and continuous with all other scientific knowledge.

Reliability of Judges

The last section described a pilot study which has as one of its goals the determination of the level of reliability

among the judges before they began coding the APA addresses.

The information concerning reliability reported in this sec-

tion was obtained from the actual data which formed the basis

of the study. Therefore, it provides an estimate of how

likely it is that similar findings would result if the same

study was done using different judges.

There are three kinds of information pertaining to

the reliability of judges: (1) information concerning the use

of the coding categories by the three judges, (2) inter-judge

reliability information, and (3) intra-judge reliability in-

formation. The complete data providing the findings for these

three kinds of information are contained in Appendix F, while

the findings themselves are described below.

The average number of prescriptions coded Present in

each address out of 36 possibilities was relatively consistent

for the three judges: 12.3, 13.0, and 15.5 prescriptions per

address, respectively (Appendix F-6). That is, the judges

used roughly the same criterion for "Present" when coding pre-

scriptions. As far as the categories pertaining to the author's

position are concerned (Appendix F-7), all judges used the

Acceptance category by far the most frequently: 75%, 83%, and

76%, respectively. The Neutral and Rejection categories also

contained proportions of codings which were similar for the

three judges. For the Neutral category, the proportions were:

16%, 11%, and 16%, respectively; for the Rejection category, they were 7%, 5%, and 6%, respectively. In terms of the Dimension of Centrality, the judges differed considerably on the criteria of "Salient" and "Incidental". The proportions of prescriptions receiving Salient codings were: 41%, 21%, and 15%, respectively; for the Incidental codings they were: 14%, 25%, and 37%, respectively. In terms of the form of expression (Explicit or Implicit), all three judges considered most prescriptions to be expressed explicitly: 68%, 64%, and 72%, respectively. These findings show that, except for their judgments on the Centrality Dimension, the judges employed roughly the same criteria to identify prescriptions and the role they play in scientific discourse. However, more precise information is needed concerning reliability.

Reliability among the judges was measured for the two major decisions made by the judges: Presence or Absence of prescriptions and the author's position (Acceptance, Neutral, Rejection). In terms of Presence-Absence, the average percentage of agreement between the judges was .76 (Appendix F-8). A second reliability coefficient on the same data was obtained by using the more conservative measure proposed by Scott (1955), called pi. It yielded an average reliability of .50, which shows that the value resulting from the conventional percentage of agreement measure was not simply due to chance. In

terms of the author's position, the average percentage of agreement between the judges was .82, and the average <u>pi</u> coefficient was .47 (Appendix F-9).

Inter-judge reliability is a measure of the extent to which different judges agree on the coding of documents. But how likely is the <u>same</u> judge to agree with his own codings at a later time? To estimate test-retest stability of an individual judge over time, a sample of four addresses was selected and re-coded. The average length of time between first and second codings was about one month. The four addresses used for re-coding were selected at random from within each sequence of 20 addresses coded by each judge. In terms of Presence or Absence, the intra-judge percentage of agreement reliabilities for the three judges were: .88 (Judge 1), .78 (Judge 2), and .90 (Judge 3) -- yielding a mean of .85 (Appendix F-10). As expected, this value is somewhat larger than the corresponding average inter-judge reliability of .76. There is more agreement between two codings done at different times by the same person than between codings done by two different persons. In terms of the author's position, the intra-judge reliabilities were .97 (Judge 1), .91 (Judge 2), and .84 (Judge 3) -- yielding a mean of .91 (Appendix F-11). This value is also larger than the corresponding value of .82 reported for inter-judge reliability.

Treatment of the Data

The treatment of the data and the forms in which the findings will be presented require explanation. This section provides the necessary explanation.

Nature and Scope of Addresses

Most of the APA presidential addresses have been a scholarly discussion of some aspect of the president's own work, although some, especially those given during the early years of the Association, were a discussion of the current state of the discipline. In order to provide an overview of the tradition of APA presidential addresses and to relate them to changes in the history of psychology in general, the addresses were analyzed along two logically independent dimensions, one involving the nature of the address and one involving the scope of the address. Each dimension required a dichotomous decision on the part of the judge.

The nature of the address was determined by classifying each address as having an Expository-orientation or a Research-orientation. The criterion of an address which is primarily or completely Expository-oriented is the presence of an exposition of the meaning of some aspect or all of psychology, whose burden does not directly depend upon concrete empirical data. This criterion is meant to differentiate,

among other things, addresses which pertain to the funda-
mental conceptual bases of psychology from those which pre-
sent findings within an established conceptual framework.
This class of addresses includes discussions of major problems,
issues and methods in psychology; discussions of the relation
of psychology to other sciences; expositions and critiques
of psychological doctrines and concepts; theories not de-
rived from empirical data; and general historical summaries.
The criterion of an address which is primarily or completely
Research-oriented is the presentation of information based
upon empirical or even experimental data. This class of
addresses includes research summaries; presentations of the
results of an original investigation; theories or concepts
based upon empirical data; and reviews of the research litera-
ture. In other words, an address coded as Research-oriented
is essentially the same as a research article published in
a standard psychological journal.

The scope of the address was determined by classifying
each address as <u>Broad</u> or <u>Narrow</u>. A Broad address was de-
fined as one which encompasses psychology as a whole, or
treats a problem which transcends specific areas and is signi-
ficant for psychology as a whole. A Narrow address was de-

fined as one which is limited to a specialized area or problem within psychology.

For both nature and scope, each address was coded three times, once for each judge. When all three judges coded the address the same way, the common coding determined the final classification of the address. In cases of disagreement, the decision concerning the nature and scope of an address was based on the criterion of 2/3 of the codings. For example, if two judges coded a particular address as Expository in nature and one judge coded it Research, the address was considered to be Expository in nature. The same criterion was used to determine the scope of an address.

Prescriptive Issues in the Development of American Psychology

A prescription is not a static entity but a conception whose status changes over time. It has already been noted that prescriptions tend to function in contrasting pairs. What then has been the changing status of prescriptive issues in the development of American psychology? This question can be answered by plotting the changes in the Acceptance codings of contrasting prescriptions on individual graphs. The Acceptance codings made up 78.3% of the total number of Present codings (Appendix F-7). Each graph would represent the changing status of a pair of prescriptions as a function of time.

If the prescriptions are to be plotted on graphs, one must be reasonably sure that the addresses expressing the prescriptions sample the interests of American psychologists at the time the addresses were delivered. The presidents of the APA were elected after they made their contributions to psychology. Hence, some of their addresses, particularly the ones that are related to their own work, could reflect areas of interest that were strong some time before the addresses were given. However, this is not a serious problem, because the addresses which are related to the president's own work are not simple summaries; they contain significant new material which is a contribution in its own right. Also, the presidents are surely as innovative and original as American psychologists who were not elected to the presidency; hence, their work, including their addresses, may be slightly ahead of time rather than behind time. For these reasons, it is unlikely that there is a systematic "time lag" with research areas in the addresses.

While no single address is representative of American psychology for a particular year, a series of ten addresses may be considered representative of a decade. Ten addresses each coded by three judges provides a data-base of 30 codings, which is large enough to provide reasonably stable findings. Yet it provides more precise information than 20-year units

would. Hence, the status of the prescriptions was plotted by decade-units.

When decades are used as units to plot the status of prescriptions in addresses, there are 10 addresses per decade for four of the eight decades, but because of the missing addresses mentioned in the Introduction, there are three decades with nine addresses and one decade, 1891-1900, with only eight addresses. This makes it necessary to transform the number of Acceptance codings for each decade to percentages. Since each address was coded three times, the percentage is based on three times the number of addresses available for the decade, i.e., on 30, 27, or 24 codings. On the graphs to be presented later, the ordinates are labeled "Percentage of Acceptance Codings of All Addresses in Decade".

To ease the interpretation of the results, a percentage may be thought of as a number of Acceptances in 10 addresses. For example, a prescription which achieves a status of 45% for a certain decade may be thought of as being accepted in 4.5 out of 10 addresses. Also, a difference of 20% in the status of a prescription in two adjacent decades is equivalent to about six Acceptance codings out of about thirty, and is probably a change worthy of interpretation.

III. NATURE AND SCOPE OF ADDRESSES: FINDINGS AND DISCUSSION

The findings in this chapter will be preceded by the relevant predictions and followed by discussion.

Nature of Addresses

Prediction 1: There will be a decrease over time in addresses characterized as expository, whose burden does not directly depend upon empirical data, and a simultaneous increase in addresses characterized by the presentation of information based upon empirical or even experimental data, or the presentation of a viewpoint deriving from empirical data. Furthermore, this transition will occur around 1930, so that the addresses before about 1930 will be predominantly expository-oriented and those after about 1930 will be predominantly research-oriented. The rationale for this prediction is that 1890 through the early 1930's was the particularly controversial period of schools in psychology, and the 1930's to the present the somewhat more tolerant factual period in American psychology.

When the 75 APA presidential addresses are dichotomized in terms of their nature, there are 58 Expository addresses and 17 Research addresses. The temporal changes in the nature

of the addresses are shown in Figure 1. The findings shown in Figure 1 support part of Prediction 1 but not all of it. There is a decrease in Expository addresses and an increase in Research addresses, which is most pronounced for addresses before and after 1930. However, the addresses after 1930 are not predominantly Research-oriented, as was predicted; only about 40% of them are.

The trends depicted in Figure 1 are probably a reflection of the changing nature of American psychology from an immature to a mature science. The nature of the president's work, and the addresses which relate to his work, have changed significantly: later addresses rest upon a firmer empirical basis. They are more likely than earlier ones to present a strictly scientific, rather than a purely conceptual, contribution.

Nature and Prescriptions

Prediction 2: Fewer prescriptions will be expressed in the research-oriented addresses than in the expository addresses. The rationale for this prediction is that expository addresses provide more freedom for an author to comment on issues and viewpoints than do research-oriented addresses.

On the average, there were 13.87 prescriptions expressed in the Expository-oriented addresses, and 12.62

Fig. 1. Presidential addresses of the
American Psychological Association with exposi-
tory orientation and research orientation in
four periods.

expressed in the Research-oriented addresses. A t test
showed that the difference between the means was not signifi-
cant at the .05 level. It is concluded that Expository
and Research addresses express about the same number of pre-
scriptions.

Prediction 3: The proportion of prescriptions which are
expressed implicitly, whatever its value relative to those
expressed explicitly, will be larger in the research-oriented
addresses than in the expository addresses. The rationale
for this prediction is that many prescriptions are implicit
in the activities of psychologists as research workers, and
therefore research-oriented addresses would be expected to be
based upon more underlying assumptions and conceptions than
expository addresses.

Table 1

	Explicit	Implicit	
Expository	72%	28%	13.87
Research	53%	47%	12.62

Table 1 shows that 28% of the prescriptions in the
Expository addresses were expressed implicitly, whereas
47% of the prescriptions in the Research addresses were
implicit. A chi square test done on the cell frequencies
indicated that the difference was significant at the .01 level.

It is concluded that the proportion of implicity expressed prescriptions is significantly larger in the Research addresses than in the Expository addresses.

Scope of Addresses

Prediction 4: There will be a decrease over time in addresses which encompass psychology as a whole, or treat a problem which transcends specific areas and is significant for psychology as a whole, and a simultaneous increase in addresses which are limited to a specialized area of problem within psychology. Furthermore, this transition will occur around 1930, so that the addresses before about 1930 will be predominantly broad in scope and those after about 1930 will be predominantly narrow in scope. The rationale for this prediction is that before the early 1930's was the period in the history of American psychology in which the various schools each claimed comprehensiveness for its psychological system, and after the early 1930's the more specialized factual period in American psychology.

When the 75 addresses are dichotomized in terms of their scope, there are 47 Narrow addresses and 28 Broad addresses. The temporal changes in the scope of the addresses are shown in Figure 2. Figure 2 shows that about 72% of the addresses given during the first 20 years of the Association, 1891-1910, encompassed psychology as a whole or were significant for psychology as a whole, while most of those given
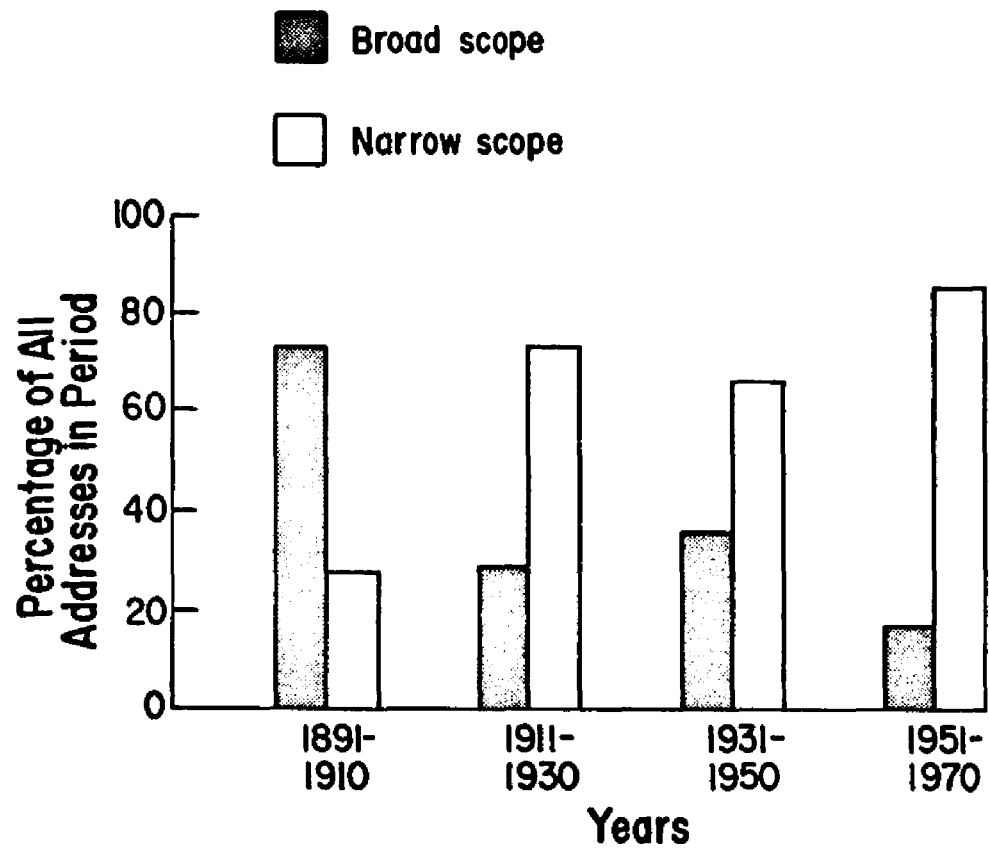
Fig. 2. Presidential addresses of the American Psychological Association with broad scope and narrow scope in four periods.

later were limited to a specialized area or problem within psychology. The transition does not occur around 1930, as was predicted. The greatest specialization in the tradition of the APA president's address occurred relatively early, in fact as early as the second and third decades of the century. This fact is based upon the results of a chi square test done on the cell frequencies which showed that the shift from the first period (1891-1910) to the second period (1911-1930) was significant at the .01 level, while none of the other shifts in adjacent periods were significant.

Nature and Scope Considered Jointly

The foregoing discussion has focused on the changes in the nature and scope of the addresses separately. The distribution of addresses on both dimensions jointly is considered in this section. These two dimensions dichotomously treated result in four possible combinations. The average number of addresses for each combination is shown in Table 2. A chi square test indicated that there was a significant difference between observed and expected frequencies at the .01 level of significance.

Table 2

Nature	Scope		
	Broad	Narrow	
Expository	28	30	58
Research	0	17	17
	28	47	75

Table 2 shows that two possible combinations are most frequent, one combination is moderately frequent, and one possible combination is without any addresses at all. The two most frequent types are the Expository-Broad and the Expository-Narrow. Of the addresses classified as Expository in nature, about half were Broad and half Narrow in scope. All of the addresses which were classified as Research-oriented were Narrow in scope.

The changes which have taken place in the APA tradition with respect to the three types of addresses are shown in Figure 3. The years 1891 to 1910 were characterized by expository addresses which were broad in scope, while the years 1911 to 1930 were mostly expository addresses which were narrow in scope. The last 40 years have seen varying proportions of all three types of addresses, with no one type predominant.

Overall, the results show that two major transitions have occurred in the tradition of APA presidential addresses. The first was a transition toward specialization, which occurred shortly after the first decade of the twentieth century. Before that time the presidents thought in broad terms and frequently discussed the philosophical foundations of psychology or psychology's relation to other sciences. Hall's first address, "The History and Prospects of Experimental Psychology in America," may have served as a prototype.
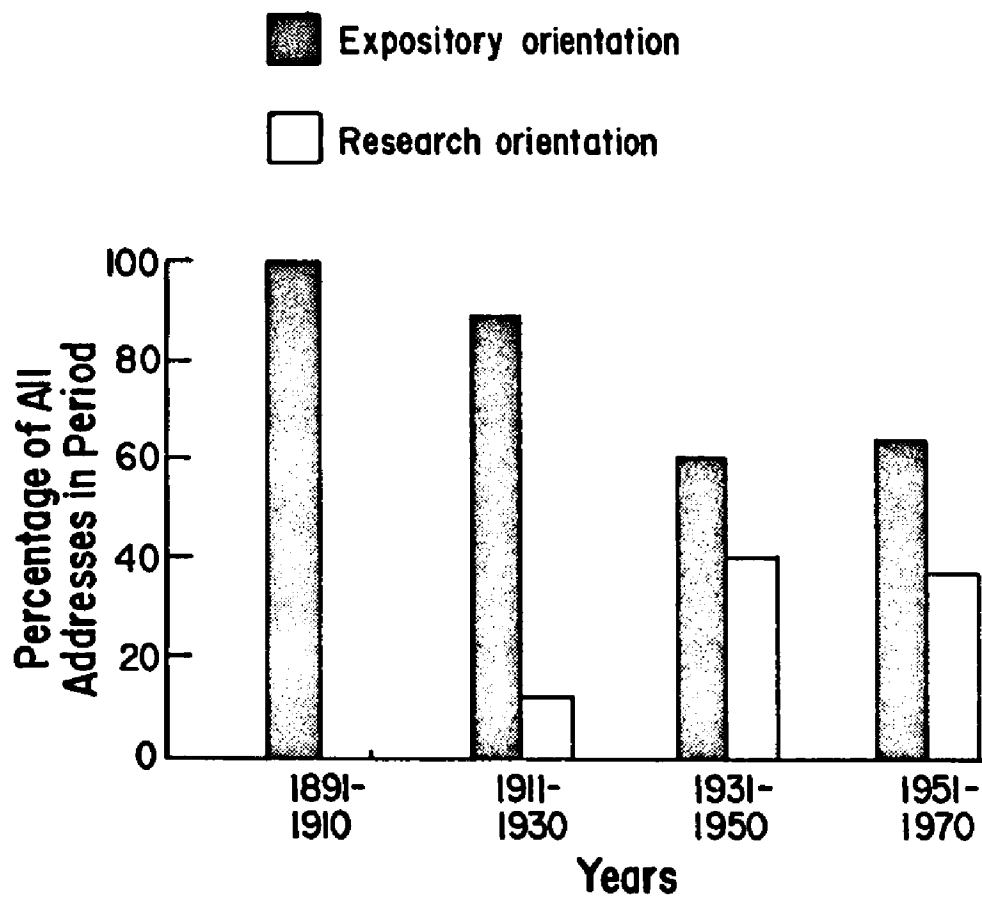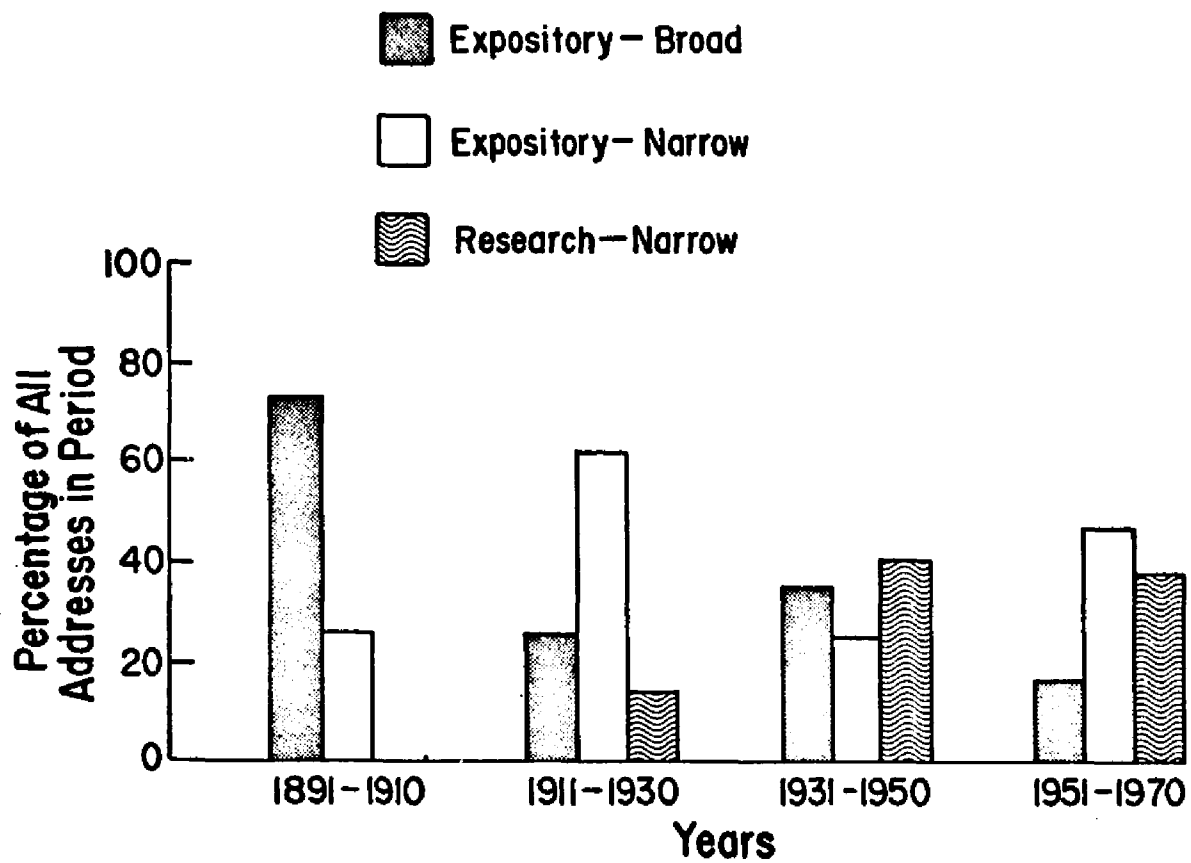
Fig. 3. Presidential addresses of the
American Psychological Association with three
orientations in four periods.

Examples of broad addresses include: "The Problems of Psychology" (Ladd, 1893), "Psychology and the Other Sciences" (Cattell, 1895), "Psychology and History" (Münsterberg, 1898), "Psychology and Social Practice" (Dewey, 1899), "Psychology and Physics" (Sanford, 1902), "Theory and Practice" (Bryan, 1903), "The Province of Functional Psychology" (Angell, 1906). After 1910, the addresses became more limited in scope. Although far too numerous to mention in their entirety, some of the specialized addresses may serve as illustrative: "Ideo-Motor Action" (Thorndike, 1912), "The Mental Test as a Psychological Method" (Terman, 1923), "A Developmental Theory of Intelligence" (Garrett, 1946), "Creativity" (Guilford, 1950), "Analytic Studies of Drive and Reward" (Miller, 1961).

The second transition which occurred in the APA tradition was less pronounced than the first and occurred later. It was the trend away from addresses which were expository in nature toward more formal research presentations. This trend showed its greatest shift in the 1930's and 1940's, and has progressed to the point where almost 40% of the addresses since 1931 have been research-oriented.

Taking these two trends together, it may be concluded that the tradition of APA presidential addresses has been characterized by a progression from broad expositions about psychology to narrow research investigations within psychology.

Of course, there have been some recent distinguished exceptions to this transition which preserve the early spirit of the founding fathers, such as the addresses by Cronbach (1957), Hebb (1960), Bruner (1965), Miller (1969), and Albee (1970).

IV. PREDICTED PRESCRIPTIVE TRENDS: FINDINGS AND DISCUSSION

This chapter and the next examine changes over time

in the status of contrasting prescriptions.[4] Before individual

changes can be interpreted, however, the average Acceptance

of all 36 prescriptions for each decade must be known, to see

if there is any general trend in the Acceptance of prescriptions

over time. The average Acceptance of all 36 prescriptions

across judges for each decade was calculated, and the results

are shown on the graphs which follow. The results are rela-

tively consistent across decades at about 30% of the codings

of all addresses in each decade. This means that there was

no general trend of prescriptions to increase or decrease in

Acceptance; therefore, significant deviations from the hori-

zontal line representing the average of all prescriptions may

be interpreted as individual phenomena.

This chapter is devoted to findings concerning those

pairs of prescriptions for which some prediction was made;

the next chapter examines findings concerning those pairs of

prescriptions for which no prediction was made. However, for

convenience findings of interest other than those strictly

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[4]

Prediction 5, which concerns the prominence of prescriptions,
is examined in Appendix G.

relating to the predictions are discussed here. The outline

of the discussion is as follows. First will be considered the

acceptance over time of the first prescription of the contrasting

pair. Then will be considered the acceptance of the second

prescription. These two considerations pertain to the

acceptance of the prescription in relation to all prescriptions,

as represented by the horizontal line on the graphs. Third

will be considered the acceptance of the two contrasting pre-

scriptions relative to each other, to see if one prescription

is dominant over the other. The discussion will procede from

a consideration of the findings of this study, to a considera-

tion of the relation of the findings to other quantitative

studies of historical trends in psychology, to some illustra-

tions of the conceptions in the history of American psychology.

Sources other than presidential addresses will be used fre-

quently when needed.

The reader is reminded that the definitions of the

prescriptions may be reviewed by consulting the Introduction

(for Watson's definitions) or Appendix D (for Watson's

definitions elaborated by the writer).

Contentual objectivism - Contentual subjectivism

Prediction 6: Contentual objectivism will be increasingly

accepted after 1913, the date of the formal founding of be-

haviorism with the publication of John B. Watson's article

"Psychology as the Behaviorist Views It," to the point where it is so pervasive a conception in contemporary American psychology that it is the major ingredient in the definition of psychology. Contentual subjectivism will decrease in acceptance after 1913 but will recover to the point where it is an important part of contemporary American psychology, although still overshadowed by Contentual objectivism. In other words, Contentual objectivism is dominant and Contentual subjectivism counter-dominant in contemporary American psychology. The aspect of this prediction concerning Contentual objectivism is based on general reading of standard sources in the history of psychology (Heidbreder, 1933; Boring, 1950; Brunswik, 1952; Marx & Hillix, 1963; Watson, 1971) and the findings of other studies (Allport, 1940; Coan, 1968), while the aspect concerning Contentual subjectivism is based on the writer's own speculation.

Figure 4 shows a pronounced overall increase in the acceptance of Contentual objectivism. The initial sharp increase occurred around the second decade of the century, with a somewhat irregular pattern developing after that. The initial increase corresponds to the inception of behaviorism. Overall, the results show that psychological data were conceptualized in behavioral terms by the 1930's, and that this has been a conception of vital significance
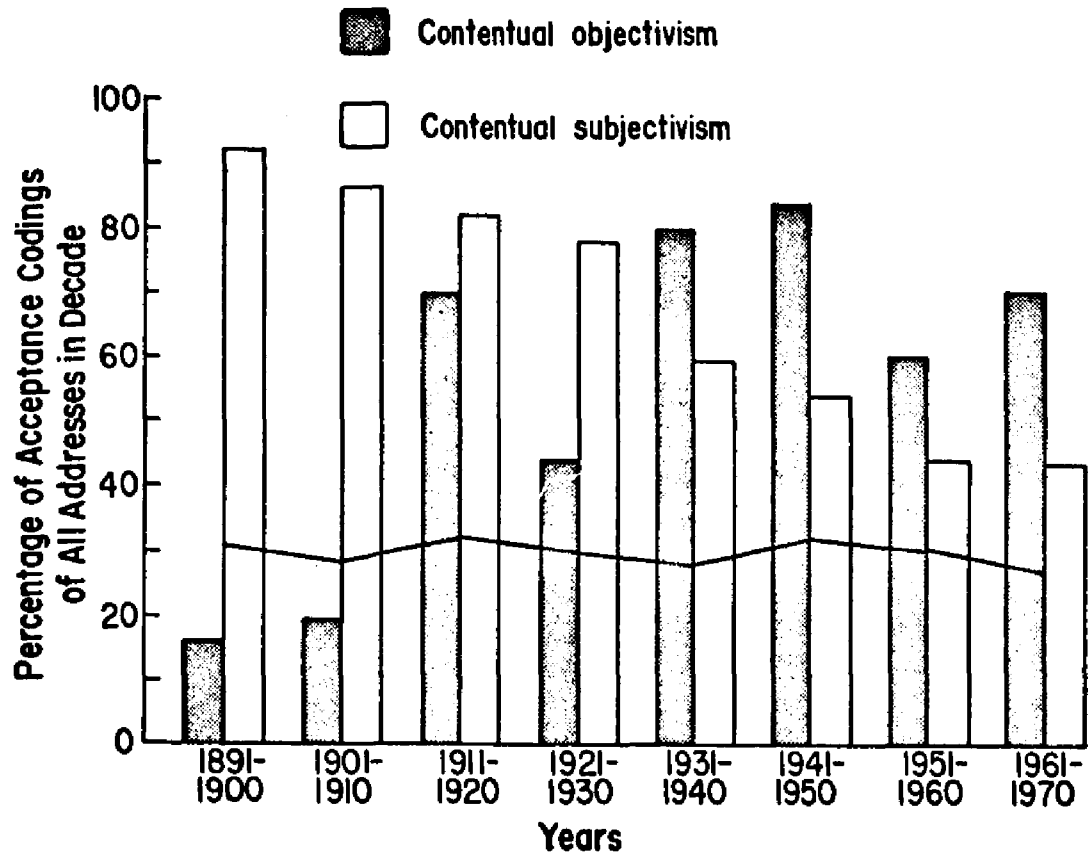
Fig. 4. Author's acceptance of Contentual objectivism and Contentual subjectivism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

during the last forty years. This aspect of the findings corresponds with the prediction.

Figure 4 also shows that Contentual subjectivism has decreased consistently in acceptance from a position of paramount importance in the 1890's. The remarkable feature of this pattern is the consistency with which the decrease has taken place, with each succeeding decade showing a slightly lower degree of acceptance of the prescription. The predicted acceptance-decrease-recovery pattern, with the decrease corresponding to the rise of Contentual objectivism, does not occur. Instead, the finding is one of an initially strong commitment to the study of mind or experience by psychologists, followed by constant weakening of that commitment to the point where experience is part of the subject matter of contemporary psychology but of less importance than behavior.

In terms of the relative acceptance of the two prescriptions, the findings are that Contentual subjectivism was dominant and Contentual objectivism counter-dominant during the first 40 years, 1891-1930, and the reverse true during the last 40 years, 1931-1970. Within this general finding, there are several further points of interest. The years 1891 to 1910 show the almost complete dominance of the mentalistic prescription over the behavioral one, but this gave way to a much weaker degree of dominance during the next

two decades, 1911-1930, when behaviorism came in vogue. Even after behaviorism had begun, subjective phenomena were considered a vital part of the subject matter of psychology and, although losing some ground, they have never ceased to be so. But during the last forty years Contentual objectivism has been dominant and Contentual subjectivism counter-dominant, a finding which accords well with the initial prediction.

These findings showing a shift from the use of mentalistic concepts in psychology to behavioral ones are consistent with those of several other studies (Allport, 1940; Bruner & Allport, 1940; Coan, 1968). Bruner and Allport (1940) found a sharp decline over time in the treatment of mental processes as entities and a simultaneous increase in their treatment as constructs. Coan's (1968) first factor, Subjectivistic versus Objectivistic, showed a progressive increase in objectivism. The findings from the three studies support the hypothesis of Brunswik (1950), who predicted a continuous change from subjectivism to objectivism in psychology.

One of the greatest problems in the history of psychology has been the problem of defining the subject matter of psychology. Psychology was classically defined as the science of the conscious mind. Fullerton, for example, stated: "[The psychologist] is . . . concerned with the

contents of consciousness, mental phenomena and their inter-
relations, and whatever else (if there be anything else)
sufficiently resembles mental phenomena to be found in a
consciousness"(1897, p. 4). This view prevailed for about
three decades in American psychology, from the 1880's through
the first decade of the twentieth century.

During the first decade of the twentieth century the
definition of psychology as the science of consciousness began
to be questioned. The first suggestion made by an APA president
that psychology should study something other than consciousness,
was made by C. H. Judd in his address in 1909.

> The science of psychology will not find itself
> until it turns away from impressions and sensory
> details and recognizes that the inner processes
> of conscious organization so transform sensory
> elements that there is in sensation little of
> value for the student of consciousness. Behavior
> on the other hand is the expression and end of all
> inner organization. To study behavior more com-
> pletely is therefore the most urgent of our problems,
> --in a very important sense it is our chief problem
> (1910, p. 95).

Of course there were those who thought psychology should
embrace both the mental and the behavioral (Warren, 1914),
or who employed the awkward term "mental behavior" to
designate psychology's subject matter (Terman, 1923; Miles,
1932), or who preferred to include both the mental and the
physiological within psychology (Langfeld, 1931). But the
growing tendency was to conceive of the subject matter of

psychology in exclusively behavioral terms.

The behavioristic phase of the history of psychology formally begins in 1913 with John B. Watson's manifesto, "Psychology as the Behaviorist Views It." In this paper Watson asserted:

> The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation. We have become so enmeshed in speculative questions concerning the . . . mind, the nature of conscious content (for example, imageless thought, attitudes, and Bewusseinslage, etc.) that I . . . feel that something is wrong with our premises and types of problems which develop from them (1913, p. 163).

Going further, Watson prescribed the next step: "What we need to do is to start work upon psychology, making behavior, not consciousness, the objective point of attack" (1913, pp. 175-176).

Another behaviorist, Walter S. Hunter, attempted to delineate the meaning of behavior for psychologists in his address in 1931, "The Psychological Study of Behavior." In doing so he hoped to separate psychology from physiology.

> In attempting to indicate the essential characteristics of that behavior which constitutes the core of the subject matter of psychology, I have found it necessary to use such terms as external adaptation, extrinsic behavior, and social environment. If I were now to attempt a definition of contemporary American psychology, not as it ought to be, nor as I wish it were, but as I think it is, the result would be as follows: Psychology seeks to describe

and explain, to predict and control, the extrinsic
behavior of the organism to an external environment
which is predominantly social. It is thus to be
contrasted with physiology which describes and ex-
plains that behavior which is intrinsic to the
various structures of the organism, behavior which
is essentially subcutaneous and which involves
adaptations to the highly uniform internal environ-
ment (1932, pp. 23-24).

Hunter's definition of psychology illustrates how behavior

was frequently conceived during the behavioristic phase of

the history of psychology.

The later behavioristic phase of the history of psy-

chology is characterized by its treatment of internal events--

formerly called consciousness -- as intervening variables or

theoretical constructs. Illustrating this trend are the

addresses by Hull (1936), Tolman (1937), Mowrer (1954), and

Osgood (1963). Their common conviction was well stated by

Hebb, who said in his 1960 address: "Mind and consciousness,

sensations and perceptions, feelings and emotions, all are

intervening variables or constructs and properly part of a

behavioristic psychology" (1960, p. 740).

Methodological objectivism - Methodological subjectivism

Prediction 7: Methodological objectivism and Methodological

subjectivism will follow roughly the same pattern as Contentual

objectivism and Contentual subjectivism in the history of

American psychology, except that Methodological subjectivism

will show a progressive decline after 1913 rather than gradual

recovery. The basis of this prediction is general reading

of standard sources in the field (e.g., Heidbreder, 1933;

Boring, 1950; Brunswik, 1952; Marx & Hillix, 1963; Watson,

1971) and the findings of other studies (Allport, 1940, Coan,

1968).

Figure 5 shows that Methodological objectivism was

quite widely accepted in the early decades of psychology's

history and then, with the rise of behaviorism, became a pre-

scription of overwhelming significance in American psychology,

and has maintained its importance to the present. At the

same time Methodological subjectivism began as quite widely

accepted and has tapered off to the point where it is no

longer a viable conception in American psychology. Relatively

speaking, Methodological subjectivism has not competed success-

fully with Methodological objectivism since before the rise

of behaviorism in the second decade of the century. Since

that time Methodological objectivism has been so dominant

that it has incited relatively little opposition.

Congruent with these findings are the findings of

Allport (1940) and Bruner and Allport (1940). Their findings

show that there were relatively few articles published in

American psychology which were based on strictly introspective

procedures, and that a marked decline was apparent in these
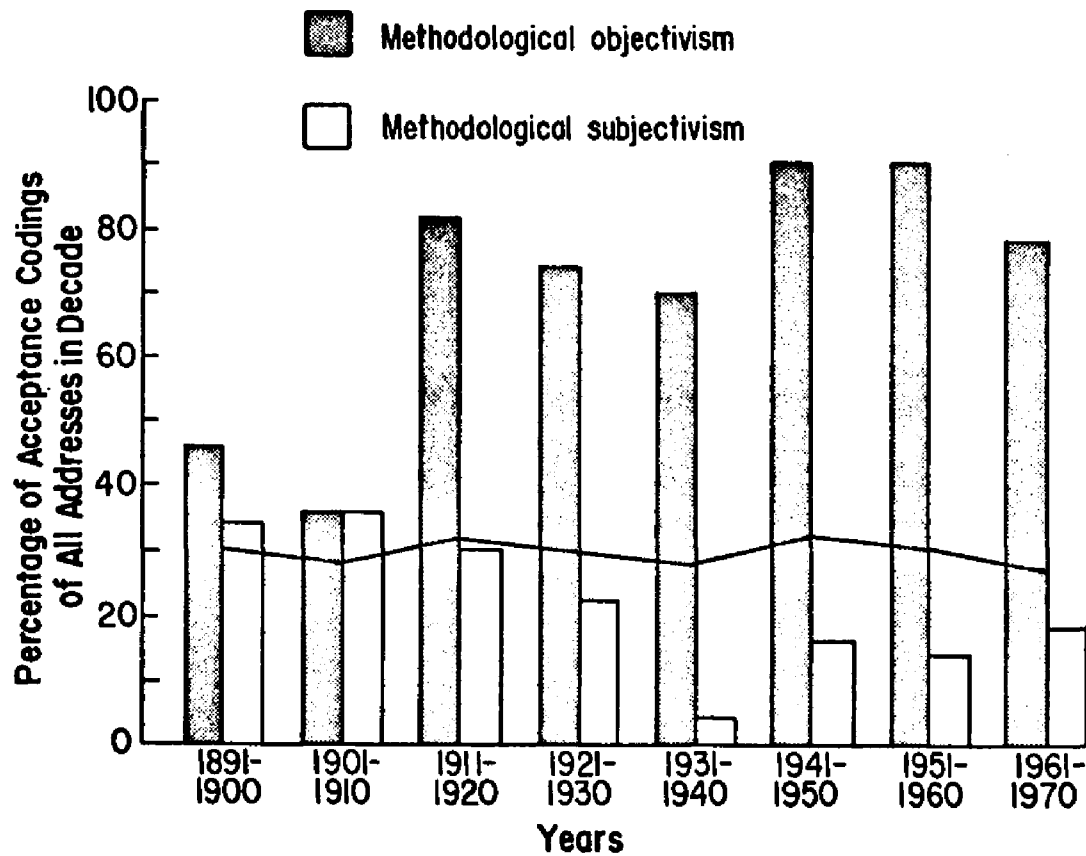
Fig. 5. Author's acceptance of Methodological objectivism and Methodological subjectivism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

studies in 1938. The authors were prompted to remark: "The entries under Category 10 [Introspective studies] indicate that the pages and pages of critical discussion devoted to the problems of introspection were scarcely justified by the slim output of articles based on strictly introspective procedures. In all years the figures are low" (1940, p. 766). On the other hand, the composite category designated "Methodological positivism" revealed both a large percentage of articles and a pronounced increase in the percentage of articles across the years.

The findings of this study are also related to those of Coan (1968). Coan's first factor, which was labeled Subjectivistic versus Objectivistic, showed "a progressive increase in objectivism" from the decade of the 1880's to the decade of the 1950's. While showing no progressive increase, the present study shows an overall increase of major proportions in the methodologically objective orientation of American psychology.

When psychology emerged as a discipline the first method used was self-observation or introspection. This method was usually combined with experiment; experimental introspection was the classical method of psychology. Later, experiment alone became the preferred method.

In 1890, William James asserted in the Principles

that introspection was psychology's primary method: "<u>Intro-spective Observation is what we have to rely on first and foremost and always</u>. The word introspection need hardly be defined--it means, of course, the looking into our own minds and reporting what we there discover" (1890, p. 185). George Trumbull Ladd was even more forceful in his address in 1893. He said: "That no method can be developed in psychology which will enable us to dispense with introspection, or which will cease to be very largely dependent, for its own value, upon the value of the introspection which accompanies it, is too obvious to require discussion" (1894, p. 6).

However, the <u>Zeitgeist</u>--the spirit of the times--was changing, and in 1913 Watson declared: "Psychology as the behaviorist views it is a purely objective experimental branch of natural science. . . . Introspection forms no essential part of its methods" (1913, p. 158). Watson was elected to the presidency of the APA two years after his classic statement. He began his address in 1915, "The Place of the Conditioned Reflex in Psychology," by saying:

> Since the publication two years ago of my somewhat impolite papers against current methods in psychology I have felt it incumbent upon me before making further unpleasant remarks to suggest some method which we might <u>begin</u> to use in place of introspection. . . .I wish in my remarks tonight to report what progress has been made in this direction (1916, p. 89).

Psychology was to adopt the method of conditioned reflexes,

modeled after either Pavlov's conditioned secretion reflexes

or Bekhterev's conditioned motor reflexes. This method,

which did not depend for its validity upon verbalization,

could be applied to either animal or human subjects, and so

was thought to serve admirably the purposes of an objective

psychology. In 1919, Watson published his most comprehensive

text, <u>Psychology from the Standpoint of a Behaviorist.</u> Here

he presented the objective methods of human psychology. Watson's

classification included the following.

      I.   Observation, with and without instrumental control.
     II.   The conditioned reflex methods.
          (a)   Methods employed in obtaining conditioned
               secretion reflexes.
          (b)   Methods employed in obtaining conditioned
               motor reflexes.
    III.   The verbal report method.
    IV. Methods of testing.

When he included verbal report among the legitimate

methods in psychology, Watson did not go back upon his

commitment to objective methods. He considered verbal report

a speech reaction or, more broadly, language behavior. The

verbal reports themselves were the data and not the exper-

iences described by the verbal reports. In this sense, verbal

report, like any other kind of behavior, is open to verifica-

tion by another competent observer, and is an expression of

Methodological objectivism.

Despite some controversy, the use of objective methods

in psychology became even more widespread in the wake of the

behaviorist revolution. Walter S. Hunter described the

phenomenon in his address in 1931.

> In America we seem to be emerging at last from an
> era of controversy concerning what psychology is
> or ought to be. For good or ill the onward march
> of experiment, which no mere speculation and con-
> troversy can halt, has carried psychology along
> the way of the objective study of human behavior.
> With the development of institutes for the study
> of the child and for the investigation of human
> relations, not to mention the post-war developments
> in the study of behavior tests and animal behavior,
> this objective tendency is ever more firmly estab-
> lished (1932, p. 2).

In sum, around the turn of the century the methodologi-

cal issue was controversial, and Methodological subjectivism

and objectivism vied for supremacy. But ever since the rise

of behaviorism in the second decade of the century, there

has been a growing emphasis upon objective methods in psychol-

ogy, with the implication that such methods lead to reliable

results. Bergmann (1956), for example, recently remarked that

"methodological behaviorism, like Functionalism, has conquered

itself to death. It, too, has become a truism. Virtually

every American psychologist, whether he knows it or not, is

nowadays a methodological behaviorist" (1956, p. 270). The

reliance upon objective methods is one of the most salient

characteristics of contemporary American psychology.

Peripheralism - Centralism

Prediction 8: Peripheralism and Centralism will show roughly

the same pattern as Contentual objectivism and Contentual

subjectivism in the history of American psychology (Allport,

1940; Coan, 1968), although they will not be as widely

accepted as the latter.

One of the noteworthy features of the results dis-

played in Figure 6, as contrasted with those for Contentual

objectivism and Contentual subjectivism, is that Peripheralism

and Centralism are not as widely accepted prescriptions.

Furthermore, Peripheralism shows an increase through the 1930's,

but then, unlike Contentual objectivism, decreases in acceptance

to the present. The decline in the acceptance of Peripheralism

since the growth of behaviorism in the 1930's, but not in

Contentual objectivism, may be interpreted as a change in

the behavioral prescription. The behaviorists began by

delimiting the subject matter of psychology in terms of the

criterion of public observation. Behavior had to be seen.

The later behaviorists, however, were more liberal: they

admitted internal events into the realm of legitimate data,

but they insisted upon conceptualizing those events in be-

havioral terms. Behavior as the major category of psychology

now included internal events as well as external ones, so

that Peripheralism, with its exclusive emphasis on external

events, was no longer sufficient to characterize the subject
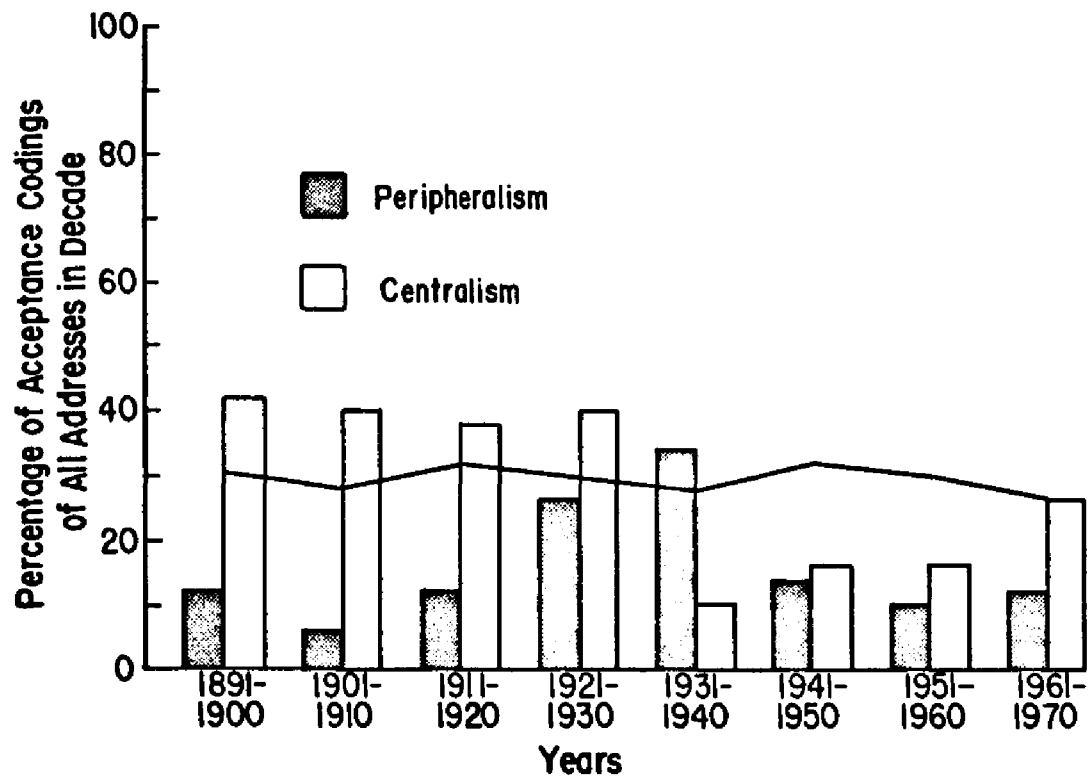
Fig. 6. Author's acceptance of Peripheralism
and Centralism in 75 APA presidential addresses coded
by three judges. (The average acceptance of all 36
prescriptions is shown by the horizontal line.)

matter of psychology. Consequently, Peripheralism is not now a viable conception, except for a few exceptionally tough-minded behaviorists.

Centralism was widely accepted from the 1890's through the 1920's, and was dominant over Peripheralism during that time, but it has since decreased in strength so that its current status is moderate. The sharpest decrease in Centralism occurred during the 1930's, which was also the decade of the strongest acceptance of Peripheralism. This shift may be due to the influence of behaviorism.

Functionalism - Structuralism

Prediction 9: Functionalism will increase in acceptance after the turn of the century and continue its pervasive influence up to and including the present. The most explicit expression of this prescription occurred shortly after the turn of the century in the form of a broad, loosely articulated movement known as functional psychology. Functionalism does not exist as a system of psychology today; it has been absorbed into the mainstream of American psychology. For this reason it has often been said that contemporary American psychology is functional in character (Heidbreder, 1933; Marx & Hillix, 1963; Watson, 1965; Chaplin & Krawiec, 1968; Watson, 1971). Structuralism in the form of the school of structural psychology

will collapse around the turn of the century, but Structuralism

as a prescription will continue to be a viable conception,

regardless of whether the data of psychology are conceived as

mentalistic, behavioral, or physiological. This last aspect

of the prediction is based on the writer's speculations stemming

from prescriptive theory.

Figure 7 shows that Functionalism has increased in

acceptance after the turn of the century and has maintained

a consistent level of very wide acceptance since that time.

This was the predicted course of the functional prescription

in American psychology. Structuralism, on the other hand,

has decreased in acceptance since the turn of the century to

a position of moderate acceptance, and is even weaker today.

Part of this trend probably reflects the demise of the structural

school of psychology and was predicted, but the decline in

acceptance was not predicted to be so great. It was thought

that the structural conception would remain after the collapse

of the structural school, implicit, if not explicit, in the

formulation of the subject matter of psychology. Considering

the relative acceptance of Functionalism and Structuralism,

the results show that Functionalism has been consistently

dominant and Structuralism counter-dominant in American
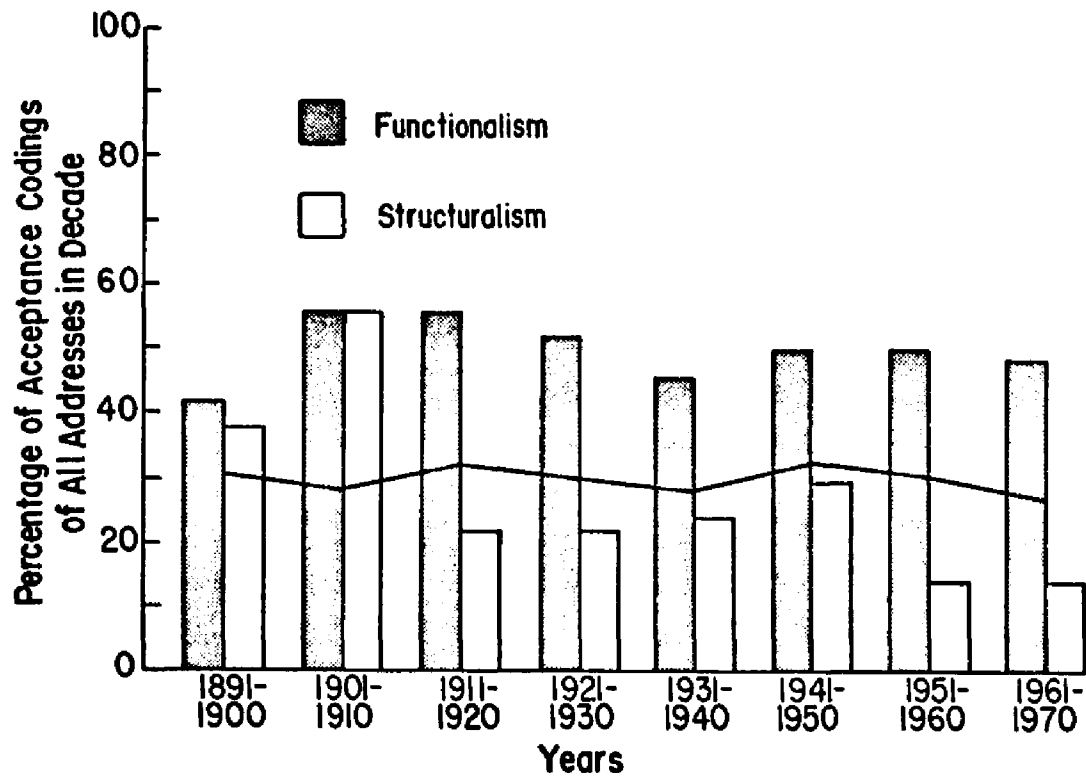
Fig. 7. Author's acceptance of Functionalism
and Structuralism in 75 APA presidential addresses
coded by three judges. (The average acceptance of
all 36 prescriptions is shown by the horizontal
line.)

psychology since the second decade of the century.

Structuralism declined in acceptance around the turn

of the century, a trend which is a reflection of the demise

of the structural school of psychology. At this time, the

classical structural school was challenged by a broad, loosely

articulated movement known as functional psychology. Joseph

Jastrow helped to usher in this movement in his address in

1900, "Some Currents and Undercurrents in Psychology."

> The conception that will serve as the background for
> my survey will be that of psychology as the science
> of mental functions. The attitude towards mental
> phenomena which this conception emphasizes came into
> prominence in the wake of the evolutionary wave that
> so wonderfully and so permanently altered the face of
> the waters. The conception of mental endowment as a
> growth-process and as a response to complex environ-
> mental conditions at once cast a blinding light upon
> an area of dimly-lit chaos in which dogmatism and
> misconception and neglect held a confused occupation.
> Not alone the illuminating truth that human mentality
> was intimately and significantly related to the men-
> tal endowment of animals was thus realized as a living
> and momentous reality, but, like the discovery of a
> new planet in the solar system, there entered our
> universe a new pivotal force. It brought us to realize
> that human history from its embodiment in the stone
> axe or the bone amulet, from the sculptured rocks of
> ancient America and the picture writings of ancient
> Egypt, from primitive cult to old-time science and
> to modern superstition, from savage myth to medieval
> legend and present-day folk-lore, is of a nature all
> compact. These and all other spheres of human achieve-
> ment became suffused with the glow of a new interest,
> took on a richer coloring and shone with a fuller
> meaning in the light of this supremely significant con-
> ception. Into the dry bones was breathed new life,
> and the thoughts of men were widened by a keener in-
> sight of the increasing purpose that through the ages
> runs (1901, pp. 5-6).

Jastrow described Functionalism as an undercurrent but said

he wanted to see it become one of the main currents in psy-

chology.

The advent of functional psychology prompted Titchener,

the champion of structural psychology, to undertake a clari-

fication of structural and functional psychology in his paper

"The Postulates of A Structural Psychology" in 1898. He

contrasted them in the following way.

> The point which I wish now to make is this: that,
> employing the same principle of division, we can
> represent modern psychology as the exact counterpart
> of modern biology. . . .
>
> 1. We find a parallel to morphology in a very
> large portion of "experimental" psychology. The
> primary aim of the experimental psychologist has been
> to analyze the structure of mind; to ravel out the
> elemental processes from the tangle of consciousness,
> or (if we may change the metaphor) to isolate the
> constituents in the given conscious formation. His
> task is a vivisection, but a vivisection which shall
> yield structural, not functional results. . . .
> 2. There is, however, a functional psychology,
> over and above this psychology of structure. . . .
> We may regard [the mind] . . . as the collective
> name for a system of functions of the psychophysical
> organism. . . .
>
> Just as experimental psychology is to a large
> extent concerned with problems of structure, so is
> "descriptive" psychology, ancient and modern, chiefly
> occupied with problems of function. Memory, recogni-
> tion, imagination, conception, judgment, attention,
> apperception, volition, and a host of verbal nouns,
> wider or narrower in denotation, connote, in the
> discussions of descriptive psychology, functions of
> the total organism. That their underlying processes
> are psychical in character is, so to speak, an
> accident; for all practical purposes they stand upon

the same level as digestion and locomotion, secretion and excretion (1898, p. 449-450).

A structural prescription and a functional prescription existed side by side in American psychology at the turn of the century, each held primarily by a distinct group of psychologists. The structural psychologists were united by their belief that psychology should make its business the "structure" of mind, i.e., the mind's conscious contents, like sensations, images, and affections. The functional psychologists soon came to oppose this view, arguing that the mind was not a group of contents, but a system of activities which better enabled the individual to adjust to his environment.

The structural and functional prescriptions were each functioning effectively around the turn of the century, guiding different groups of psychologists in their activities. But in 1905, Mary Calkins attempted to reconcile the two prescriptions in her address, "A Reconciliation Between Structural and Functional Psychology." She wrote:

> The object of this paper is to show that the two conceptions, structural and functional, are readily combined, if only the basal fact of psychology be conceived as a conscious self, that is, as a self-being-conscious. The combination of the two procedures is--I shall argue--in this way made possible because a self-being-conscious is not only analyzable into elements but is also a complex of relations to its environment, social and physical (1906, p. 63).

While Titchener was sharpening the contrast between

structural and functional psychology, and Calkins was trying

to reconcile them, others sought to evaluate the current

status of the new functional psychology. The best exposition

was presented in 1906 by James Rowland Angell in his address,

"The Province of Functional Psychology." Angell believed

that the aim of functional psychology was interpreted in

several different ways, and he delineated three conceptions

of functionalism. The three conceptions were (1) functionalism

conceived as the psychology of mental operations in contrast

to the psychology of mental elements, (2) the functionalism

which deals with the problem of mind conceived as primarily

engaged in mediating between the environment and the needs

of the organism, and (3) functionalism as psychophysical

psychology. Angell later argued that these three conceptions

are all aspects of a single problem, the problem "of deter-

mining just how mind participates in accommodatory reactions"

(1907, p. 88).

It may be said in summary that the functional school

of psychology, like all schools, was founded upon protest

and, with the demise of the structural school, became

dominant. Since there was then nothing left to protest

against, it too passed away. But the main tenet of the

functional school--the prescription that psychology should

concern itself with what the processes of mental life and

behavior do to help the organism adjust to its environment—
was quickly absorbed into the mainstream of American psychology.
For this reason contemporary American psychology is often con-
sidered to be functional in character.

Quantitativism - Qualitativism

Prediction 10: Quantitativism will increase in acceptance
(Bills, 1938; Allport, 1940; Watson, 1965), with a concurrent
decrease in acceptance of Qualitativism.

Figure 8 shows an overall increase in the acceptance
of Quantitativism. The specific pattern is a very pronounced
increase in acceptance during the second decade of the cen-
tury, followed by a drop, and then strong recovery lasting
several decades. Finally, there is a notable decrease in
the 1960's. Qualitativism, by contrast, has maintained a
consistent level of "average" acceptance from the 1890's to
the 1960's. This finding differs from the prediction, which
postulated a stronger initial acceptance of Qualitativism
and subsequent decrease in strength. Considered in relative
terms, Quantitativism has been dominant and Qualitativism
counter-dominant in American psychology since the second de-
cade of the century.

The above findings are congruent with those of Allport
(1940) and Bruner and Allport (1940). Their category, "The
use of statistics," included all articles that employed
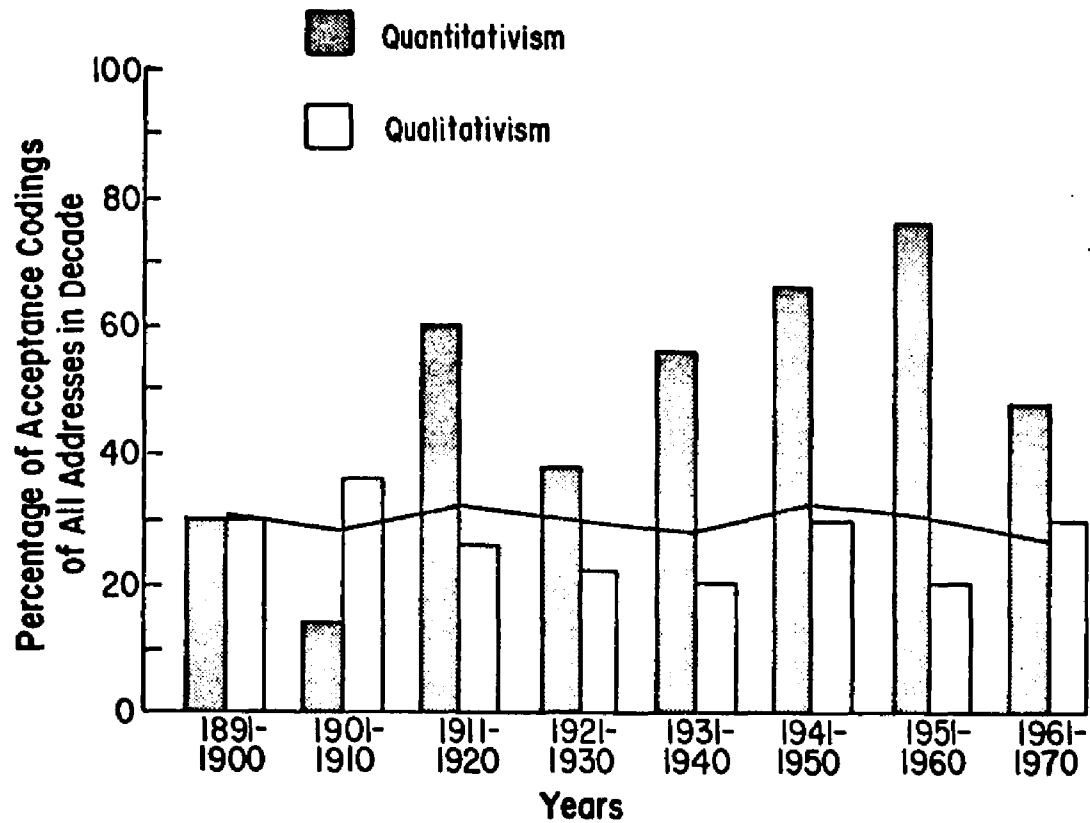
Fig. 8. Author's acceptance of Quantitativism and Qualitativism in 75 APA presidential addresses coded by three judges.(The average acceptance of all 36 prescriptions is shown by the horizontal line.)

statistical aid, ranging from simple measures of variability and correlation to complex factorial procedures. This category showed the greatest increase of the 32 categories employed by Bruner and Allport. The authors concluded:

> Quantitatively, the most striking change in 50 years is the great increase in the use of statistical aids in psychological research, shown in Category 11. In part this rise reflects the growing proficiency of psychologists in the use of techniques of critical investigation, and in part, no doubt, it reflects the preoccupation with quantitative standards of excellence characteristic of most American cultural activities--even science (1940, pp. 766-767).

Coan's (1968) fourth factor, Quantitative versus Qualitative, showed a trend over time in psychological theory from quantitative to qualitative to quantitative emphases, in which the second quantitative emphasis was stronger than the earlier one. This finding differs from the present study and the Bruner and Allport study, which both show a unidirectional increase of major proportions in the quantitative orientation of American psychology.

Even in the early years of the history of psychology there were psychologists who were advocating the use of measurement. One of the strongest advocates of the quantitative prescription at that time was J. McKeen Cattell, who as early as 1895 said:

> Now it seems to me . . . that measurements have just the same place in psychology as in the material sciences, except in so far as they have not been as

yet so successfully prosecuted. The immediate end
of science, whether physical or mental, is to describe
the world . . . in so far as a description of the
world is an end in itself, measurements are a part
of this description, and by far the most exact,
general and economical method of description hitherto
devised (1896, p. 140).

The acceptance of Quantitativism was, to a large

extent, a consequence of the general behavioristic recon-

ception of psychology's subject matter in terms of behavior.

Behavior is concrete and tangible; it can be subjected to

measurement. Although the quantitative prescription appears

in APA addresses as widely diversified as those devoted to

the psychology of music (Seashore, 1911), vocational guidance

(Scott, 1919), and factor analysis (Thurstone, 1933), it is

most explicit in Woodrow's address in 1941, "The Problem of

General Quantitative Laws in Psychology." Woodrow expressed

the sentiments of many psychologists when he wrote:

The viewpoint believed to be the most serviceable
in the formulation of quantitative laws rests
largely upon the nature of the primary, quantitative
data of psychology. If one examines any large
number of psychological investigations, he will find
that the actual observations deal with the activities
of organisms or the more or less immediate results
of these activities. These activities are usually
described in connection with the environmental cir-
cumstances under which they occur. . . . One after
another, psychological systems come to the fore and
then subside; but the measurements of psychology
continue to be, as they have always been, measure-
ments of attributes of behavioral responses or their
products and of the environmental conditions under
which these responses occur. From the fact that the
primary observations of psychology are in the first
instance almost entirely observations of surface

behavior and its products, and from the further
fact that the attributes of such behavior are
measurable, it follows naturally that psychology
is very largely a quantitative science (1942, pp. 1-2).

Today qualitative speculation, no matter how brilliant,
"is apt to be considered worthwhile only if it be a prelude
to a form in which it can be restated so as to be measured"
(Watson, 1965). The use of quantitative techniques and pro-
cedures is so widespread that American psychology may be
characterized as predominantly quantitative in nature.

Nomotheticism - Idiographicism

Prediction 11: Nomotheticism will be dominant and Idio-
graphicism counter-dominant throughout the history of American
psychology up to the present (Allport, 1940; Watson, 1965).

Figure 9 shows a similar pattern for Nomotheticism
and Idiographicism: initial acceptance followed by attenuation
and then growing acceptance again. This pattern is not as
striking for Idiographicism as it is for Nomotheticism, but
the parallel between the two prescriptions is noteworthy.
Nomotheticism shows very strong acceptance since the 1930's,
although it drops precipitously during the last decade.
Idiographicism shows moderately strong acceptance during the
last three decades. In terms of relative acceptance, Nomo-
theticism has been dominant and Idiographicism counter-dominant
throughout the history of American psychology, as was predicted.
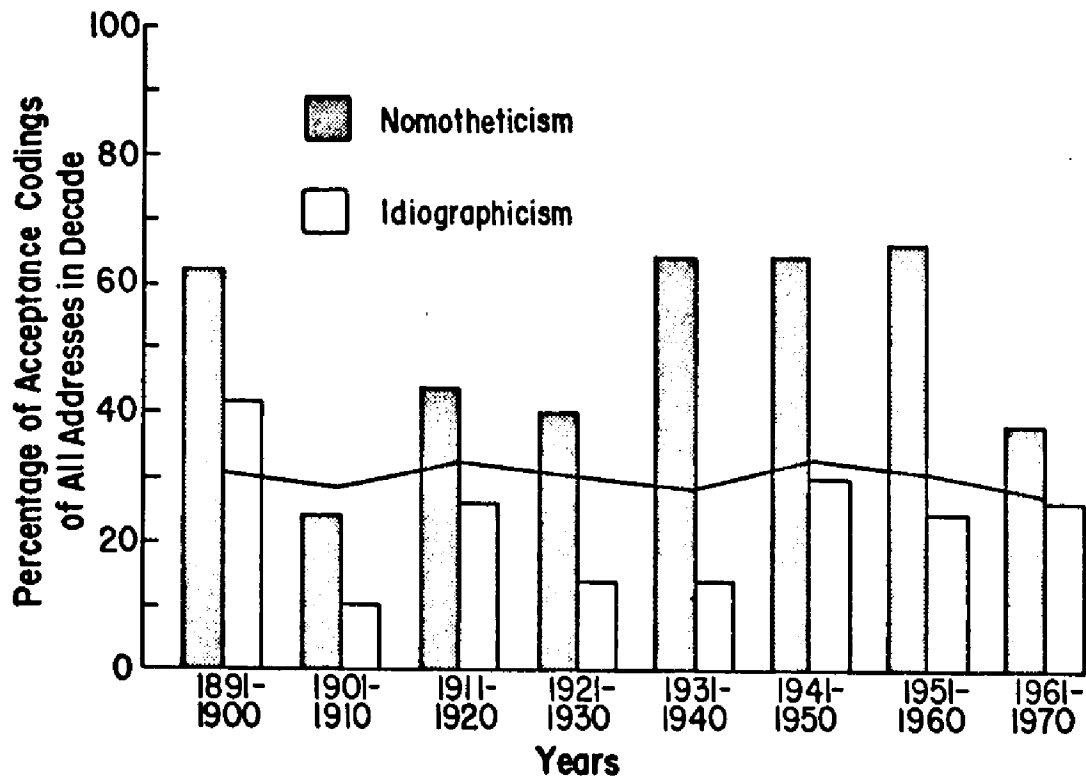
Fig. 9. Author's acceptance of Nomotheticism
and Idiographicism in 75 APA presidential addresses
coded by three judges. (The average acceptance of
all 36 prescriptions is shown by the horizontal line.)

The relation of dominance and counter-dominance between Nomotheticism and Idiographicism has existed throughout the development of American psychology. Being a scientific goal rather than an artistic one, the search for general laws was taken for granted as being the aim of psychology, while explaining particular events or individuals was of interest to a minority of psychologists. The strongest acceptance of Idiographicism was during the 1890's; since that time there has been a decline, but most recently a slight increase in its acceptance. The increase in the acceptance of Nomotheticism has been far more rapid, however.

The above finding of initial strength of Idiographicism followed by decline is supported by the findings of Bruner and Allport (1940). Their category of "Articles dealing with the single case" is substantially the same as the idiographic prescription, and it received the highest percentage of articles in the decade of the 1890's and then declined through 1938. With respect to the last decade they considered, 1938, the authors commented, "Most psychologists do not regard clinical cases, individual life histories, or single historical events as appropriate material for professional publication" (1940, p. 768). While this statement is still true, the findings of the present study, which extends beyond 1938 to the present, show a moderate increase in the idio-

graphic point of view in American psychology.

Purism – Utilitarianism

Prediction 12: Purism will be accepted throughout the

history of American psychology. Utilitarianism will become

accepted shortly after the turn of the century and then will

increase steadily in acceptance, but will remain counter-

dominant in contemporary American psychology (Misiak & Sexton,

1966).

Figure 10 shows that Purism has been very widely

accepted in the history of American psychology, although a

noteworthy decline occurred during the last decade. Utili-

tarianism has also been very widely accepted, although not

as strong as Purism, and it has become more widely accepted

during the last few decades. Examination of the relative

acceptance of these two prescriptions shows that Purism has

been dominant and Utilitarianism counter-dominant in American

psychology until the last decade, when the reverse was true.

Although both Purism and Utilitarianism have been

very widely accepted in the history of American psychology,

the acceptance of pure research has been, on the whole,

considerably stronger than the acceptance of applied psy-

chology. It has been felt by most psychologists that pure

psychology is more basic than applied and that progress in
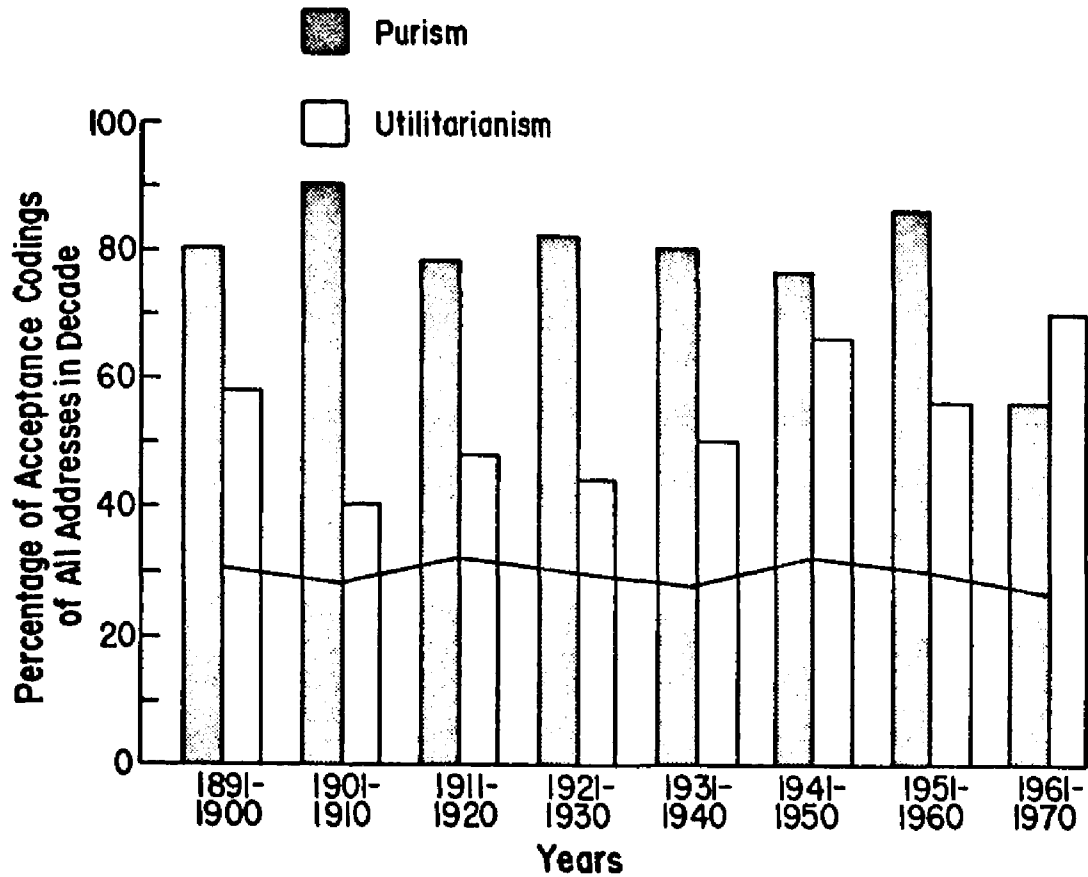
Fig. 10. Author's acceptance of Purism and
Utilitarianism in 75 APA presidential addresses
coded by three judges. (The average acceptance of
all 36 prescriptions is shown by the horizontal line.)

the latter depends upon a strong commitment to the former. However, a distinct trend is apparent: there has been a marked increase in the acceptance of applied psychology in the last 40 years, and in fact it was more widely accepted in the 1960's than was pure psychology.

Bruner and Allport's (1940) category "Applied psychology," defined as including theoretical and experimental contributions aimed primarily at the direct application of psychological principles to life outside the laboratory, showed a <u>decline</u> in percentage of articles over time. However, in view of the activity of the American Association for Applied Psychology (AAAP) and the Society for the Psychological Study of Social Issues (SPSSI), Allport (1940) was led to remark:

> The conclusion to be drawn, I think, is not that our membership as a whole is less interested in the usefulness of psychology, but that a certain professional cleavage is developing. Psychologists using the fourteen journals studied are, in their writings, becoming more and more remote from living issues and more abstract in the presentation of their subject matter. The consulting, applied, and socially-minded psychologists are turning to other, more specialized, journals not included within our survey. Thus, the indication is that "pure" and "applied" psychology are parting ways to some extent--an event which some will deplore and others welcome (1940, p. 7).

This interpretation was elaborated by Bruner and Allport (1940) in the following way.

The year 1938 presents in fairly dramatic form two alternative courses for the future. Briefly, these courses might be designated as 'psychology for science's sake' and 'psychology for society's sake.' These designations do not imply, however, simply a choice between pure and applied psychology, nor between isolationism and participationism. For the course selected will determine inevitably the design of mental science in the future--the character of its presuppositions, the systematic nature of its con- cepts, the structure of its theories, the fashioning of its techniques, as well as the content of its research (1940, p. 775).

According to a textbook account (Misiak & Sexton, 1966), the contrast between pure and applied psychology was evident from the beginning in American psychology, but, although the issue was discussed, there was no sharp rift at that time, probably because applied psychologists held academic positions and contributed to psychological science. Gradually, as American psychology developed, the rift widened and the dual character of the discipline became a bipolarity between scientific and professional interests. The principle factor responsible for accelerating this trend was the role of psychologists in the two world wars, particularly World War II. The following discussion of this factor is taken from the presentation of Misiak and Sexton, and is offered to provide a context for later discussion of the views of some of the APA presidents on the Purism-Utilitarianism issue.

Psychology was given impetus by America's entry into World War I in 1917. Although psychologists performed many

applied services in the war effort, their single most significant function was to devise effective techniques by which civilian recruits could be selected and allocated to military assignments. The success of psychologists in dealing with the manpower problem opened up new possibilities for applied psychology in education, business, and industry. Clinical psychology, vocational guidance, and industrial psychology made significant gains. Hall founded the <u>Journal of Applied Psychology</u> in 1917. After 1920, applied psychology began to develop as an independent field.

America's entry into World War II came in 1941, and once again psychologists were called on to select and classify military personnel in induction centers. They also engaged in "human factors engineering," the designing of military equipment according to human specifications. Once again the success of psychologists in these applied tasks gave prestige to psychology and accelerated the development of applied psychology. When World War II ended in 1945 there followed in America enthusiastic support for the behavioral sciences in general and psychology in particular. Psychology's success during the war led to an unprecedented demand for psychological services in the community. Formal recognition of professional psychology was achieved. At the same time many psychologists were happily engaged in research in academic settings. It

was as if psychology--at least two major groups of psycholo-
gists--were moving in opposite directions. It could be
estimated that the turning point was around 1945; prior to
that time psychology was predominantly academically oriented,
after 1945 it became more professionally oriented. The
cleavage between pure and applied psychology grew to con-
siderable proportions.

The cleavage between pure or academic psychology
and applied or professional psychology deepened during the
1960's. Academic psychologists, who train future psycholo-
gists, are in the minority. In 1965 one estimate concluded
that "6 out of 10 psychologists are primarily concerned with
the applications of psychology" (Watson, 1965, p. 132).

Having provided an overview of the development of
the pure and applied prescriptions in psychology, some specific
views of APA presidents will be discussed. These are dis-
cussed at somewhat greater length for the Purism-Utilitarianism
issue than for other prescriptions, because of the significance
of the implications of this issue.

As early as 1893 George Trumbull Ladd spoke to the
issue of psychology's applications. He said: "The more I
study and teach this science the deeper does the impression
become that it is able and destined to contribute greatly to
the welfare of mankind" (1894, p. 19). Ladd pointed out

that this fact implied a certain responsibility, "which is of a quasi-ethical sort," upon the Association, and he added that the Association "should enter upon its career with a sufficiently generous estimate of its privileges and of its responsibility" (1894, p. 21).

Other addresses given before World War I which expressed the utilitarian theme included Dewey's (1899) address, "Psychology and Social Practice," which dealt with the application of psychological knowledge to education and served as an impetus for the progressive education movement, and Bryan's (1904) address, "Theory and Practice," in which he stressed that all knowledge is potentially practical. In "The Measure of a Singer" (1911), Seashore dealt with a problem in the applied psychology of music: the measurement of an individual's musical ability. He claimed that "measurements of the kind we commonly accept in psychology may be so employed as to furnish a serviceable invoice of the natural capacity, plasticity, skill and knowledge a particular individual may have for doing a particular thing" (1912, p. 212).

In 1917, Robert M. Yerkes gave his address, "Psychology in Relation to the War," in which he outlined the history of the organizing of psychological military service in that year. He noted:

> The obvious and significant trend of our psychological
> military work is toward service. Psychologists who

develop methods or accumulate information which
promises to aid us in winning the war are shortly
appointed to positions which give them opportunity
to apply their special knowledge effectively. At
present our profession is importantly represented
in the Department of the Adjutant General, in the
Navy, the Signal Corps, the Medical Corps, the
Sanitary Corps and the Quartermaster Corps (1918,
p. 113).

However, Yerkes noted that the future demand for psychologists

and psychological services threatened to outstrip the supply.

Walter Dill Scott published in 1903 the first book

by a psychologist aimed to help business, The Theory of Ad-

vertising. Scott followed this with two other books, The

Psychology of Advertising (1910) and Influencing Men in

Business (1911). Considered the "father of applied psy-

chology," he was elected to the presidency of the APA in 1919,

and gave his address on "Changes in Some of Our Conceptions

and Practices of Personnel."

Although applied psychology received a great deal of

support from the functional school of psychology, it was

even more strongly advocated by classical behaviorism.

Drawing the ethical implications of his environmentalistic

position, J. B. Watson sought to develop a social philosophy

dedicated to the secular salvation of the human race. His

"experimental ethics" was based on the assumption that since

man is determined by the environment, he ought to be inten-

tionally molded by the social environment. With his usual

enthusiasm, Watson envisaged a future society based on the

principles of behavioristic psychology.

> Behaviorism ought to be a science that prepares
> men and women for understanding the principles
> of their own behavior. It ought to make men and
> women eager to rearrange their own lives, and
> especially eager to prepare themselves to bring
> up their own children in a healthy way. I wish
> I could picture for you what a rich and wonderful
> individual we should make of every healthy child
> if only we could let it shape itself properly and
> then provide for it a universe in which it could
> exercise that organization--a universe unshackled
> by legendary folk-lore of happenings thousands of
> years ago; unhampered by disgraceful political
> history; free of foolish customs and conventions
> which have no significance in themselves, yet which
> hem the individual in like taut steel bands. I am
> not asking here for revolution; I am not asking
> people to go out to some God-forsaken place, form
> a colony, go naked and live a communal life, nor
> am I asking for a change to a diet of roots and
> herbs. I am not asking for 'free love.' I am try-
> ing to dangle a stimulus in front of you, a verbal
> stimulus which, if acted upon, will gradually
> change this universe. For the universe will change
> if you bring up your children, not in the freedom
> of the libertine, but in behavioristic freedom--a
> freedom which we cannot even picture in words, so
> little do we know of it. Will not these children
> in turn, with their better ways of living and
> thinking, replace us as society and in turn bring
> up their children in a still more scientific way,
> until the world finally becomes a place fit for
> human habitation? (1924, pp. 303-304).

In 1928, Watson dedicated his book, <u>Psychological Care of the Infant and Child</u>, to "the first mother who brings up a happy child."

In 1935, Albert T. Poffenberger gave his address, "Psychology and Life." This address departed from tradition and limited itself to the organization and administration of

the APA, rather than to psychology as a discipline. The address took the form of a statement of recommendations of policy for the APA by its president. Poffenberger asserted that psychology was of necessity both a pure and applied science, touching particularly closely upon everyday life. In recognition of this, he recommended that the APA take the following steps: (1) Define the homo psychologicus, (2) Propose minimum standards for his training, (3) Determine the training needed for at least the most active of the applications, and recommend the means for obtaining it, (4) Extend psychological service within the community, thereby increasing jobs for psychologists, (5) Protect psychology against the inroads of charlatans, (6) Insure against the misinterpretation of psychological findings and the spread of unsound conclusions therefrom.

In 1939, Gordon W. Allport presented his address, "The Psychologist's Frame of Reference," which has already been cited numerous times in this chapter, including his reference to the growing cleavage between pure and applied psychology. Allport disparaged that psychology was in danger of losing sight of "the true source of the eminence of the elder sciences." He said: "Their enviable glory consists in the unexampled power they have given mankind in predicting, understanding, and controlling the course of nature for

mankind's own benefit. As a mature science psychology, too, will find its justification, . . . in contributing to humanity the power to achieve these ends" (1939, p. 16).

America had been at war for two years when John E. Anderson gave his address in 1943, "Freedom and Constraint or Potentiality and Environment." In view of the amazingly effective organization of the country at that time, Anderson wondered what might be accomplished in peacetime by expending equal thought, energy, and effort upon human welfare. He said: "Our wartime experience suggests that the possibilities of effectively utilizing human and material resources are almost limitless, if only the constraints inherent in our normal environments, which inhibit us from expending money, time, and energy, could be removed" (1944, p. 2). In succeeding years there were presidents calling for the integration of pure and applied psychology (Murphy, 1943), or stressing that the two are interdependent (Hunt, 1951), or discussing applied psychology in relation to some practical problem (Bruner, 1965; Hobbs, 1966).

The theme of the annual meeting of the APA in 1969 was "Psychology and the Problems of Society." To honor that theme, George A. Miller presented his address on "Psychology as a Means of Promoting Human Welfare." In Miller's view, the impact of psychology will be felt, not through technologi-

cal products, but through a new conception of man. The new conception--or paradigm, as he calls it--differs from the traditional one in emphasizing the multiple bases of behavior, positive reinforcement rather than punishment, the early prevention of problems, emotional and irrational bases of behavior rather than the rational, focusing on causes rather than symptoms, etc. The difference might be characterized as a "proactive view" of human nature and the social order rather than a "reactive view." In order for this image of man to be absorbed by the public, Miller said that psychologists must endeavor to give psychology away in every way possible.

The most recent address included in this study was "The Uncertain Future of Clinical Psychology," given by George W. Albee in 1970. Albee called for a complete separation between scientific and professional psychology. He said: "I fear that all these basic incompatibilities between the science of psychology and the profession of psychology may be so serious as soon to require a separation or divorce . . . Looking ahead 10-20 years, I predict that there may be an American Scientific Psychological Association and an American Professional Psychological Association coexisting side by side" (1970, p. 1078). For the first time in the history of the APA the membership was being called upon not

to close ranks in a spirit of cooperation but to pursue their separate ends. It is too soon to tell whether the current period is a significant turning point in which efforts to couple the science and profession of psychology are finally abandoned.

V. DESCRIPTIVE PRESCRIPTIVE TRENDS: FINDINGS AND DISCUSSION

In addition to the findings concerning those pairs

of prescriptions for which some prediction was made, there

are other findings of interest. The findings from each pair

of prescriptions not discussed in Chapter IV are examined

here.

Conscious mentalism - Unconscious mentalism

Figure 11 shows a sharp irregular decrease in

Conscious mentalism from a point of very wide acceptance

around the turn of the century. This pattern is probably

a reflection of the general attenuation of the status of

subjective phenomena in psychology, but is even more pro-

nounced than Contentual subjectivism because Conscious

mentalism specifically emphasizes awareness as a special

characteristic of mental activity and this is a character-

istic which is likely to be objectionable to tough-minded

behaviorists. Unconscious mentalism, by contrast, shows an

increase up through the 1920's, and then irregular decrease

to the present. The strong acceptance of Unconscious mentalism

in the 1920's is probably an effect of the introduction of

psychoanalytic ideas and concepts into psychology during the

preceding decade. Prior to that time Conscious mentalism
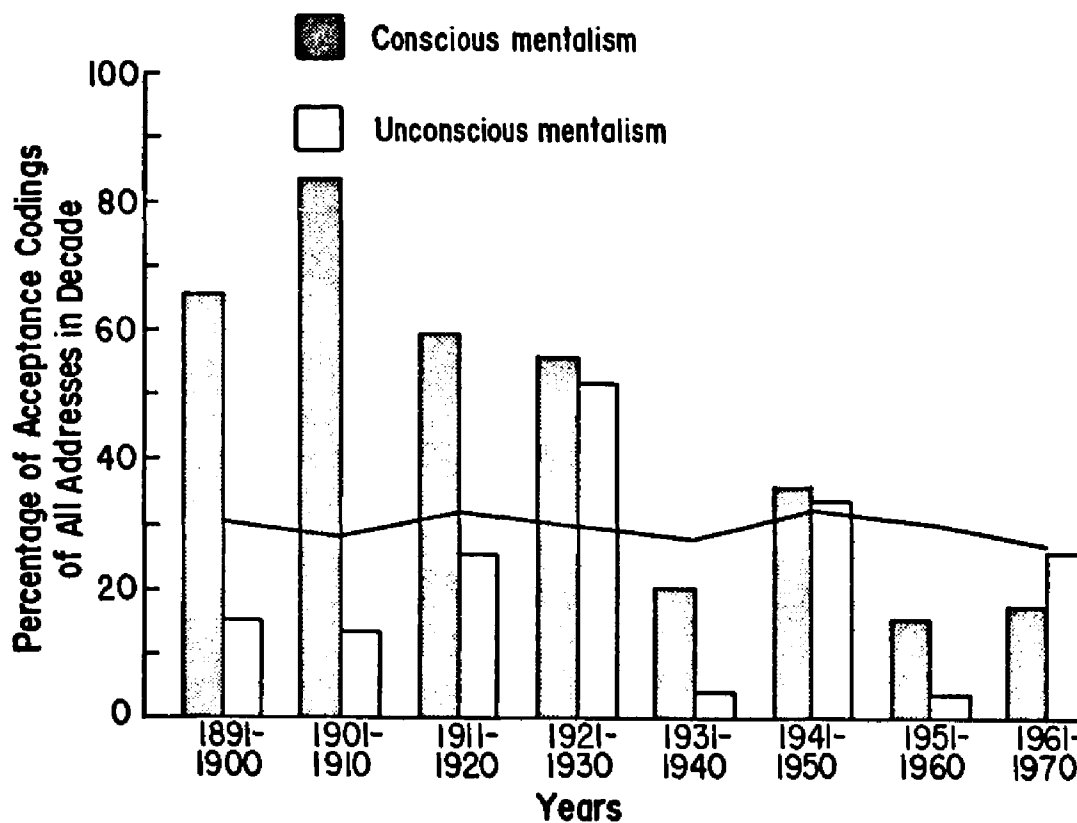
Fig. 11. Author's acceptance of Conscious mentalism and Unconscious mentalism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

was dominant and Unconscious mentalism counter-dominant in American psychology; since that time neither prescription has maintained a consistent position of dominance over the other.

The data of Bruner and Allport (1940) also show a pattern of rise and fall in their category relating to the unconscious, "Explicit manifestations of the unconscious." However, while the two findings are parallel in terms of showing a rise and fall of interest, the historical time in which interest was at its peak is different in the two studies: in 1908 for Bruner and Allport, and in the 1920's in the present study. Parenthetically, this difference may be due to the more stringent criteria employed by Bruner and Allport: either the concept of the unconscious had to be used in an explanatory manner or else some phenomenon had to be treated as a manifestation of the unconscious to qualify an article for inclusion in the category. In the present study an expression of acceptance of the concept was enough to meet the criterion of the prescription. The explanatory efficacy of the unconscious, as measured by Bruner and Allport, may have been more sensitive to the growing antagonism of behaviorism toward mentalistic explanations and thus show an earlier decline than the findings from this study.

Determinism - Indeterminism

Figure 12 shows that Determinism has been a widely held prescription in American psychology, although it has not been consistently accepted. Rather, it was most widely accepted during the 1920's and 1930's, in the wake of behaviorism. In the 1940's there was a decrease in the acceptance of Determinism and simultaneous increase in the acceptance of Indeterminism. The findings show only two phases of the history of American psychology when Indeterminism was even moderately widely accepted. The first was just prior to the turn of the century, and the second was a temporary resurgence in the 1940's, which may have been due to the increased interest in clinical activities at the time. The overall finding, however, is that Determinism, although very much operative, incites very little opposition in twentieth century American psychology.

The rationale behind the adoption of the deterministic assumption in psychology was discussed by Warren in his presidential address in 1913. He said:

> Let us face the issue squarely. Scientific research points more and more in the direction of a rigid, mechanistic interpretation of the physical universe. It is time for scientists to recognize that the data of psychology conform to a uniformitarian pattern also.
> Hitherto mental phenomena have been too often regarded as something apart from the world-order—something out of harmony with its regularity. In Newton's day the movements of

Fig. 12. Author's acceptance of Determinism and Indeterminism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

the heavenly bodies were considered something apart
from the movements of terrestrial bodies. The
burden of proof and the fear of anathema rested on
those who sought to harmonize them. Now the com-
plexion of the world has changed. Chemists and
physicists have demonstrated the uniformity and
regularity of events in their domain. The doctrine
of conservation is only one striking example.
Physiologists are extending the same notion of uni-
formity to the more complex realms of cytology and
organic processes. Animal psychologists have begun
to trace out uniformities in the activities of
organisms. Sociologists have discovered many
regularities in the interaction of living creatures.
All these sciences have done their best work under
the inspiration of the uniformity hypothesis. If
the glory of modern science is its determinism, why
should uniformity be considered degrading in the
sphere of mental events alone? If the 'reign of law'
means automatism, should not the term automatism be
purged of its stigma? Is psychology to remain under
the imputation of holding a primitive conception of
the world from which the other sciences are fast
escaping? Must we not amend the traditional inter-
pretation of choice, reason, and volition, so as to
bring these phenomena into harmony with the scientific
conception of uniformity in nature? (1914, p. 86).

Warren went on to ask of his audience: "With the uniformities

in behavior of simpler organisms staring up at us from below,

and the social uniformities of human groups staring down at

us from above, are we not bound to work under the assumption

that human choice is fully determined by natural antecedents?

(1913, p. 89).

The attitude illustrated by Warren was adopted by

the majority of American psychologists, and Determinism soon

became part of their psychological creed. For example, in

his textbook, Psychology: A Study of Mental Life (1921),

Woodworth stated:

> To the psychologist, conduct is a matter of cause
> and effect, of natural law. His business is to
> know the laws of that part of nature which we call
> human nature . . . For him, even the most capricious
> conduct has its causes, even the most inexplicable
> has its explanation--if only the cause can be un-
> earthed (1921, p. 18).

In contemporary American psychology, Determinism is

so dominant that it incites practically no opposition. One

of the most vocal exponents of the deterministic viewpoint is

B. F. Skinner. In his book, <u>Science and Human Behavior</u> (1953),

Skinner wrote:

> The hypothesis that man is not free is essential to
> the application of scientific method to the study
> of human behavior. The free inner man who is held
> responsible for the behavior of the external biologi-
> cal organism is only a prescientific substitute for
> the kinds of causes which are discovered in the course
> of a scientific analysis. All these alternative
> causes lie <u>outside</u> the individual (1953, p. 447).

While few psychologists would go so far as Skinner in insisting

that all of the causes of human behavior are outside the

individual, it is generally recognized that science in general

and psychological science in particular depend upon an assump-

tion of determinism: that mental events and human action in

general are not arbitrary, capricious, or uncaused, but are

determined like the rest of nature.

<u>Empiricism - Rationalism</u>₁

Figure 13 shows the overwhelming pervasiveness of

the empirical prescription in American psychology. Rationalism,
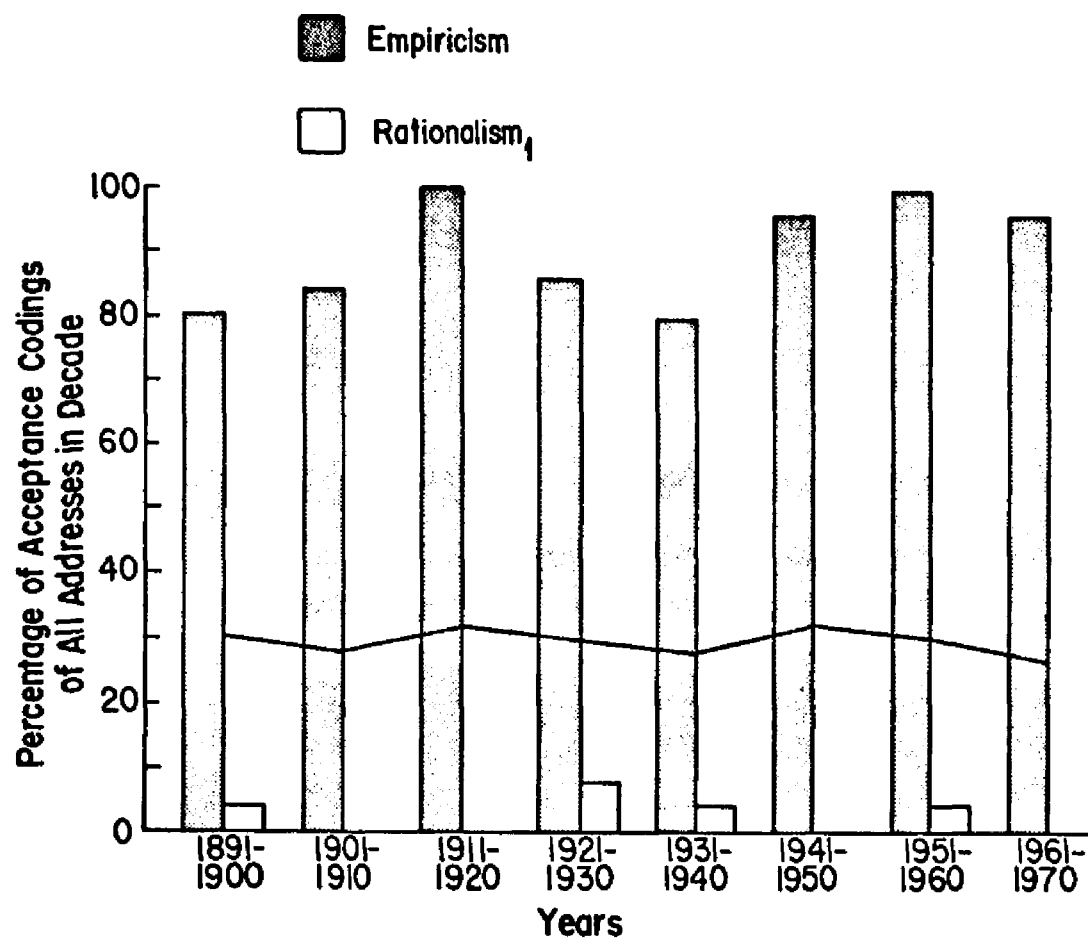
Fig. 13. Author's acceptance of Empiricism and Rationalism$_1$ in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

as a reliance on reason as the major, if not exclusive, source of knowledge, is for all practical purposes non-existent in American psychology. Reason is involved in various phases of the scientific enterprise, but it is secondary to the more basic empirical commitment, and is not an autonomous prescription. So Empiricism remains unopposed, a finding that is consistent across decades.

Inductivism - Deductivism

Figure 14 shows a consistent level of moderate strength for Inductivism from the 1890's through the 1930's, and then an increase in the 1940's and 1950's, followed by a decrease in the decade of the 1960's. Deductivism has followed a cyclical course in American psychology in which it was very weak for three decades, rose to moderate strength during the war years, and then rose sharply in acceptance during the 1950's, but has decreased during the last decade. The apex of acceptance of Deductivism during the 1950's may be a reflection of the general increase in theory construction at that time.

Mechanism - Vitalism

Figure 15 shows that neither Mechanism nor Vitalism has been widely accepted in American psychology. Mechanism was moderately accepted during the development of behaviorism, in the second, third, and fourth decades of the century.

Fig. 14. Author's acceptance of Inductivism and Deductivism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)
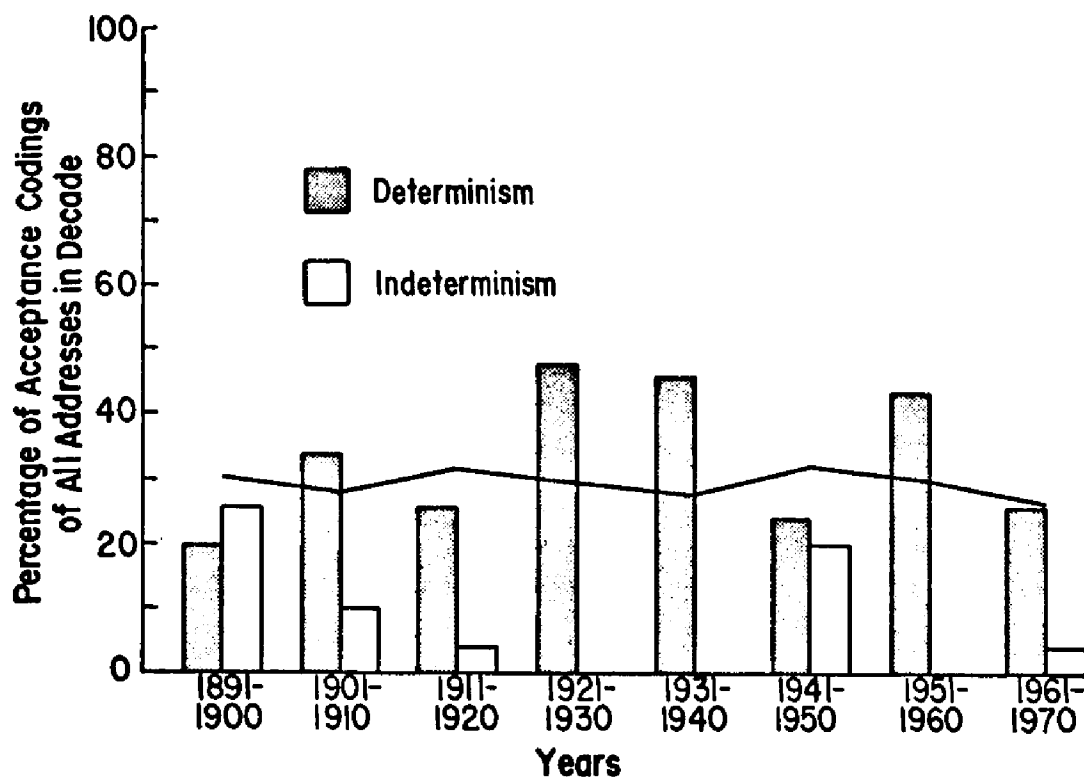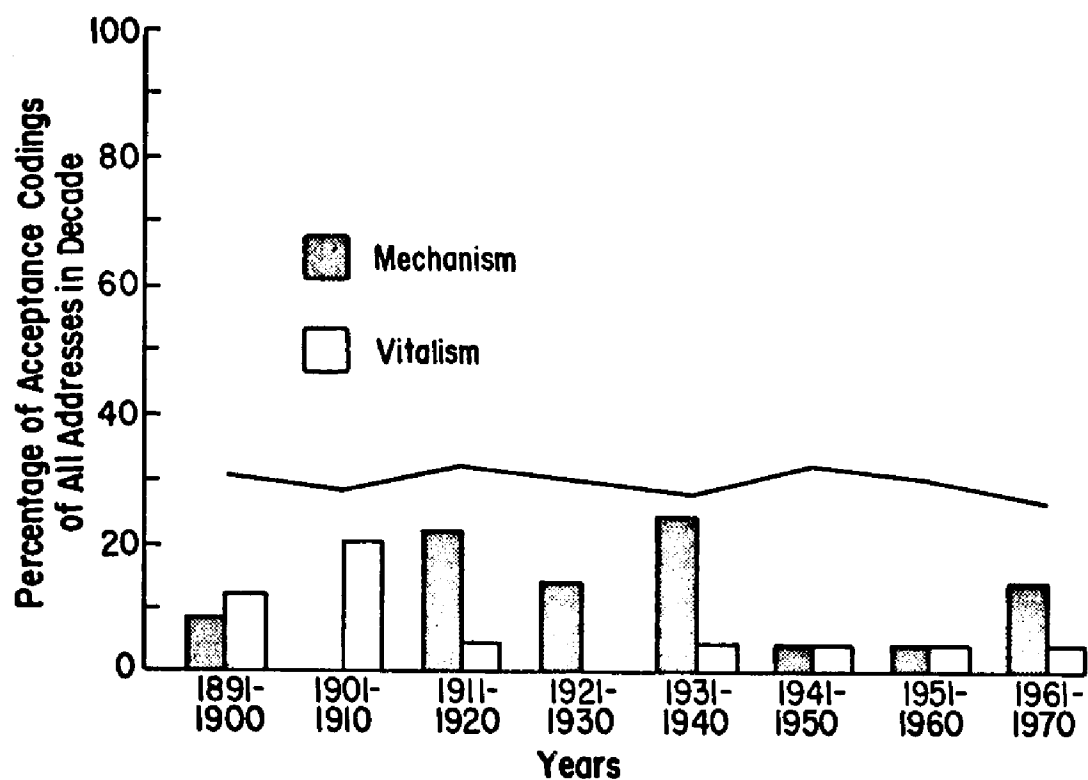
Fig. 15. Author's acceptance of Mechanism
and Vitalism in 75 APA presidential addresses
coded by three judges. (The average acceptance
of all 36 prescriptions is shown by the horizontal
line.)

The only noteworthy acceptance of Vitalism occurred around the turn of the century, but even then it was not widely accepted. Consequently, the following discussion focuses on the status of Mechanism and Vitalism in the second, third, and fourth decades of the century, when behaviorism was making important gains in American psychology.

About the time that behaviorism was making its appearance in psychology, the Mechanism-Vitalism issue was of concern to some psychologists. The issue was discussed by Warren in his address, "The Mental and the Physical" (1913), and his discussion illustrates the rationale of psychologists' general preference for Mechanism when they do take a position.

> Can vital phenomena be wholly explained in physical and chemical terms or not? The term vital force may be employed in two different ways: either to indicate our ignorance of certain physiological processes, or to designate a sort of process quite distinct from physical or chemical change. In the former sense it has no bearing on the dispute. In the latter sense it presents a definite problem for investigation. Now what is known about vital forces? The advocates of vitalism claim only that certain vital phenomena are not fully explicable in physicochemical terms. They have no alternative explanation to offer--only the name Entelechy, which serves to label the unsolved problems but does not advance one whit our understanding of them.[1] Driesch, for example, brings forward three separate proofs of vitalism;[2] every one of these rests on the inconceivability of imagining a machine so constructed as to perform certain processes observed in organisms. This is the inconceivability of antipodes over again. A century ago it was inconceivable that the chemical composition of distant stars should ever be known;

and it is not many years since the earth's curvature rendered the notion of radiotelegraphy absurd. Mechanism is not synonymous with artificial machinery. Any process which involves only physicochemical changes is mechanistic, though it differ radically from a linotype or a refinery.

The organic processes are every year brought more and more within the domain of physics and chemistry.[3] Unless some new force is definitely discovered, should not the scientist assume that the unexplained processes harmonize with those already worked out?[4] Vitalism is a <u>possible</u> hypothesis, but it is not scientifically acceptable, for it stands without direct support. The present evidence from biology justifies the assumption that physicochemical processes govern the growth and activity of organisms, --that uniformitarianism and mechanism are inter-changeable terms (1914, pp. 88-89).

Some of the behaviorists, in turn, were eager to reject anything as unscientific as Vitalism, and they sometimes embraced Mechanism. J. B. Watson, in his debate with William McDougall in 1924, later published as <u>The Battle of Behaviorism</u> (1928), declared: "<u>The behaviorist finds no scientific evidence for the existence of any vitalistic principle</u> . . . We need nothing to explain behavior but the ordinary laws of physics and chemistry" (1928, pp. 26-28). Another behaviorist, Karl Lashley, stated in his address, "Basic Neural Mechanisms of Behavior," that there was general agreement among psychologists that "the final explanation of behavior or of mental processes is to be sought in the physiological activity of the body and, in particular, in the properties of the nervous system" (1930, p. 1).

A secondary conception of Mechanism--that man is a machine--was also held by a few psychologists. In his address, "The Experimental Embryology of Mind" (1940), Carmichael claimed validity for the conception of man as a machine. He summarized his address by saying:

> In this paper I have attempted to demonstrate that the fetus may be described as machine-like in the precision and repetition of many of its patterns of response in the same stimulus situations. I have also suggested that the complex behavior of the adult organism may in certain aspects be viewed in a similar manner. That is, the machine character of the fetus does not seem to be lost as development progresses, provided only it is recognized in its early stages when it can be most clearly seen. The machine, as well as what it can do, becomes more complex, but it does not become in any sense non-mechanical. This is still true, it seems to me, when the organism's behavior is of the sort that external observers call purposive, or when it is adaptively modified by learning (1941, p. 24).

In sum, although the Mechanism-Vitalism issue had its origin in the middle of the nineteenth century and was most controversial in biology, it was of concern to some psychologists. Mechanism received its strongest acceptance from behavioristically-inclined psychologists. The associated doctrine--that man is nothing but a machine--seems to be essentially an article of faith, not implied by the more fundamental physiological hypothesis. Today the vast majority of psychologists accept neither Mechanism nor Vitalism as necessary assumptions of psychology.

Molecularism - Molarism

Figure 16 reveals that Molecularism and Molarism have been moderately accepted as prescriptions in American psychology. Molecularism follows an irregular pattern of "average" degree of acceptance, fall, rise, and fall again. Molarism, by contrast, shows a somewhat more consistent level of moderate acceptance. The differences in status between these two prescriptions are not great; there is no dominance of one prescription over the other.

Brunswik (1950) predicted an historical trend from a molecular type of approach in psychology to a molar type of approach. In testing this hypothesis, Coan (1968) found a U-shaped progression from elementarism to holism to elementarism, with the peak for holism in the 1920's. The present study shows no systematic trends. It shows more acceptance for Molecularism than for Molarism in psychology's early history, more acceptance of Molarism than Molecularism in the 1920's, and slightly more acceptance of Molarism than Molecularism in contemporary American psychology. The only conclusion that can be made on the basis of these results is that the evolution of Molecularism and Molarism in psychology is not a simple unidirectional progression but is characterized by fluctuations in acceptance.
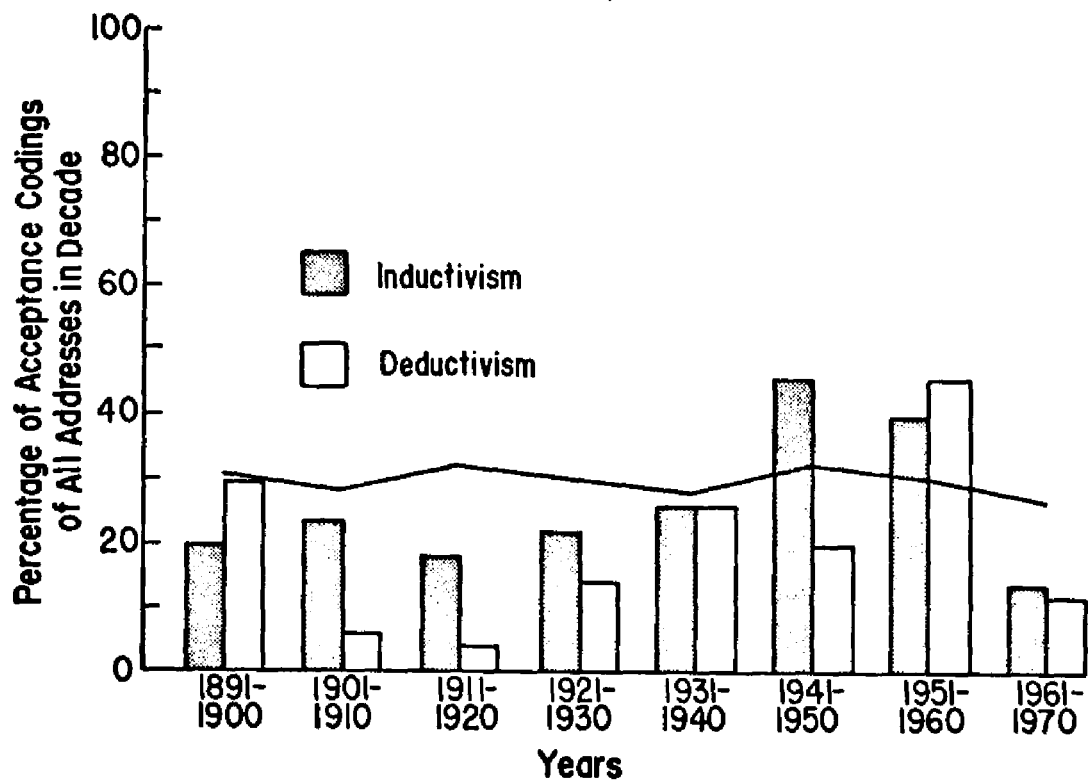
Fig. 16. Author's acceptance of Molecularism and Molarism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

Monism – Dualism

Figure 17 shows a pattern in which the only out-
standing acceptance of either prescription is of Dualism
during the first two decades of the century. It was at this
time that the mind-body problem was discussed, especially
the relative merits of interactionism (two separate and
interacting processes) and parallelism (two separate but
correlated series of events). Since that time there has
been a sharp decline in metaphysical speculation and this
is reflected in the findings: neither prescription was
accepted at all during the last two decades.

These findings are corroborated by the findings of
Bruner and Allport (1940), who also found a decline in treat-
ments of the mind-body problem. Commenting on the nature of
the shift, Allport remarked: "In the earlier literature
solutions to the problem were boldly offered in monistic or
dualistic terms; today [1938] the fashion is to deny the
existence of the body-mind problem, the denial being generally
effected with the aid of Vienna logic" (1940, p. 3).

John B. Watson may have set the example for modern
psychologists in regard to the mind-body problem in his
manifesto of behaviorism in 1913, "Psychology as the Be-
haviorist Views It." He declared forcefully:

> In it [behaviorism] one avoids both the Scylla of
> parallelism and the Charybdis of interaction. Those
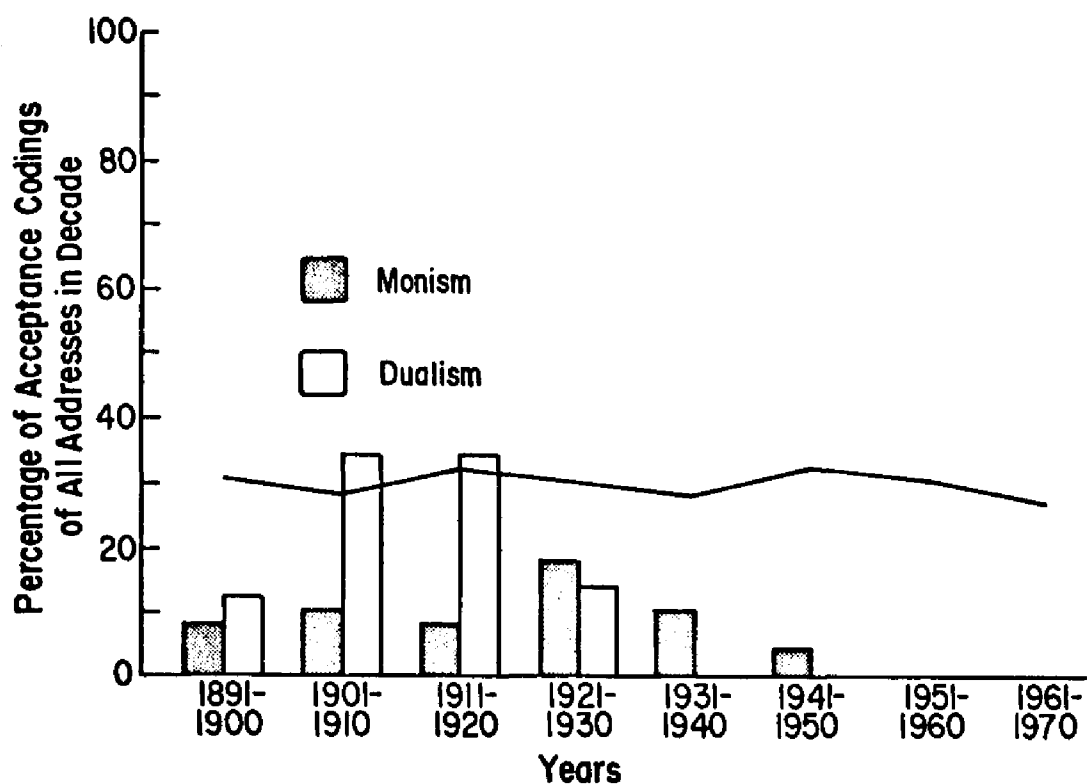
Fig. 17. Author's acceptance of Monism and Dualism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

> time-honored relics of philosophical speculation need trouble the student of behavior as little as they trouble the student of physics. The consideration of the mind-body problem affects neither the type of problem selected nor the formulation of the solution of that problem. I can state my position here no better than by saying that I should like to bring my students up in the same ignorance of such hypotheses as one finds among the students of other branches of science (1913, p. 166).

Naturalism - Supernaturalism

Figure 18 shows that Naturalism was strongly accepted in American psychology in the 1890's. Since that time Naturalism has been moderately widely accepted, except for the last decade when it was not accepted at all.

The findings shown in Figure 18 are difficult to interpret, since the naturalistic prescription is usually taken for granted in psychology, as it is in all sciences. The paradox is resolved when the results are interpreted (and this is the writer's personal conviction) as portraying a situation in which the naturalistic basis of American psychology is so deeply implicit that it provides only a little objective evidence of its existence. In the 1890's, American psychology was becoming established and psychologists were eager to assert that psychology was a natural science along with the other sciences. Since that time Naturalism has been mostly taken for granted, while Supernaturalism was never accepted at all in American psychology.
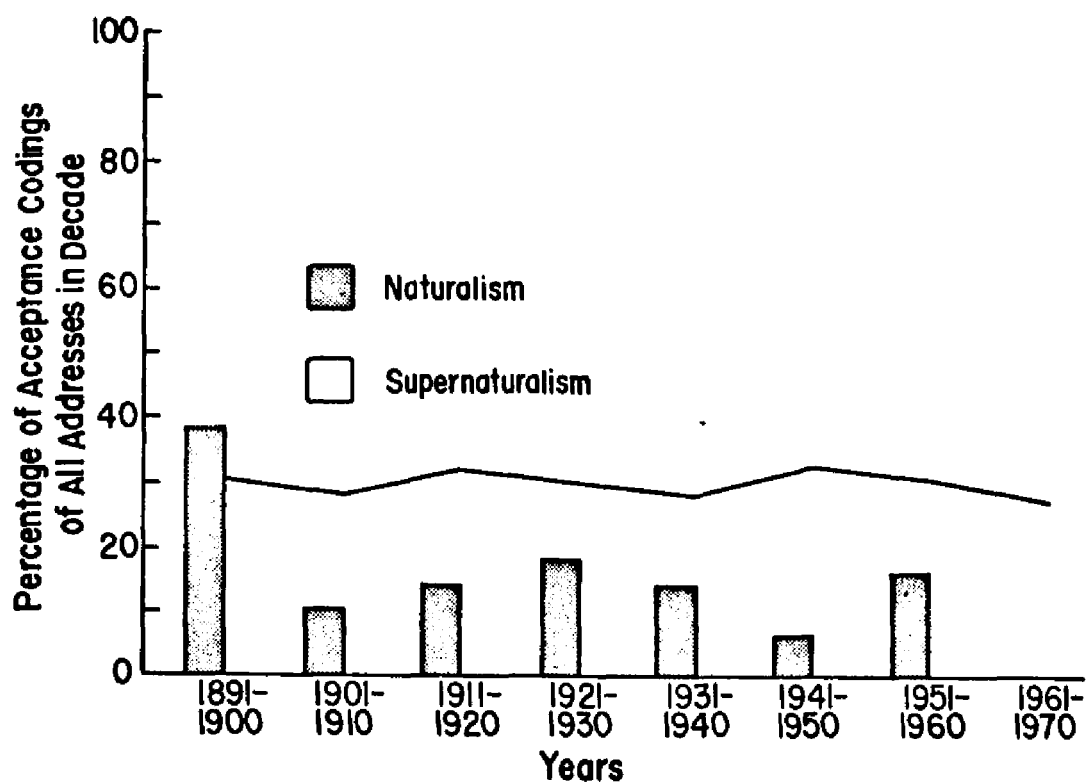
Fig. 18. Author's acceptance of Naturalism and Supernaturalism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

<u>Rationalism$_2$ - Irrationalism</u>

Neither Rationalism$_2$ nor Irrationalism has been widely accepted in American psychology, according to Figure 19. Rationalism$_2$ was moderately widely accepted during the beginning of psychology's history, when psychology was defined as the study of the conscious mind. In later decades Irrationalism became moderately accepted; this development was probably influenced by the integration of selected psychoanalytic ideas into the mainstream of American psychology. On the whole, Irrationalism has been more widely accepted in the history of psychology than Rationalism$_2$.

One of the APA presidents, Walter Dill Scott, described the historical decline in the acceptance of Rationalism$_2$ in his address, "Changes in Some of Our Conceptions and Practices of Personnel."

> A second change in our conception and practice of personnel administration is seen in the decreasing importance ascribed to <u>Reason</u> as a factor in determining human action. For many centuries man was defined as the reasoning animal. Aristotle's "Logic" was the standard textbook for all students desiring to learn the best method of influencing and controlling men. For persuasion the syllogism was believed to be the most perfect tool. Arguments to be effective must be analyzed and presented in a logical form. The hearer was supposed to criticize appeals by the most rigorous of logical standards.
>
> The change in this point of view has come about so gradually that we fail to appreciate its extent. At the hands of certain authors the importance of reason is minimized by an emphasis upon suggestion as descriptive of the process of influencing men. Others contrast reason and instinct, urging the
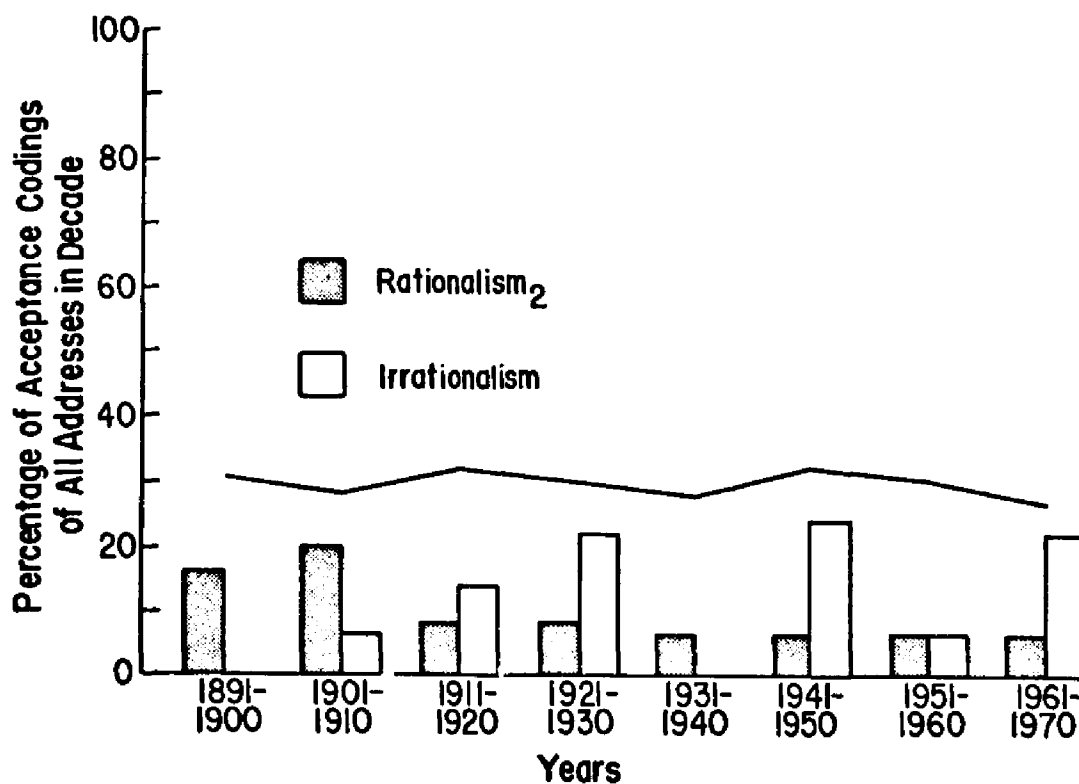
Fig. 19. Author's acceptance of Rationalism$_2$ and Irrationalism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

important part instincts play not only in the
behavior of young children but also in the more
important acts of adults.

Still other scientists stress the significance
of sentiments and emotions, of impulse and habit,
or of other forms of human response not reducible
to any standard type of reasoning. This change in
our concept of the importance of reasoning is ob-
servable in the writings of modern psychologists,
and is reflected also in the practices of the more
progressive leaders in personnel administration
(1920, pp. 85-86).

Staticism$_1$ - Developmentalism

Figure 20 shows that Staticism$_1$ has increased slightly

in acceptance over time. The status of Developmentalism has

followed an almost cyclical pattern over time: it was initially

widely accepted, decreased to moderate acceptance for several

decades, and then rose to wide acceptance again. The overall

pattern of these two prescriptions relative to each other,

is that Developmentalism has been dominant and Staticism$_1$

counter-dominant throughout the history of American psychology.

Staticism$_2$ - Dynamicism

Figure 21 shows that Staticism$_2$ has been consistently

weak as a prescription in American psychology. Dynamicism,

on the other hand, has increased in acceptance during the

first few decades of the century, a trend that may have been

enhanced by the advent of psychoanalysis, and then leveled

off at the status of "average" acceptance. The psychoanalytic

concept of defense mechanisms, which are dynamic in nature,
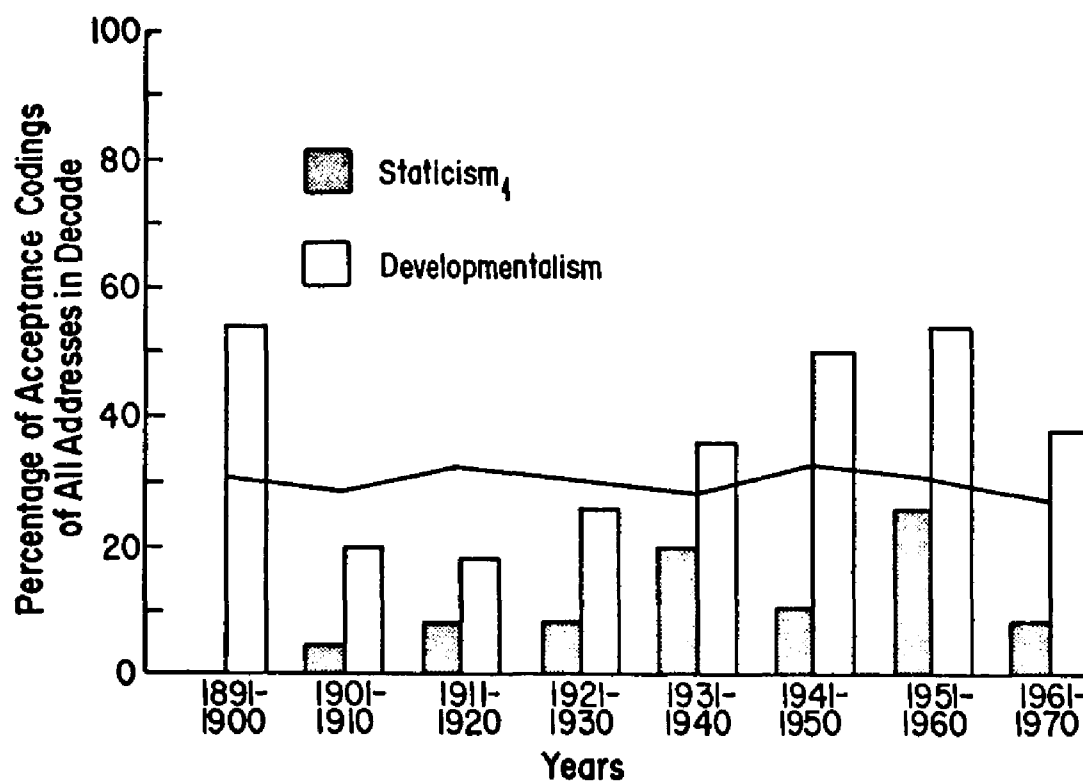
Fig. 20. Author's acceptance of Staticism[1] and Developmentalism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)
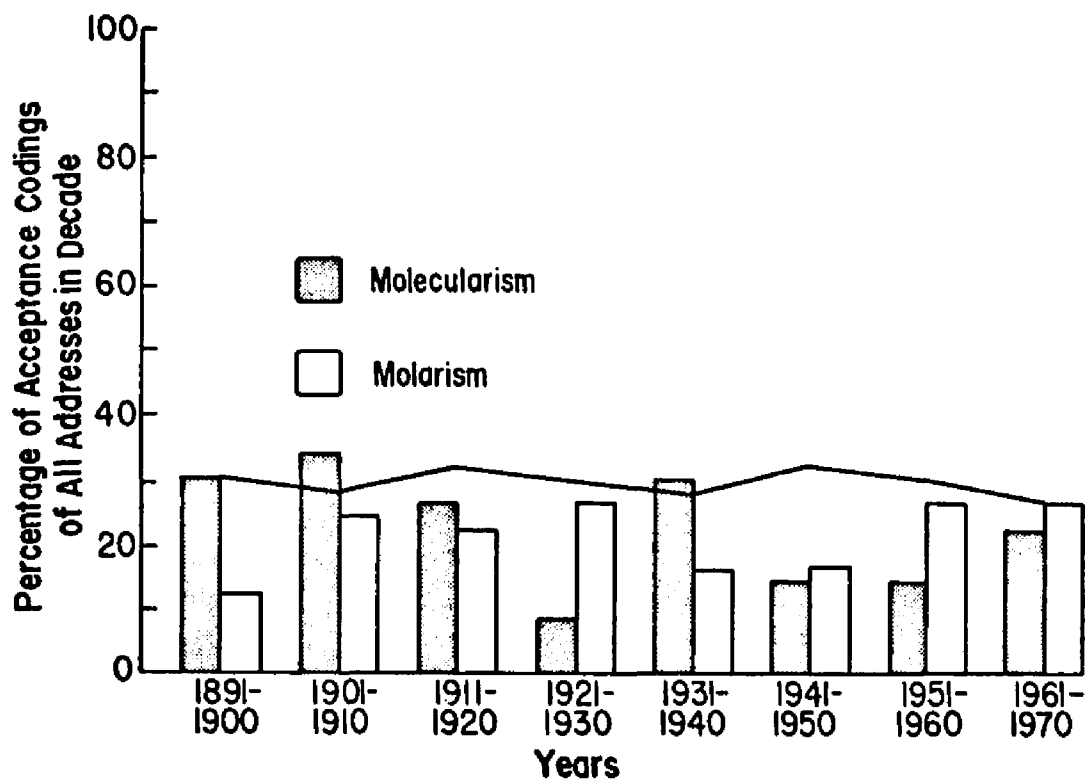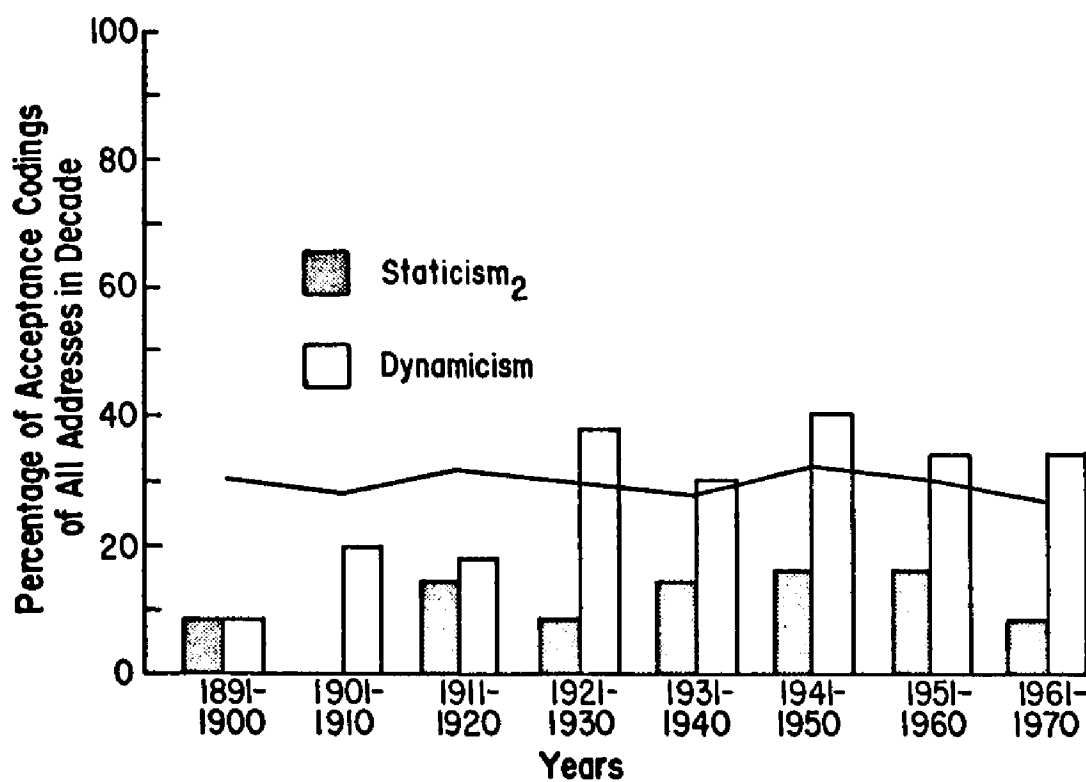
Fig. 21. Author's acceptance of Staticism$_2$ and Dynamicism in 75 APA presidential addresses coded by three judges. (The average acceptance of all 36 prescriptions is shown by the horizontal line.)

became part of American psychology. The importance of moti-
vation and the emphasis on change were also accepted in
American psychology. The relation between these two pre-
scriptions is one in which Dynamicism is consistently
dominant and Staticism$_2$ counter-dominant. There is no evidence
of a progression from Staticism$_2$ to Dynamicism, as Coan
(1968) found, but simply an early trend toward wider acceptance
of Dynamicism, followed by consistent "average" acceptance
during the last 50 years.

VI.   PRESCRIPTIONS IN CONTEMPORARY AMERICAN PSYCHOLOGY:

FINDINGS AND DISCUSSION

Having examined changes over time in the status of

contrasting prescriptions, this chapter considers the status

of prescriptions in contemporary American psychology.[5] Con-

temporary American psychology is operationally defined in

terms of the last two decades, 1951 to 1970. The data were

combined for this period, and consequently the interpretations

of the findings are restricted to this time span.

Prediction 14: The following prescriptions will be among

the most widely accepted prescriptions in contemporary

American psychology (1951-1970), irrespective of temporal

considerations: Conscious mentalism, Contentual objectivism,

Contentual subjectivism, Empiricism, Methodological objecti-

vism, Nomotheticism, Purism, Utilitarianism, and Quantita-

tivism. This prediction is based on the writer's background

reading and personal judgments.

The findings relevant to Prediction 14 are presented

in Table 3.

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[5]

    Prediction 13, which concerns the relative proportion of
explicitly and implicitly accepted prescriptions over time,
is examined in Appendix H.

Table 3

Ten Prescriptions with Highest Acceptance in 19 APA Presidential Addresses Representing Contemporary American Psychology (1951-1970) (Each number is the average of three judges. The mean for all prescriptions was 5.4 acceptance codings.)

Empiricism[a]	18.67
Methodological objectivism[a]	16.00
Purism[a]	13.67
Contentual objectivism[a]	12.33
Utilitarianism[a]	12.00
Quantitativism[a]	12.00
Nomotheticism[a]	10.00
Functionalism	9.33
Developmentalism	8.67
Contentual subjectivism[a]	8.33

[a] Predicted to be among the most widely accepted of the 36 prescriptions (N = 9).

The average number of acceptance codings across judges out of 19 addresses was 5.4. There was wide variation around the mean, as expected. Table 3 shows the ten most widely accepted prescriptions in contemporary American psychology, as represented by the last 19 APA presidential

addresses. Of the nine prescriptions predicted to be among the most widely accepted, eight were listed among the top ten in Table 3. Functionalism and Developmentalism were the unpredicted prescriptions occurring in this list, while Conscious mentalism, which was predicted, ranked nineteenth in acceptance.

While Table 3 shows the ranking of prescriptions in contemporary American psychology relative to all 36 pre-scriptions, Table 4 shows the relative acceptance of contrast-ing prescriptions by comparing their degree of acceptance. The magnitude of the difference between the two prescriptions is used as an operational definition of the dominance of one over the other.

Considering the findings in Table 4 individually, it is evident that Empiricism is the most widely accepted pre-scription in contemporary American psychology and that it incites no opposition from Rationalism$_1$. There is no question that Empiricism provides a major part of the philosophical foundation of contemporary American psychology, as it does for all sciences.

Methodological objectivism is very widely accepted, while Methodological subjectivism is counter-dominant. Methodological objectivism is most widely accepted in academic psychology. In the opinion of the writer, Methodological

Table 4

Prescriptions in 19 APA Presidential Addresses Representing Contemporary American Psychology (1951-1970) Arranged in Order of Dominance (Each number is the average of three judges. The mean for all prescriptions was 5.4 acceptance codings.)

More Widely Accepted Prescription	Less Widely Accepted Prescription	Difference
Empiricism (18.67)	Rationalism$_1$ (.33)	18.34
Methodological objectivism (16.00)	Methodological subjectivism (3.00)	13.00
Quantitativism (12.00)	Qualitativism (4.67)	7.33
Functionalism (9.33)	Structuralism (2.67)	6.66
Determinism (6.67)	Indeterminism (.33)	6.34
Developmentalism (8.67)	Staticism$_1$ (3.33)	5.34
Nomotheticism (10.00)	Idiographicism (4.67)	5.33
Contentual objectivism (12.33)	Contentual subjectivism (8.33)	4.00
Dynamicism (6.33)	Staticism$_2$ (2.33)	4.00
Centralism (4.00)	Peripheralism (2.00)	2.00
Molarism (5.00)	Molecularism (3.33)	1.67
Naturalism (1.67)	Supernaturalism (0)	1.67
Purism (13.67)	Utilitarianism (12.00)	1.67
Irrationalism (2.67)	Rationalism$_2$(1.00)	1.67
Mechanism (1.67)	Vitalism (.67)	1.00
Conscious mentalism (3.33)	Unconscious mentalism (2.67)	.66
Deductivism (5.67)	Inductivism (5.33)	.34
Monism (0)	Dualism (0)	0

subjectivism can be seen in contemporary American psychology in the various forms of psychotherapy (including the technique of free association), in the use of phenomenological methods, and in the recent popularity of T-groups in their various forms.

Quantitativism is dominant, but it does stand in significant contrast to Qualitativism. Commenting on the relationship between these two prescriptions, Watson (1965) wrote:

> Desire to follow a quantitative prescription in research is very evident. The urge toward quantification . . . is drilled into all American psychologists. Speculation, no matter how brilliant, is apt to be considered worthwhile only if it be a prelude to a form in which it can be restated so as to be measured. Speculation leads to quantitative hypothesis formation formulation and is not an end in itself (1965, p. 135).

Functionalism is dominant; Structuralism counter-dominant. Functionalism is expressed in contemporary American psychology in "the stress on 'activities' as utilities, in the acceptance and advancement of the applications of psychology, and in the utilization of the contingent meaning of function in research planning and interpretation" (Watson, 1965, p. 134).

Determinism incites no opposition from Indeterminism. This finding agrees with that of Watson (1965).

Developmentalism is dominant; Staticism$_1$ counter-

dominant. The acceptance of the developmental prescription may be underestimated in contemporary American psychology.

Nomotheticism is dominant; Idiographicism counter-dominant. This relationship was not unrecognized. For example, Watson wrote: "The search for general laws, even if expressed within the modest limits of miniature theories, clearly marks American psychology as primarily nomothetic in character. There are, of course, staunch defenders of the idiographic, for example in Gordon W. Allport and many clinical psychologists" (1965, p. 136).

Contentual objectivism is dominant; Contentual subjectivism counter-dominant. This relationship was predicted by the writer in Prediction 6. The findings show that the primary data of psychology are behavioral, and that subjective experience is secondary.

Dynamicism is dominant; Staticism$_2$ counter-dominant. American psychologists place more emphasis on change than they do on enduring aspects of psychology's subject matter.

The relationship between Molarism and Molecularism shows a lack of dominance, since the two prescriptions are about equally widely accepted.

Naturalism is too deeply implicit to provide objective evidence of its true degree of acceptance, in the judgment of the writer. It has no opposition from Supernaturalism. The

unopposed status of Naturalism was also pointed out by

Watson (1965).

Purism and Utilitarianism are about equally widely

accepted in contemporary American psychology.

The findings show that Deductivism and Inductivism

are also about equally widely accepted in contemporary Ameri-

can psychology.

Neither Monism nor Dualism is accepted at all in

contemporary American psychology.

In sum, it is apparent that certain prescriptions in

contemporary American psychology are so dominant that they

have no counter-dominant prescription. These are Empiricism,

Determinism, and Naturalism. Other prescriptions in con-

temporary American psychology are dominant but do have

counter-dominant prescriptions. Methodological objectivism

is dominant and Methodological subjectivism counter-dominant;

Quantitativism is dominant, and Qualitativism counter-dominant;

Functionalism is dominant, and Structuralism counter-dominant;

Developmentalism is dominant, and Staticism$_1$ counter-dominant;

Nomotheticism is dominant, and Idiographicism counter-dominant;

Contentual objectivism is dominant, and Contentual sub-

jectivism counter-dominant; and Dynamicism is dominant, and

Staticism$_2$ counter-dominant. Still other prescriptions mani-

fest no dominance, since the members of the pair are about

equally widely accepted. These are Deductivism-Inductivism,

Purism-Utilitarianism, and Molarism-Molecularism.

VII. SUMMARY AND CONCLUSIONS

This investigation is offered as a contribution to the study of historical change in American psychology. It makes use of a previously untapped source of scientific literature, the speeches given by the presidents of the American Psychological Association since its founding in 1892, as the basis for a systematic historical analysis taking Watson's (1967, 1971) prescriptive approach. The 75 APA presidential addresses were selected for analysis because (1) they express the thinking of very eminent psychologists, (2) they are likely to be sensitive to current issues and developments in the discipline, and explicit about the author's preferences and biases, and (3) they provide temporal continuity from 1892, thus making it possible to investigate trends in the history of American psychology. Watson's approach to the history of psychology is based upon a theoretical framework consisting of certain conceptions which are particularly significant in terms of their role in the history of psychology, called prescriptions. Prescriptions are characterized by the orientative function they serve for psychologists and by the fact that they can be traced over an appreciable period of time, thus forming trends. Watson's prescriptions have been demonstrated to be important

in the history of psychology, and consequently the list of prescriptions was adopted as the conceptual framework for this study. On the basis of the three reasons mentioned above, it was assumed that the APA presidential addresses constitute a body of scientific literature which reflects the prescriptions in American psychology. The ultimate goals of the study were to trace the status of the prescriptive conceptions in the development of American psychology, and to assess their status in contemporary American psychology. The specific objective was to compare the status of each prescription with all others and with an individual contrasting prescription, and by so doing to derive an empirically-based characterization of American psychology, both historical and contemporary.

It was assumed that the relative status of prescriptions in American psychology could best be ascertained by using some form of systematic quantitative analysis, and the method adopted was that of content analysis. Three judges, including the author, each coded each of the 75 APA presidential addresses in terms of Watson's 36 prescriptive concepts. The results of this coding process were systematically recorded on a formal coding form. The concepts and rules governing the coding process were made explicit in the Coding Manual, which was followed by all three judges. The

initial task of the judge was to determine, for a given

address, whether each of the 36 prescriptions was Present

or Absent. Prescriptions which were judged to be Present

were considered further in terms of the author's position:

Acceptance, Neutral, or Rejection. The Acceptance codings,

which constituted 78.3% of the total Present codings, were

then used as the basis for tracing the changes in the status

of contrasting prescriptions over time. Eighteen graphs,

each one portraying the status of two contrasting prescriptions

by decades, were used to present the major portion of the

findings.

Before presenting the findings with respect to the

status of prescriptions in American psychology, some findings

were presented which concerned the nature and scope of the

APA presidential addresses. It was found that two major

transitions have occurred in the tradition of APA presidential

addresses. The first was a transition from broad addresses

which encompass psychology as a whole, or treat a problem

which transcends specific areas and is significant for

psychology as a whole, to narrow addresses which are limited

to a specialized area or problem within psychology. The

transition occurred shortly after the first decade of the

twentieth century. Before that time the presidents thought

in broad terms and frequently discussed the philosophical

foundations of psychology or psychology's relation to other sciences, while after that time the addresses were more limited in scope. The second transition which occurred in the APA tradition was less pronounced than the first and occurred later. It was the trend away from addresses which were expository in nature toward more formal research presentations. This trend showed its greatest shift in the 1930's and 1940's, and has progressed to the point where almost 40% of the addresses since 1931 have been research-oriented. Considering these two trends together, it was concluded that the tradition of APA presidential addresses has been characterized by a progression from broad expositions about psychology to narrow research investigations within psychology.

It was also found that expository and research addresses express about the same number of prescriptions, although the proportion of implicitly expressed prescriptions is significantly larger in the research addresses than in the expository addresses.

The major portion of the findings concerned the status of the prescriptions in American psychology. It was found that American psychology, viewed in historical perspective, may be characterized by certain accelerated prescriptive trends. These are: Methodological objectivism (use of methods open to verification by another competent

observer), Contentual objectivism (psychological data viewed as behavior of individual), Quantitativism (stress upon knowledge which is countable or measurable), Nomotheticism (emphasis upon discovering general laws), Developmentalism (emphasis upon changes with time), and Utilitarianism (seeking of knowledge for its usefulness in other activities).

American psychology, viewed in historical perspective, shows certain prescriptive trends which show a decrease over time. These are: Conscious mentalism (emphasis on awareness of mental structure or activity), Contentual subjectivism (psychological data viewed as mental structure or activity of individual), Structuralism (psychological categories are contents), Centralism (stress upon psychological events taking place within the body), and Methodological subjectivism (use of methods not so open to verification by another competent observer).

Some prescriptions in the development of American psychology exhibit a pattern of rise and fall, with their strongest acceptance occurring at different times. Dualism (fundamental principle or entity in universe is of two kinds, mind and matter) was most widely accepted in the first two decades of the twentieth century, and then almost completely disappeared. Unconscious mentalism (emphasis on unawareness of mental structure or activity) rose to its widest acceptance

in the 1920's and declined after that. Peripheralism (stress upon psychological events taking place at periphery of body) rose to its widest acceptance in the 1930's and then declined, while Mechanism (activities of living beings completely explicable by physiochemical constituents) was most widely accepted in the second, third, and fourth decades and declined thereafter. Dynamicism, on the other hand, increased in acceptance up through the 1920's, and then leveled off at a consistent degree of acceptance.

In addition, a relatively consistent pattern of acceptance in the development of American psychology was revealed by other prescriptions, including Empiricism (major, if not exclusive source of knowledge is experience), Purism (seeking of knowledge for its own sake), Functionalism (psychological categories are activities), Qualitativism (stress upon that which is different in kind or essence), and Molarism (psychological data most aptly described in terms of relatively large units). The specific pattern of each prescription was discussed within the context of the development of American psychology.

In terms of contemporary American psychology, it was found that certain prescriptions are so dominant that they have no counter-dominant prescription. These are Empiricism, Determinism (human events completely explicable in terms of

antecedents), and Naturalism (nature requires for its

operation and explanation only principles found within it).

Other prescriptions in contemporary American psychology are

dominant but do have counter-dominant prescriptions: Methodo-

logical objectivism is dominant, and Methodological sub-

jectivism counter-dominant; Quantitativism is dominant, and

Qualitativism counter-dominant; Functionalism is dominant,

and Structuralism counter-dominant; Developmentalism is

dominant, and Staticism$_1$ (emphasis upon cross-sectional view)

counter-dominant; Nomotheticism is dominant, and Idiographi-

cism (emphasis upon explaining particular events or individuals)

counter-dominant; Contentual objectivism is dominant, and

Contentual subjectivism counter-dominant; and Dynamicism is

dominant, and Staticism$_2$ (emphasis upon enduring aspects)

counter-dominant. Still other prescriptions manifest no

dominance, since the members of the pair are about equally

widely accepted. These are Deductivism-Inductivism (investi-

gations begun with assumed established truths--with facts

or observations), Purism-Utilitarianism, and Molarism-

Molecularism (psychological data most aptly described in terms

of relatively large units--relatively small units).

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APPENDIX A

Notes on the American Psychological Association

The American Psychological Association was founded on July 8, 1892, at Clark University in Worcester, Massachusetts, on invitation of G. Stanley Hall, president of the university. This meeting, which Hall reports took place in his study (Hall, 1923), was the preliminary or organizational meeting. Later in the same year, on December 27, the first annual meeting was held at the University of Pennsylvania.

Although the published reports of the preliminary meeting state that seven psychologists attended (Anon., 1892; Anon., 1894), the validity of these reports has been questioned. A recent study addressed to the question of who attended the preliminary meeting (Dennis & Boring, 1952) concluded that of the 26 charter members, only 10-18 were actually present. Probably it will never be known for sure exactly who attended the organizational meeting. It is known, however, that Hall was elected president, that the scientific character of the organization was firmly established, that five new members were elected in addition to the 26 charter members, and that of these 31 persons, 18 attended the first annual meeting at the University of Pennsylvania on December 27, 1892.

The membership of the APA has grown phenomenally since 1892. From 31 in 1892, to over 3,000 fifty years later, in 1942, to over 31,000 today. At this rate, one might estimate its membership to be over 200,000 by psychology's centennial in 1992. According to E. G. Boring, if the APA continues to grow at its present rate, by sometime in the twenty-second century there should be more psychologists than people in the world!

The APA was founded in 1892 to advance psychology as a science. However, there has been a growing trend over the years toward professionalization. In the 1930's, three applied psychological organizations were formed: the Psycho-metric Society (1938), the Society for the Psychological Study of Social Issues (SPSSI, 1936), and the American Association for Applied Psychology (AAAP, 1937). In 1945, the AAAP was incorporated into the APA, so that scientific and professional interests were united in a single national organization. The purpose of the reorganized APA became: to advance psychology as a science, a profession, and a means of promoting human welfare. The American Psychologist was established in 1946 and became the publication outlet of the Association. Today the purpose of the Association reads: "to advance psychology as a science, and as a means of promoting human welfare by the encouragement of psychology in all its branches

in the broadest and most liberal manner" (APA, 1970).

Throughout its history the effort has been to keep the

science and profession of psychology together.

APPENDIX B

Title of the Presidential Addresses of the American Psychological Association, 1892-1970

Year	President	Title of Address	Place of Publication [1]
1892	G. S. Hall	History and Prospects of Experimental Psychology in America	(Not published)
1893	G. T. Ladd	The Problems of Psychology	PR, 1894, 1, 1-21
1894	W. James	The Knowing of Things Together	PR, 1895, 2, 105-124
1895	J. McK. Cattell	Psychology and the Other Sciences	PR, 1896, 3, 134-148
1896	G. S. Fullterton	The "Knower" in Psychology	PR, 1897, 4, 1-26
1897	J. M. Baldwin	On Selective Thinking	PR, 1898, 5, 1-24
1898	H. Münsterberg	Psychology and History	PR, 1899, 6, 1-31
1899	J. Dewey	Psychology and Social Practice	PR, 1900, 7, 105-124 (also: S, 1900, 11, 321-332)

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[1] The following code has been used to save space: PR = Psychological Review; S = Science; PB = Psychological Bulletin; AP = American Psychologist.

1900	J. Jastrow	Some Currents and Undercurrents in Psychology	PR, 1891, 8, 1-26
1901	J. Royce	Recent Logical Inquiries and Their Psychological Bearings	PR, 1902, 9, 105-133
1902	E. C. Sanford	Psychology and Physics	PR, 1903, 10, 105-119
1903	W. L. Bryan	Theory and Practice	PR, 1904, 11, 71-82
1904	W. James	The Experience of Activity	PR, 1905, 12, 1-17
1905	M. W. Calkins	A Reconciliation of Structural and Functional Psychology	PR, 1906, 13, 61-80
1906	J. R. Angell	The Province of Functional Psychology	PR, 1907, 14, 61-91
1907	H. R. Marshall	The Methods of the Naturalist and Psychologist	PR, 1908, 15, 1-24
1908	G. M. Stratton	Toward the Correction of Some Rival Methods in Psychology	PR, 1909, 16, 67-84

1909	C. H. Judd	Evolution and Consciousness	PR, 1910, 17, 77-97
1910	W. B. Pillsbury	The Place of Movement in Consciousness	PR, 1911, 18, 83-99
1911	C. E. Seashore	The Measurement of a Singer	S, 1912, 35, 201-212
1912	E. L. Thorndike	Ideo-motor Action	PR, 1913, 20, 91-106
1913	H. C. Warren	The Mental and the Physical	PR, 1914, 21, 79-100
1914	R. S. Woodworth	A Revision of Imageless Thought	PR, 1915, 22, 1-27
1915	J. B. Watson	The Place of the Conditioned Reflex in Psychology	PR, 1916, 23, 89-117
1916	R. Dodge	The Laws of Relative Fatigue	PR, 1917, 24, 89-113
1917	R. M. Yerkes	Psychology in Relation to the War	PR, 1918, 25, 85-115
1918	J. W. Baird	(No address)	
1919	W. D. Scott	Changes in Some of Our Conceptions and Practices of Personnel	PR, 1920, 27, 81-94
1920	S. I. Franz	Cerebral-mental Relations	PR, 1921, 28, 81-95
1921	M. F. Washburn	Introspection as an Objective Method	PR, 1922, 29, 89-112

1922	K. Dunlap	The Foundations of Social Psychology	PR, 1923, 30, 81-102
1923	L. M. Terman	The Mental Test as a Psychological Method	PR, 1924, 31, 93-117
1924	G. S. Hall	(No address)	
1925	M. Bentley	The Major Categories of Psychology	PR, 1926, 33, 71-105
1926	H. A. Carr	The Interpretation of the Animal Mind	PR, 1927, 34, 87-106
1927	H. L. Hollingworth	Sensuous Determinants of Psychological Attitudes	PR, 1928, 35, 93-117
1928	E. G. Boring	The Psychology of Controversy	PR, 1929, 36, 97-121
1929	K. S. Lashley	Basic Neural Mechanisms in Behavior	PR, 1930, 37, 1-24
1930	H. S. Langfeld	A Response Interpretation of Consciousness	PR, 1931, 38, 87-108
1931	W. S. Hunter	The Psychological Study of Behavior	PR, 1932, 39, 1-24
1932	W. R. Miles	Age and Human Ability	PR, 1933, 40, 99-123
1933	L. L. Thurstone	The Vectors of Mind	PR, 1934, 41, 1-32

1934	J. Peterson	Aspects of Learning	PR, 1935, 42, 1-27
1935	A. T. Poffenberger	Psychology and Life	PR, 1936, 43, 9-31
1936	C. L. Hull	Mind, Mechanism, and Adaptive Behavior	PR, 1937, 44, 1-32
1937	E. C. Tolman	The Determiners of Behavior at a Choice Point	PR, 1938, 45, 1-41
1938	J. F. Dashiell	Some Rapprochements in Contemporary Psychology	PB, 1939, 36, 1-24
1939	G. W. Allport	The Psychologist's Frame of Reference	PB, 1940, 37, 1-28
1940	L. Carmichael	The Experimental Embryology of Mind	PB, 1941, 38, 1-28
1941	H. Woodrow	The Problem of General Quantitative Laws in Psychology	PB, 1942, 39, 1-27
1942	C. P. Stone	Multiply, Vary, Let the Strongest Live and the Weakest Die - Charles Darwin	PB, 1943, 40-1-24
1943	J. E. Anderson	Freedom and Constraint or Potentiality and Environment	PB, 1944, 41, 1-29

1944	G. Murphy	The Freeing of Intelligence	PB, 1945, 42, 1-19
1945	E. R. Guthrie	Psychological Facts and Psychological Theory	PB, 1946, 43, 1-20
1946	H. E. Garrett	A Developmental Theory of Intelligence	AP, 1946, 1, 372-378
1947	C. R. Rogers	Some Observations on the Organization of Personality	AP, 1947, 2, 358-368
1948	D. G. Marquis	Research Planning at the Frontiers of Science	AP, 1948, 3, 430-438
1949	E. R. Hilgard	Human Motives and the Concept of Self	AP, 1949, 4, 374-382
1950	J. P. Guilford	Creativity	AP, 1950, 5, 444-454
1951	R. R. Sears	A Theoretical Framework for Personality and Social Behavior	AP, 1951, 6, 476-483
1952	J. McV. Hunt	Psychological Services in the Tactics of Psychological Science	AP, 1952, 7, 608-622
1953	L. F. Shaffer	Of Whose Reality I Cannot Doubt	AP, 1953, 8, 608-623

1954	O. H. Mowrer	The Psychologist Looks at Language	AP, 1954, 9, 660-694
1955	E. L. Kelly	Consistency of the Adult Personality	AP, 1955, 10, 659-681
1956	T. M. Newcomb	The Prediction of Interpersonal Attraction	AP, 1956, 11, 575-586
1957	L. J. Cronbach	The Two Disciplines of Scientific Psychology	AP, 1957, 12, 671-684
1958	H. F. Harlow	The Nature of Love	AP, 1958, 13, 673-685
1959	W. Köhler	Gestalt Psychology Today	AP, 1959, 14, 727-734
1960	D. O. Hebb	The American Revolution	AP, 1960, 15, 735-745
1961	N. E. Miller	Analytical Studies of Drive and Reward	AP, 1961, 16, 739-754
1962	P. E. Meehl	Schizotaxia, Schizotypy, Schizophrenia	AP, 1962, 17, 827-838
1963	C. E. Osgood	On Understanding and Creating Sentences	AP, 1963, 18, 735-751
1964	Q. McNemar	Lost: Our Intelligence? Why?	AP, 1964, 19, 871-882
1965	J. E. Bruner	The Growth of Mind	AP, 1965, 20, 1007-1017
1966	N. Hobbs	Helping Disturbed Children: Psychological and Ecological Strategies	AP, 1966, 21, 1105-1115

1967	G. Lindzey	Some Remarks Concerning Incest, the	
		Incest Taboo, and Psychoanalytic	
		Theory	AP, 1967, 22, 1051-1059
1968	A. H. Maslow	(No address)	
1969	G. A. Miller	Psychology as a Means of Promoting	
		Human Welfare	AP, 1969, 24, 1063-1075
1970	G. W. Albee	The Uncertain Future of Clinical	
		Psychology	AP, 1970, 25, 1071-1080

APPENDIX C

Eminence of the APA Presidents

Election to the office of president of the APA is an

honor received by relatively few psychologists, yet even here

one would expect to find individual differences in eminence.

A recent study of "Important Psychologists, 1600-1967" (Annin,

Boring, & Watson, 1968) makes it possible to assess the rela-

tive eminence of 45 of the past 78 APA presidents, both

individually and collectively.

Essentially, the method used in the Annin et al. study

was to prepare a list of 1,040 deceased persons contributing

to psychology from 1600 to 1967, each of which was then rated

on a scale from 1 to 3 by an international panel of nine judges.

A judge was instructed to give the person a score of 1 if he

recognized the name in the history of psychology, even if he

could not specify the person's contribution; a score of 2 if

he could identify the person's contribution to psychology,

even if not very precisely; and 3 if he considered the person

of such distinction that his name should be included in a

list of the 500 most important psychologists since 1600 and

not living. Thus, the highest possibly score was 27. In the

present comment, each score was treated as a separate category

of eminence and called an "eminence score." Since the goal

of the Annin et al. study was to report on approximately

500 of the most important deceased contributors to psychology

since 1600, the 1,040 names had to be reduced by about one-

half. A decision to include persons scoring 11 or above

yielded 538 names. A list of these 538 persons was published

(Annin et al., 1968), while a list of those receiving scores

of 10 or below was deposited with the American Documentation

Institute. The published list was arranged by score and again

alphabetically with dates of birth and death. The dates of

birth and death were checked again in a follow-up study

(Merrifield & Watson, 1970), and another study was made to

ascertain the particular profession, nationality, and temporal

period of the 538 persons (Watson & Merrifield, in press).

This latter study showed that about one-half of the 538

most important contributors to psychology were psychologists

per se, while the others were primarily identified with

other fields. The ultimate goal of these studies was to pro-

vide the basis for a forthcoming bibliography which will

contain about 50,000 primary and secondary references relevant

to these important contributors to psychology (Watson, in

preparation).

Forty-seven APA presidents were among the deceased

important contributors to psychology evaluated in the Annin

et al. panel study (see Table 5).

Table 5 contains mostly familiar names and shows a preponderance of high eminence scores. However, it also contains a few relatively unknown psychologists, at least to the nine present-day judges in the Annin et al. study. The lowest scores were 9, received by Joseph Peterson; 10, received by Henry R. Marshall; and 11, received by Walter D. Scott. The presence of these low scorers suggests that there may sometimes be grounds other than scientific eminence for the selection of a psychologist to be president of the APA. This inference agrees with one made previously based on the last 20 APA presidents as part of a study in which scientific eminence was related to journal citations (Myers, 1970).

Of the 47 APA presidents in Table 5, 45 were included among the published list of 538 most important contributors to psychology. How distinguished are these APA presidents as a group compared with their peers? Perhaps the most appropriate comparison is with those contributors to psychology who were later classified as "American psychologists" by Watson and Merrifield (in press), rather than with the whole heterogeneous group of contributors. The most important American psychologists (N = 129) and the subgroup of APA presidents (n = 45) are alike on the variables of nationality and profession (except for three presidents classified as "American philosophers" --

Dewey, James, Royce) but differ in degree of eminence: (a) On the scale from 11 to 27, the mean of the eminence scores of American psychologists was 18.50 (Mdn = 19), while the mean of the APA presidents was 23.16 (Mdn = 24). (b) While 13.18% of the American psychologists scored in the highest category of eminence (indicating perfect agreement among the nine judges), 37.78% of the APA presidents scored in this category. These comparisons testify to the eminence of the APA presidents as operationally defined with reference to the Annin et al. study and the Watson and Merrifield study.

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University of New Hampshire

Table 5

Forty-Seven Deceased Presidents of the APA Arranged by Score

for Importance to Psychology

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President	Eminence score	Year(s) of presidency
Gordon W. Allport	27	1939
James R. Angell	27	1906
John Dewey	27	1899
G. Stanley Hall	27	1892, 1924
Clark L. Hull	27	1936
William James	27	1894, 1904
Wolfgang Köhler	27	1959
Karl S. Lashley	27	1929
Lewis M. Terman	27	1923
Edward L. Thorndike	27	1912
Louis L. Thurstone	27	1933
Edward C. Tolman	27	1937
John B. Watson	27	1915
Robert S. Woodworth	27	1914
Robert M. Yerkes	27	1917

James McK. Cattell	26	1895
Edwin R. Guthrie	26	1945
James M. Baldwin	25	1897
Walter S. Hunter	25	1931
George T. Ladd	24	1893
Hugo Münsterberg	24	1898
Carl E. Seashore	24	1911
Harvey A. Carr	23	1926
Howard C. Warren	23	1913
Margaret F. Washburn	23	1921
Knight Dunlap	22	1922
Joseph Jastrow	22	1900
Chalres H. Judd	22	1909
George M. Stratton	22	1908
Madison Bentley	21	1925
Walter B. Pillsbury	21	1910
Mary W. Calkins	20	1905
Raymond Dodge	20	1916
Shepherd I. Franz	20	1920
Harry L. Hollingworth	20	1927
Herbert S. Langfeld	20	1930

Edmund C. Sanford	20	1902
John W. Baird	17	1918
William L. Bryan	16	1903
Josiah Royce	16	1901
Calvin P. Stone	16	1942
George S. Fullerton	14	1896
Walter D. Scott	11	1919
Henry R. Marshall[a]	10	1907
Joseph Peterson[a]	9	1934

Note. -- As judged by an international panel of nine psychologists. Score from Annin et al. (1968).

[a]Not among the 538 most important psychologists whose names were published in the Annin et al. (1968) study. Their names were on a list of the remaining psychologists which was deposited with the American Documentation Institute.

APPENDIX D

CODING MANUAL

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The Conceptual Bases of American Psychology:

A Content Analysis of the Presidential Addresses of the

American Psychological Association

Department of Psychology

October 1971

Contents

I. Introduction

In the broadest sense, this study is addressed to the question, How has the conception of American psychology changed since the 19th century and what is its present status as a science? Until recently, textbooks on the history of psychology have often followed one of two theories of historical change: either the Great Man theory, which attributes the dynamics of history to the genius of great men, or the Zeitgeist theory, which attributes the dynamics of history to social forces, the "spirit of the times." Stimulated by the work of Kuhn in the history of the physical sciences, Watson has recently proposed a third alternative, known as prescriptive theory (1967). The present study focuses on a portion of American psychology of special significance, the presidential addresses of the American Psychological Association (APA), within the framework of this third alternative, using the method of content analysis. The immediate purpose of the study is to analyze the contents of the presidential addresses as official documents prepared by eminent psychologists who often look at their primary task as the presentation of a formal statement of their scientific and professional credo. In the broader sense, it is assumed that the addresses constitute a rich source of information about the historical changes that have taken place in American psychology. The essence of the study is to determine the growth and contemporary status of the views of American psychologists in as scientific a fashion as possible.

Taking his point of departure from Kuhn's recent analysis of the development of scientific revolutions (1962), Watson has argued that psychology is still at a relatively early stage of scientific development (1967). Unlike the older, more mature sciences—which have reached the level of guidance by what Kuhn calls a "paradigm"—psychology does not seem to have a single, unifying contentual model which defines the field and which is accepted by all psychologists. Persistent disagreement over

fundamental issues such as subject matter and methodology, the fact that schools of psychology still have their adherents, and the presence of national differences in psychology—these facts suggest that psychology is still at the pre-paradigmatic stage of a science.

Psychologists are not neutral toward either the subject matter of the methods of their science. They have definite preferences or cognitive biases. They rely on habits of thought which are partly a matter of temperament and partly due to the influence of their teachers, their reading, and the ethos of the school which they attended. These habits of thought guide their psychological activities. The habits which can be traced historically over an appreciable period of time, thus forming trends or themes, are what Watson calls prescriptions. Examples of prescriptions are the emphasis upon discovering general laws (Nomotheticism), the stress upon psychological events taking place at the periphery of the body (Peripheralism), and the stress upon knowledge which is countable or measurable (Quantitativism). Prescriptions may be defined as attitudinal perspectives, basic orientative assumptions, or modes of conceptualiza- tion, and they play an important role in enabling the psychologist to deal with the problems of subject matter and methodology.

In this content analysis, prescriptions will be used in one of the ways they function, that is, as contrasting pairs. For example, the emphasis upon discovering general laws (Nomotheticism) contrasts with the emphasis upon explaining particular events or individuals (Idiographicism), the stress upon psychological events taking place at the periphery of the body (Peripheralism) contrasts with the stress upon psychological events taking place within the body (Centralism), and the stress upon knowledge which is countable or measurable (Quantitativism) contrasts with the stress on that which is different in kind or essence (Qualitativism). There are

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18 pairs of prescriptions. This study may be thought of as an attempt to quantify the prescriptions which have been expressed in the presidential addresses of the APA.

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II. The Coding System

In this content analysis, the process of coding an address with re-spect to a prescription is a two-fold task. First, the judge must deter-mine whether the author of the address expresses the prescription in question. This will take practice because a prescription is not a unit of communication for which physical guides exist. Second, if the author does not express the prescription, it is left blank on the Coding Form; but if he does express the prescription, the judge must determine his position or attitude toward it. The judge indicates which of three possi-ble categories (existing along a single dimension) best describes the author's position. These categories are:

Acceptance	Neutral	Rejection
1	0	-1

The specific meaning of these three categories, which together con-stitute the coding system, is as follows.

(1) __Acceptance__ - The prescription is supported, advocated, or other-wise accepted by the author.

(2) __Rejection__ - The prescription is disapproved, repudiated, or otherwise rejected by the author.

(3) __Neutral__ - The prescription is mentioned, but the author does not take a position or reveal an attitude of acceptance or rejection. This does not mean that the author has no position, but rather that the pres-cription, __as expressed,__ is not accepted or rejected. If the author neither accepts nor rejects the prescription, then it is neutral in status with respect to that particular manifestation.

In order to aid the judge in his two-fold coding task, the next section provides a dictionary of prescriptions with corresponding coded examples of prescriptions. The value of the content analysis rests on the extent to which the judges rely on this dictionary as the basis for coding. The dictionary and examples of the prescriptions constitute the essence of this Coding Manual.

The format of the dictionary is as follows. Each prescription is followed by Watson's definition in quotations (1967). In most cases the meaning is amplified, either by myself or by relevant definitions taken from Warren, Dictionary of Psychology (1934) or English and English, A Comprehensive Dictionary of Psychological and Psychoanalytic Terms (1958). Sometimes several variations of a prescription are given, or different shades of meaning are accentuated. An attempt has been made to relate the concept to contemporary psychology whenever possible by mentioning areas where it may be found.

Following the definition of each pair of contrasting prescriptions there are some examples of those prescriptions. Quoted passages which include the contrasting prescriptions together come before quotations which include only one prescription. Examples of single prescriptions are then arranged by the author's position in the order of Acceptance, Neutral, Rejection. The passages, and the examples of prescriptions found in each passage, are numbered consecutively. There are 145 examples of prescriptions, or an average of about eight examples per pair of contrasting prescriptions.

Following each sample passage are some comments relevant to the prescription(s) expressed and the author's position (except in cases where I felt the coding was self-evident). These are intented to clarify the basis of the preferred coding, which takes the form: Prescription—Author's position.

Some quoted statements or passages are clear-cut and easily coded.
Others are extremely equivocal. Most fall between these two extremes.
It is hoped that by standardizing the coding procedure as much as possible
that high reliability between judges may be obtained.

A problem exists in coding the sample passages which will probably not
be as great during the coding of the actual articles. It is the problem
of context. The sample passages are frequently taken out of context, and
this makes it especially difficult to determine the author's position. Is
he making an argument and therefore commited to the prescriptions he ex-
presses (which should elicit the Acceptance category), or is he simply
describing the subject matter and trying to be objective (which should
elicit the Neutral category)? Questions such as this make for equivocal
codings. As noted before, however, this problem should not be as great
when the judge is coding articles instead of isolated passages.

Unavoidably, the prescription which is being illustrated is sometimes
accompanied by other prescriptions; these additional prescriptions are
coded too. This means that in the sample passages there are different
combinations of categories which may be used to describe the prescriptions.
For example, with two prescriptions in a passage, there are $(3)^2$ or nine
possible combinations of categories which may be employed. These nine
logical possibilities are: Acceptance, Acceptance; Acceptance, Neutral;
Acceptance, Rejection; Neutral, Acceptance; Neutral, Neutral; Neutral,
Rejection; Rejection, Acceptance; Rejection, Neutral; Rejection, Rejection.
The number of logical possibilities increases exponentially as the number
of prescriptions in the passage: three prescriptions = $(3)^3$ or 27 combina-
tions, four prescriptions = $(3)^4$ or 81 combinations, etc.

With this information about the coding system and general format of
the dictionary of prescriptions, the next section contains the dictionary
itself.

III. Dictionary of Prescriptions with Examples

<u>Conscious mentalism</u> - "Emphasis on awareness of mental structure or activity." Mentalism is the belief that there is a unique group of mental phenomena not reducible without remainder to physical phenomena. Conscious mentalism refers to mental activity of which a person is fully aware at any given time.

<u>Unconscious mentalism</u> - "Emphasis on unawareness of mental structure or activity." Mentalism is the belief that there is a unique group of mental phenomena not reducible without remainder to physical phenomena. Unconscious mentalism refers to mental activity which is outside the range of conscious awareness.

<u>Passage 1 - Examples 1 & 2</u>

Many people, both inside and outside [psychological] science, are satisfied with the assumption that consciousness alone is psychical; in that case nothing remains for psychology but to discriminate among psychical phenomena between perceptions, feelings, thought-processes and volitions. It is generally agreed, however, that these conscious processes do not form unbroken sequences which are complete in themselves; there would thus be no alternative left to assuming that there are physical or somatic processes which are concomitant with the psychical ones and which we should necessarily have to recognize as more complete than the psychical sequences, since some of them would have conscious processes parallel to them but others would not. If so, it of course becomes plausible to lay the stress in psychology on these somatic processes, to see in <u>them</u> the true essence of what is psychical and to look for some other assessment of the conscious processes. The majority of philosophers, however, as well as many other people, dispute this and declare that the idea of something psychical being unconscious is self-contradictory.

But that is precisely what psycho-analysis is obliged to assert. . . . It explains the supposedly somatic concomitant phenomena as being what is truly psychical, and thus in the first instance disregards the quality of consciousness.

In this passage conscious processes are deemphasized and unconscious processes emphasized as the primary data of psychology. An accurate rendering in terms of the Coding System would be: Conscious mentalism—Rejection; Unconscious mentalism—Acceptance. (The passage also illustrates Contentual subjectivism, which will be defined later.)

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Passage 2 - Examples 3 & 4

Professor Kirkpatrick suggests that . . . psychology be broadened to
include the functioning of all organisms, whether conscious or unconscious,
and suggests the term organosis.

The reference to conscious and unconscious functioning warrents the codings

of Conscious mentalism and Unconscious mentalism, respectively. Since the

statement is descriptive of Professor Kirkpatrick, it should be coded as

Neutral with respect to the author's position. Coding: Conscious menta-

lism—Neutral; Unconscious mentalism—Neutral.

Passage 3 - Example 5

An investigation of normal, stable states, in which the frontiers of the
ego are safeguarded against the id by resistances (anticathexes) and have
held firm, and in which the super-ego is not distinguished from the ego,
because they work together harmoniously—an investigation of that kind
would teach us little. The only thing that can help us are states of con-
flict and uproar, when the contents of the unconscious id have a prospect
of forcing their way into the ego and into consciousness and the ego puts
itself once more on the defense against this invasion. It is only under
these conditions that we can make such observations as will confirm or
correct our statements about the two partners. Now, our nightly sleep is
precisely a state of this sort, and for that reason psychical activity
during sleep, which we perceive as dreams, is our most favourable object
of study.

The meaning of this passage revolves around the concept of the unconscious

id, and the author gives our dreams as an example of unconscious activity.

Coding: Unconscious mentalism—Acceptance.(This passage also illustrates

Contentual subjectivism, Structuralism, and Dynamicism, to be defined

later.)

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Contentual objectivism - "Psychological data viewed as behavior of

individual." The point of view concerning the subject matter of psychology

which focuses on what is open to external observation, namely, the beha-

vior of organisms.

Contentual subjectivism - "Psychological data viewed as mental

structure or activity of individual." The point of view which focuses

on mental states as the primary subject matter of psychology. Some of the

terms which reflect either acceptance or rejection of Contentual subjecti-

vism are: mind, consciousness, experience, soul, spirit, psyche, private

events, imagery, cognitive processes, covert behavior, internal response

states.

Passage 1 - Examples 1 & 2

What we need to do is to start work upon psychology, making behavior, not
consciousness, the objective point of attack.

Coding: Contentual objectivism—Acceptance; Contentual subjectivism—

Rejection.

Passage 2 - Examples 3 & 4

Nobody has as yet invented a complete terminology that avoids all reference
to mental activity; and even if it were possible to construct such a new
language, it would have to be learned and understood through the medium of
consciousness, because all communication requires not merely the behavioris-
tic processes of signalling through spoken or written or gesture language,
but also the reference to the past experiences of the individual who re-
ceives the signals.

The author's defense of the concepts of "mental activity" and "conscious-

ness" is an expression of Contentual subjectivism. The reference to a

"complete terminology that avoids all reference to mental activity" suggests

Contentual objectivism, which is repudiated by the author. Coding: Con-

tentual subjectivism—Acceptance; Contentual objectivism—Rejection.

Passage 3 - Examples 5 & 6

I believe we can write a psychology, define it as Pillsbury, and never go
back upon our definition: never use the terms consciousness, mental states,

mind, content . . . imagery, and the like.

Since the author believes a psychology can be developed without
Contentual subjectivism, he simultaneously implies a commitment to Con-
tentual objectivism. Coding: Contentual objectivism—Acceptance; Con-
tentual subjectivism—Rejection.

Passage 4 - Examples 7 & 8

Enough has been said to show that there are certain aspects of human
nature in which the interrelations of behavior and consciousness are so
intimate and so essential to the facts involved that an artificial separa-
tion of the two distorts the facts and leads to one-sided interpretations
or abstractions. We must therefore conclude that psychology should not
split into two new sciences nor limit itself exclusively to either con-
sciousness or behavior, because both are mere abstractions from the con-
crete events to be studied.

The author rejects the dichotomy between behavior and consciousness,
so the paragraph may be coded as: Contentual objectivism—Rejection;
Contentual subjectivism—Rejection.

Passage 5 - Example 9

The behaviorist asks: Why don't we make what we can observe the real
field of psychology? Let us limit ourselves to things that can be ob-
served, and formulate laws concerning only those things. Now what can we
observe? We can observe behavior—what the organism does or says. And
let us point out at once: that saying is doing—that is, behaving.
Speaking overtly or to ourselves (thinking) is just as objective a type
of behavior as baseball.

This is a statement of the rationale of Contentual objectivism, which
should be coded as Acceptance. (In addition, the identification of thinking
with speaking to ourselves warrents the coding of Peripheralism—Acceptance.)

Passage 6 - Examples 10

[Psychology's] theoretical goal is the prediction and control of behavior.
. . . The behaviorist, in his efforts to get a unitary scheme of animal
response, recognizes no dividing line between man and brute. The behavior
of man, with all of its refinement and complexity, forms only a part of
the behaviorist's total scheme of investigation.

Coding: Contentual objectivism—Acceptance.

Passage 7 - Example 11

I have a profound admiration and respect for the large amount of fine

original work done by all the workers in scientific psychology. But I confess that a very large part of their work as well as their method seems to me to be unpsychological. They are studying something, but it is not consciousness or psyche, and psychology is the science descriptive of consciousness. That should be the root of the matter, whereas, with them, it is at most a convenient general abstract term to hold together a lot of abstractions, from the activity of the concrete psyche.

The author defines the subject matter of psychology as consciousness, thus revealing his commitment to Contentual subjectivism. Coding: Contentual subjectivism—Acceptance.

Passage 8 - Example 12

. . . yet there remain many facts of psychological observation . . . [which] . . . are subjective in their very nature and cannot be observed by anybody but the person who experiences them. What is to be done with this subjective material in our science? European psychologists evidently have not worried themselves much over this question, but in this country a group of psychologists have arisen who feel that the recognition of subjective facts is irreconcilable with scientific accuracy and measurement and should be excluded from the subject-matter of psychology. Whether we are to agree with this movement or not will depend upon our answers to the two questions: What is psychology? and, What are its objectives? We must therefore understand the full significance of these important questions.

The description of "subjective facts" is a statement of Contentual subjectivism. The allusion to the behaviorists' rejection of such conceptualizing is not quite explicit enough to be coded for Contentual objectivism. The passage is historical and descriptive; the author's position should be considered Neutral. Coding: Contentual subjectivism—Neutral. (The reference to scientific measurement warrents a coding of Quantitativism, to be defined later.)

Passage 9 - Example 13

"States of consciousness," like the so-called phenomena of spiritualism, are not objectively verifiable and for that reason can never become the data for science.

Coding: Contentual subjectivism—Rejection.

Passage 10 - Example 14

⁰ The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation. We have become so enmeshed in speculative questions concerning the . . . mind, the nature of

conscious content (for example, imageless thought, attitudes, and Bewusseinslage, etc.) that I . . . feel that something is wrong with our premises and types of problems which develop from them.

Coding: Contentual subjectivism—Rejection.

Determinism - "Human events completely explicable in terms of ante-

cedents." The doctrine that human behavior is determined by (or is a

necessary consequence of) antecedent factors, which may be external (e.g.,

temperature) or internal (e.g., motives). It follows that human behavior

is predictable, in principle, from knowledge of these antecedent factors,

although such knowledge has never been complete.

Indeterminism - "Human events not completely so explicable in terms

of antecedents."

> the theory that man can act or choose reflectively in relative
> independence of given stimuli (Warren, 1934).

The chief form of indeterminism is the doctrine of free will, which asserts

that man's deliberate choices may transcend the matrix of cause-and-effect.

> free-will doctrine = the theory that the course of thought and
> volition is or may be directed by the individual himself, regard-
> less of external influences and (according to some) regardless
> of internal or mental constitution (Warren, 1934).

Passage 1 - Examples 1 & 2

The hypothesis that man is not free is essential to the application of
scientific method to the study of human behavior. The free inner man who
is held responsible for the behavior of the external biological organism
is only a prescientific substitute for the kinds of causes which are
discovered in the course of a scientific analysis. All these alternative
causes lie <u>outside</u> the individual.

This is a rejection of Indeterminism and simultaneous acceptance of

Determinism. The author's repudiation of the "inner man" in favor of the

"external biological organism" may be interpreted as: Contentual subjecti-

vism—Rejection; Contentual objectivism—Acceptance. (In addition, a

coding of Peripheralism—Acceptance would not be inappropriate, due to

the emphasis on the <u>external</u> biological organism and <u>external</u> causes of

human behavior.)

Passage 2 - Examples 3 & 4

Man, we once believed, was free to express himself in art, music and
literature, to inquire into nature, to seek salvation in his own way. He
could initiate action and make spontaneous and capricious changes of

course . . . But science insists that action is initiated by forces impinging upon the individual, and that caprice is only another name for behavior for which we have not yet found a cause.

This is a rejection of Indeterminism and argument for Determinism.

Coding: Indeterminism—Rejection; Determinism—Acceptance.

Passage 3 - Examples 5 & 6

To me this kind of world would destroy the human person as I have come to know him in the deepest moments of psychotherapy. In such moments I am in relationship with a person who is spontaneous, who is responsibly free, that is, aware of this freedom to choose who he will be, and aware also of the consequences of his choice. To believe, as Skinner holds, that all this is an illusion, and that spontaneity, freedom, responsibility, and choice have no real existence, would be impossible for me.

Coding: Indeterminism—Acceptance; Determinism—Rejection. (Since the author is a psychotherapist, a coding of Utilitarianism is also justified.)

Passage 4 - Example 7

To the psychologist, conduct is a matter of cause and effect, of natural law. His business is to know the laws of that part of nature which we call human nature . . . For him, even the most capricious conduct has its causes, even the most inexplicable has its explanation—if only the cause can be unearthed . . .

The emphasis on the concepts of cause, effect, and law suggest a coding of: Determinism—Acceptance. (The author's conviction that psychology be limited to the realm of nature also suggests a coding of Naturalism—Acceptance.)

Passage 5 - Example 8

Freedom is man's capacity to take a hand in his own development. It is our capacity to mold ourselves. . . . But by our power to be conscious of ourselves, we can call to mind how we acted yesterday or last month, and by learning from these actions we can influence, even if ever so little, how we act today. And we can picture in imagination some situation tomorrow—say a dinner date, or an appointment for a job, or a Board of Directors meeting—and by turning over in fantasy different alternatives for acting, we can pick the one which will do best for us.

Here the emphasis is on freedom as reflective choice. Coding: Indeterminism—Acceptance. In addition, the author's mention of "our power to be conscious of ourselves." suggests a coding of Conscious mentalism—Acceptance.

Empiricism -"Major, if not exclusive source of knowledge is experience."
The approach which relies on sense experience or sense perception--what the
senses receive from the environment--in the search for truth. The kind of
experience referred to in this original conception is common, everyday,
practical, experience, without systematic questioning of nature.

However, the modern form of Empiricism emphasizes controlled observa-
tion, experiment, and recording of data. In this latter sense, Empiricism
is synonymous with experimentalism. Thus there are two conceptions of
Empiricism, a broader and a narrower one. There common feature is the
emphasis on sense experience as the major source of knowledge. Even though
experimentalism adds the element of control, it is still based on the
assumption that experience is the major source of knowledge.

Rationalism$_1$ (vs. Empiricism) - "Major, if not exclusive source of
knowledge is reason." The approach which relies on reasoning or thought
in the search for truth. This conception of Rationalism$_1$ has been associated
with scholastic logic and recourse to authority during the Middle Ages.

Some of the modern forms of Rationalism are: rational consideration
of empirical data (interpretation), theorizing, use of models (including
mathematical models), and philosophical psychology. What these various
activities have in common is the use of reason or thought as a major source
of knowledge.

Passage 1 - Examples 1 & 2

The processes of science are characteristic of humans in that they move by
the union of empirical fact and rational thought in a way which cannot be
disentangled. There is in science, as in all our lives, a continuous to
and fro of factual discovery, then of thought about the implications of
what we have discovered, and so back to the facts for testing and discovery
--a step by step of experiment and theory, left, right, left, right, for-
ever. This union of two methods is the very basis of science.

This is an explication of the integration of Empiricism and Rationalism$_1$
in scientific activity. They are inexplicably intertwined. Coding:
Empiricism--Acceptance; Rationalism$_1$--Acceptance.

Passage 2 - Examples 3 & 4

Modern science has two inseparable components--the empirical and the theoretical. The empirical component is concerned primarily with observation; the theoretical component is concerned with the interpretation and explanation of observation. A natural event is explained when it can be derived as a theorem by a process of reasoning from (1) knowledge of the relevant natural conditions controlling it, and (2) one or more relevant principles called postulates.

Coding: Empiricism--Acceptance; Rationalism$_1$--Acceptance. (Since

the type of reasoning favored by the author is deductive reasoning, his

statement should also receive a coding of Deductivism--Acceptance. Another

appropriate coding is Naturalism--Acceptance.)

Passage 3 - Example 5

. . . I, as an experimental student, feel that something is wrong with our premises and types of problems which develop from them.

The author makes explicit his commitment to experimentalism, so the

coding is Empiricism--Acceptance. (A coding of Methodological objectivism

--Acceptance is also appropriate.)

Passage 4 - Example 6

. . . and I look to neurophysiological theory for an eventual emendation and supplementation of behavior theories.

The emphasis on theory warrents a coding of Rationalism$_1$--Acceptance,

and the specification of behavior theory warrents a coding of Contentual

objectivism--Acceptance.

Functionalism - "Psychological categories are activities." The belief

that psychology should concern itself with what the processes of mental

life and behavior do.

> the doctrine that an essential feature of all psychological pro-
> cesses is the part which they play in the adaptive functions of
> the organism (Warren, 1934).

Hence, any doctrine or practice that lays stress upon function, use, adapta-

tion, or adjustment.

Structuralism - "Psychological categories are contents."

When the categories of psychology are conceived as mentalistic,

Structuralism takes the view that psychology should be concerned with the

"structure" of the human mind, or alternately, the "structures" of personality.

In the first subclass, the focus is on conscious "contents," like sensations,

images, and affections. These are the elements of which the mind is com-

posed. In the second subclass, the focus is on personality conceived as

made up of systems or stable acquisitions rather than as a single process.

For example, the id, ego, and superego are personality structures.

On the other hand, when the categories of psychology are conceived as

behavioral, Structuralism takes the view that psychology should be concerned

with the "structure" of behavior, e.g., the conception that personality is

build up out of habits.

Passage 1 - Examples 1 & 2

The point which I wish now to make is this: that, employing the same
principle of division, we can represent modern psychology as the exact
counterpart of modern biology. . . .

   1. We find a parallel to morphology in a very large portion of "ex-
perimental" psychology. The primary aim of the experimental psychologist
has been to analyze the structure of mind; to ravel out the elemental
processes from the tangle of consciousness, or (if we may change the
metaphor) to isolate the constituents in the given conscious formation.
His task is a vivisection, but a vivisection which shall yield structural,
not functional results. . . .
   2. There is, however, a functional psychology, over and above this
psychology of structure. . . . We may regard [the mind] . . . as the collec-
tive name for a system of functions of the psychophysical organism. . . .

Just as experimental psychology is to a large extent concerned with problems of structure, so is "descriptive" psychology, ancient and modern, chiefly occupied with problems of function.. Memory, recognition, imagination, conception, judgment, attention, apperception, volition, and a host of verbal nouns, wider or narrower in denotation, connote, in the discussions of descriptive psychology, functions of the total organism. That their underlying processes are psychical in character is, so to speak, an accident; for all practical purposes they stand upon the same level as digestion and locomotion, secretion and excretion.

This passage contrasting structural and functional psychology warrents

codings of Structuralism and Functionalism, respectively. (The description

of structural psychology includes expressions of Molecularism in the references

to "elemental processes" and "constituents in the given conscious formations.")

The concepts of mind, consciousness, and psychical process throughout should

be coded as Contentual subjectivism. The author's purpose is descriptive,

so his position should be considered as Neutral on all prescriptions.

Coding: Structuralism—Neutral; Functionalism—Neutral; Molecularism—

Neutral; Contentual subjectivism—Neutral.

Passage 2 - Examples 3 & 4

We have seen that man tends to organize his behavior and thought and to adapt to the environment. These tendencies result in a number of psychological structures which take different forms at different ages. The child progresses through a series of stages each characterized by different psychological structures before he attains adult intelligence.

Coding: Functionalism—Acceptance; Structuralism—Acceptance; Con-

tentual objectivism—Acceptance; Contentual subjectivism—Acceptance;

Developmentalism—Acceptance.

Passage 3 - Example 5

To put the whole case as concretely as possible, the hypothesis treats human cognition as part and parcel of the way of life of a species of living creatures—as one of the ways in which human beings, as biological organisms, react adaptively to their environment.

This is a statement of Functionalism, but the author's position is

not clear. The preference is for an Acceptance rather than Neutral coding,

since the author is summarizing a previous argument.

Passage 4 - Example 6

Psychology is one of the sciences of human nature which . . . deals with the concrete ways in which human beings are impressed by, and respond to, their physical and social environment.

Coding: Functionalism—Acceptance.

Passage 5 - Example 7

It is proposed to define intelligence as capacity for variability or versatility of response.

This definition means that with greater intelligence there is greater capacity to succeed or to fail, to make greater and more successes or failures, to adapt or to maladapt, to learn more things, to make more applications of what has been learned, to make finer distinctions, to spin more theories, to make a larger number of trial and error responses, to act in terms of more ends, including more remote ends, etc. But it must not be forgotten that it means more mistakes as well as more successful responses. The finer intelligence can make more abstractions and generalizations, can be more general and comprehensive, more productive and original, can do more unhabitual things, solve more problems, and find more solutions for the same problems than can the poorer intelligence; the range or scope of analysis and selection is vastly increased. Reflex means relative invariability; intelligence means variability, flexibility, versatility, plasticity, resourcefulness.

This passage is functional in substance. Since the author is giving his own definition, the coding is Fuctionalism—Acceptance. (The author mentions the ability to "make more applications of what has been learned," and to "spin more theories." These abilities suggest the prescriptions of Utilitarianism and Rationalism$_1$, respectively.)

Passage 6 - Example 8

In short, whether or not a potential stimulus becomes effective depends on the individual. It depends on the species to which he belongs, on the anatomy of the sense organs, the stage of maturation, the capacities for sense organ adjustment, the habits of attention, the activity in progress, and the possibilities of educating the attention of the individual. Such facts make up the field of perceptual development and perceptual learning. At the lower levels they are called facts of sensory physiology; at the higher levels, facts of attention or exploration, but they are all one problem.

The emphasis on adjustment and activity in this passage warrents a coding of Functionalism. Since the author is attempting persuasion, the most appropriate coding is Functionalism—Acceptance. (In the last sentence the author mentions a continuum with sensory physiology at one end and

attention at the other end. These levels seem to correspond to the molecular (sensory physiology) and molar (attention, exploration), but discussion of these prescriptions will be reserved until later.)

Passage 7 - Example 9

As to structural analytic or idea-psychology. This form of psychology is strictly analytical of psychoses, states of consciousness, ideas . . . It is after the elements in any psychosis and their quantity . . .

Structural psychology is here defined in terms of analysis of states of consciousness into basic elements, a conception that corresponds to one example of Structuralism. The inclusion of consciousness justifies a coding of Contentual subjectivism, and the specification of molecular units justified a coding of Molecularism. The author is describing structural psychology and has not yet indicated his attitude toward it, so those prescriptions should be coded as Neutral. Coding: Structuralism—Neutral; Contentual subjectivism—Neutral; Molecularism—Neutral.

Passage 8 - Example 10

The total personality . . . consists of three major systems. These are called the id, the ego, and the superego.

Coding: Structuralism—Acceptance.

Passage 9 - Example 11

It is obvious that the different kinds of habits based on training, education, and discipline of any sort are nothing but a long chain of conditioned reflexes.

This is a behavioral example of Structuralism. Conditioned reflexes are the units out of which habits are built. Coding: Structuralism—Acceptance.

Passage 10 - Example 12

Personality is the sum of activities that can be discovered by actual observation of behavior over a long enough time to give reliable information. In other words, personality is but the end product of our habit systems. . . . Among these activities, however, there are dominant systems in the manual field (occupational), in the laryngeal field (great talker, raconteur, silent thinker), and in the visceral field (afraid of people, shy, given to outbursts, having to be petted, and in general what we call emotional).

The author conceives of personality as a structure rather than a process. It is the sum of a person's habits or habit systems revealed through observation of his behavior. Coding: Structuralism--Acceptance; Contentual objectivism--Acceptance.

<u>Inductivism</u> - "Investigations begun with facts or observations." The approach which is characterized by reasoning from particular facts to general principles. More specifically, it is the sort of inference which attempts to reach conclusions about all the members of a class from observation of only some of them.

<u>Deductivism</u> - "Investigations begun with assumed established truths." The approach which is characterized by reasoning from assumed established truths (premises) to valid conclusions.

> deduction = a type of inference or reasoning from premises or propositions to more concrete and specific truth (Warren, 1934).

Passage 1 - Examples 1 & 2

There are two broad and diametrically opposed schools of thought concerning the most effective methods for integrating diverse data. The difference between the two schools lies, not in the presence or absence of theory, but in the way theory is brought into the picture. In one case, the theories are formulated first and then tested deductively by means of experiment. The other method is to experiment first and let the theories emerge inductively from the data.

The most explicit prescriptions in this passage are Deductivism and Inductivism. The author also mentions theories and how they are experimentally tested, which warrents codings of Rationalism$_1$, Empiricism, and Methodological objectivism. Coding: Deductivism—Neutral; Inductivism—Neutral; Rationalism$_1$—Neutral; Empiricism—Neutral; Methodological objectivism—Neutral.

Passage 2 - Examples 3 & 4

Throughout the history of moder science there has been a running debate between two groups of researchers on the issue of the utility of theories. On one side have appeared the defenders of abstraction and speculation, the people who, like James (1892) calling for a "Lavoisier or Galileo of psychology," see theory as an essential step in the scientific process. For them, the mere recitation of accumulated "facts" would never constitute a system of knowledge, but rather they seek the great theoretical insight that will reveal the secrets of nature. Counter to this devotion to generalized statement is the attitude of the research workers who are usually called "pure empiricists." From Newton's (1713) celebrated and probably misunderstood "Hypotheses non fingo" to Skinner's (1950) "Are learning theories necessary?" there has been a steady line of defense drawn for the position that what matters in science is the patient collec-

tion of data, to which end worrying about heady abstractions will be more of a diversion and waste of time than a help to prediction and control.

Coding: Deductivism—Neutral; Inductivism—Neutral; Rationalism₁

—Neutral; Empiricism—Neutral; Naturalism—Neutral.

Passage 3 - Examples 5 & 6

I never faced a Problem which was more than the eternal problem of finding order. I never attacked a problem by constructing a Hypothesis. I never deduced Theorems or submitted them to Experimental Check. So far as I can see, I had no preconceived Model of behavior—certainly not a physiological or mentalistic one and, I believe, not a conceptual one.

The author rejects the deductive approach in psychology. He favors

the inductive approach of simply "finding order" in nature. He also re-

jects mentalistic data in favor of behavioral data, although this bias

is secondary to the inductive-deductive theme. Coding: Deductivism—

Rejection; Inductivism—Acceptance; Contentual subjectivism—Rejection;

Contentual objectivism—Acceptance.

Passage 4 - Example 7

An adequate impetus is supplied by the inclination to obtain data showing orderly changes characteristic of the learning process. An acceptable scientific program is to collect data of this sort and to relate them to manipulable variables, selected for study through a common sense exploration of the field.

The author favors the inductive approach in psychological science.

Coding: Inductivism—Acceptance; Methodological objectivism—Acceptance.

Passage 5 - Examples 8

The grand aim of all science is to cover the greatest number of empirical facts by logical deduction from the smallest number of hypotheses or axioms.

Coding: Deductivism—Acceptance; Empiricism—Acceptance.

Passage 6 - Example 9

The progress of science comes about through the experimental testing of theorems. When agreement is found, the postulate system generating the theorem remains in the running; when disagreement is found, a search is made for the faulty postulate, if such there be, and the postulate is then revised. Possibly, if no faulty postulate can be found, a new postulate may have to be added. Thus the system is self-correcting, and only those features survive that have stood the scrutiny of meticulous experimental testing.

This is an example of the "hypothetical-deductive method" or what is prescriptively called Deductivism. The author seems to be making an argument so his position may be considered as Acceptance. Coding: Deductivism--Acceptance; Empiricism--Acceptance; Methodological objectivism-- Acceptance.

Passage 7 - Example 10

I. The definitions and postualtes of a scientific system should be stated in a clear and unambiguous manner, they should be consistent with one another, and they should be of such a nature as to permit rigorous deductions.

II. The labor of deducing the potential implications of the postulates of the system should be performed with meticulous care and exhibited, preferably step by step and in full detail. It is these deductions which constitute the substance of a system.

III. The significant theorems of a truly scientific system must take the form of specific statements of the outcome of concrete experiments or observations. The experiments in question may be those which have already been performed, but of particular significance are those which have not previously been carried out or even planned. It is among these latter, especially, that the crucial tests of a theoretical system will be found.

IV. The theorems so deduced which concern phenomena not already known must be submitted to carefully controlled experiments. The outcome of these critical experiments, as well as of all previous ones, must agree with the corresponding theorems making up the system.

This is a more detailed account of the "hypothetical-deductive method."

Coding: Deductivism--Acceptance; Empiricism--Acceptance; Methodological objectivism--Acceptance; Rationalism$_1$--Acceptance.

<u>Mechanism</u> - "Activities of living beings completely explicable by physiochemical constituents." In addition to this basic meaning, there is a derived meaning of Mechanism:

> mechanism = a machine or machine-like system, fitted to perform certain activities in fairly precise manner. . . . As applied to human behavior, the term refers to those activities which are machine-like in their constancy and regularity (Warren, 1934).

These two meanings are reconciled by the fact that for behavior to be machine-like it must first be completely explicable by physiochemical constituents.

<u>Vitalism</u> - "Activities of living beings not so explicable by physiochemical constituents."

> The doctrine that phenomena of life possess a character <u>sui generis</u> by virtue of which they differ radically from physiochemical phenomena. The vitalist ascribes the activities of living organisms to the operation of a "vital force" (Ross, 1970).

Passage <u>1</u> - Examples <u>1</u> & <u>2</u>

No other forces than the common physical-chemical ones are active within the organism. In those cases which cannot at the time be explained by these forces, one has either to find the specific way or form of their action by means of the physical-mathematical method or to assume new forces, equal in dignity to the chemical-physical forces inherent in matter, reducible to the force of attraction and repulsion.

This passage illustrates a rejection of Vitalism and an explicit endorsement of Mechanism. Coding: Vitalism--Rejection; Mechanism--Acceptance.

Passage <u>2</u> - Examples <u>3</u> & <u>4</u>

<u>The behaviorist finds no scientific evidence for the existence of any vitalistic principle</u> . . . We need nothing to explain behavior but the ordinary laws of physics and chemistry. . .

Coding: Vitalism--Rejection; Mechanism--Acceptance; Contentual objectivism--Acceptance.

Passage <u>3</u> - Example <u>5</u>

. . . let us try to think of man as an assembled organic machine ready to run . . . . Take four wheels with tires, axles, differentials, gas engine, body; put them together and we have an automobile of a sort. <u>The automobile is good for certain kinds of duties</u>. . . . In a similar way this

man, this organic animal, this John Doe, who so for as parts are concerned
is made up of head, arms, hands, trunk, legs, feet, toes and nervous,
muscular and glandular systems. . . is good for certain jobs.

This analogy says that man is _like_ a machine, rather than _is_ a machine,

but the best overall description is one of Mechanism--Acceptance.

Passage 4 - Example 6

Man _is_ a machine, but he is a very complex one. At present he is far
beyond the powers of men to construct--except, of course, in the usual
biological way. . . . as our understanding of human behavior increases we
appeal less and less to explanatory fictions and we can then accept the
fact that the essential differences between machines and men concern com-
ponentry. The problem of simulation is the technical problem of working
with the stuff of which the human body is made.

Coding: Mechanism--Acceptance; Contentual objectivism--Acceptance.

Passage 5 - Example 7

A strictly mechanistic study of man cannot deal with 'fellow-members of
society viewing each other.' Such conceptions belong only to a psychology
which recognizes human beings as something more than merely infinitely
complex mechanisms.
    This kind of psychology has always existed, since Aristotle, and will
continue to exist as an honorable member of the group which . . . we usually
speak of as the natural sciences. It is only this kind of psychology which
deserves to be called 'objective psychology,' because it alone studies
the objective or concrete events occurring to human beings . . .

The author is using the word "mechanistic" in the prescriptive sense,

and he is reacting negatively to this conception. He favors instead a

psychology which studies the objective and concrete events occurring to

human beings. Coding: Mechanism--Rejection; Contentual objectivism--

Acceptance.

Passage 6 - Example 8

The vital force causes a decomposition of the constituents of food, and
destroys the force of attraction which is continually exerted between their
molecules . . . The phenomenon of growth, or increase in the mass, pre-
supposes that the acting vital force is more powerful than the resistance
which the chemical force opposes to the decomposition or transformation
of the elements of the food.

This description of digestion and growth illustrates the use of the

concept of "vital force." Coding: Vitalism--Acceptance.

Passage 7 - Example 9

We find both structural and functional psychologists to be chary and wary of psyche. They fear its recrudescence, just as biologists fear any recrudescence of vitalism.

Coding: Vitalism--Neutral; Structuralism--Neutral; Functionalism--

Neutral; Contentual subjectivism--Neutral.

Methodological objectivism - "Use of methods open to verification by another competent observer."

Methodological subjectivism - "Use of methods not so open to verification by another competent observer."

Preliminary

In the past, the concepts of objectivity-subjectivity have been used indiscriminately in psychology to refer to either subject matter or method. The prescriptive approach makes a distinction between subject matter and method as referents of these terms. The former, called Contentual objectivism-subjectivism, has already been defined; the latter, Methodological objectivism-subjectivism, is considered here. The need for this distinction is due to the fact that psychology became differentiated from philosophy not in terms of its subject matter, but because of its application of the experimental method to problems of mind. Wundt, for example, took a methodologically objective approach to contentually subjective problems. Later, with the advent of the behaviorists, the subject matter of psychology became objective too.

Paradox

The utility of the method of introspection has been a thorny issue in the history of psychology. The controversy stems from Wundt's and Titchener's use of experimental introspection, or describing one's experiences under controlled laboratory conditions. Experimental introspection is distinguished by its control of a variable, its discipline, the training required, and its technical vocabulary. The paradox of this method in terms of the present content analysis is this: Compared to the philosophy out of which psychology grew, it is methodologically objective, because it is experimental; compared to behaviorism, it is methodologically subjective, because it is introspective.

Resolution

The resolution of this paradox lies in the realization that experimental introspection can be either methodologically objective or subjective, depending upon which component--experiment or introspection--is considered dominant by the writer. That is, it depends upon the author's meaning, which can be ascertained only by considering the context of his statement. It can be assumed that the experimental component was accepted, in principle if not in practice, by all writers in the history of American psychology. The issue concerns the introspective component.

Guidelines

The following guidelines should be considered when using Methodological objectivism-subjectivism as coding categories.

(1) Certain methods are typically referred to when the contrast is with philosophy and the emphasis is on observation and experiment, thus they should be coded as Methodological objectivism. Those methods (some of which are described by synonyms) include classical introspection, experimental introspection, controlled introspection, systematic experimental introspection, and experimental phenomenology.

(2) Certain other methods are typically referred to when the comparison is with other psychological methods. They should be coded as Methodological subjectivism. Those methods include uncontrolled introspection, phenomenological observation and description (without controls), existential analysis, and free association.

(3) Many references encountered in the psychological literature do not fall easily into either of the above two classes. They are more directly dependent upon context for their meaning. Those terms include introspection, introspective observation, introspectionism, and introspective psychology. The general rule is to consider these references as instances of Methodological subjectivism unless there is specific reason for doing otherwise.

<u>Verbal</u> <u>report</u>

A special case which depends upon context is the use of verbal report. There are at least two main uses of verbal report: as observation and as speech reaction. (1) Verbal report is sometimes interpreted as an indication or observation of something else, namely, inner experience (thoughts, feelings). Another competent observer cannot verify the truth value of the subject's verbal reports when they refer to intra-psychic events, so it is best described as Methodological subjectivism. This use of verbal report exists in clinical psychology, counseling psychology, and psychopharmacology. (2) Verbal report is sometimes taken at face value as a speech reaction, as language behavior, or in Skinnerian terms, verbal behavior. In this use, verbal report, like any other kind of behavior, is open to verification by another competent observer, and is an expression of Methodological objectivism. It exists in psychophysics and in psychological testing.

<u>Passage</u> <u>1</u> - <u>Examples</u> <u>1</u> & <u>2</u>

Psychology as the behaviorist views it is a purely objective experimental branch of natural science. . . . Introspection forms no essential part of its methods . . .

The emphasis on objectivity and the rejection of introspection (without qualification of what kind of introspection) suggest the codings of methodological objectivism—Acceptance; Methodological subjectivism—Rejection. The passage should also receive codings of Contentual objectivism—Acceptance; Empiricism—Acceptance; Naturalism—Acceptance.

<u>Passage</u> <u>2</u> - <u>Examples</u> <u>3</u> & <u>4</u>

But most of the work in the new science is carried on without introspection, the only door into the specific subject-matter of psychology.

The author's commitment to introspection warrents a coding of Methodological subjectivism—Acceptance, and since it is the <u>only</u> genuine method, all objective methods are simultaneously excluded. Also, the author's

reference to the "specific subject-matter of psychology" warrents a coding.

Coding: Methodological subjectivism—Acceptance; Methodological objectivism

—Rejection; Contentual subjectivism—Acceptance.

Passage 3 - Example 5

Only by looking inward can we gain a knowledge of mental processes; only by looking inward under standard conditions can we make our knowledge scientific. . . . We must always fall back upon experimental introspection. For our own mind is our only means of interpreting the mind of another organism; we cannot imagine processes in another mind that we do not find in our own.

The author specifically refers to experimental introspection, so it

is coded as Methodological objectivism. Since this method is used to

study mind, Contentual subjectivism is also expressed. Coding: Methodolo-

gical objectivism—Acceptance; Contentual subjectivism—Acceptance.

Passage 4 - Example 6

It remains to give a somewhat more extended discussion of objective methods as employed in human psychology. . . .
When we come to look them over, . . . we find that most of them fall within the following general classification:
    I.   Observation, with and without instrumental control.
   II. The conditioned reflex methods.
       (a) Methods employed in obtaining conditioned secretion reflexes.
       (b) Methods employed in obtaining conditioned motor reflexes.
  III. The verbal report method.
  IV. Methods of testing.

The author considers verbal report as an objective method, so that is

how it should be coded. Coding: Methodological objectivism—Acceptance.

Passage 5 - Example 7

The kind of introspection which prevailed in Leipzig and Cornell was rigorous and pedantic, with strict rules and well-defined procedures. The subjects used in laboratory experiments had to be thoroughly trained in it, and their reports supplemented by measurements with instruments such as the chronoscope. This type of introspection is referred to as classical.

The emphasis on experiment and quantification warrents codings of

Methodological objectivism—Neutral; Quantitativism—Neutral.

Passage 6 - Example 8

The Würzburg group introduced systematic experimental introspection, a name proposed by N. Ach (1905), a member of the school.

To code this statement, a judge may follow the Guideline which specifies that systematic experimental introspection is an expression of Methodological objectivism. The author's position is Neutral.

Passage 7 - Example 9

Introspective Observation is what we have to rely on first and foremost and always. The word introspection need hardly be defined--it means, of course, the looking into our own minds and reporting what we there discover. Every one agrees that we there discover states of consciousness.

The author is committed to Methodological subjectivism and Contentual subjectivism. Coding: Methodological subjectivism--Acceptance; Contentual subjectivism--Acceptance.

Passage 8 - Example 10

We gather the material for our work from a variety of sources--from what is conveyed to us by the information given us by the patient and by his free associations, from what he shows us in his transferences, from what we arrive at by interpreting his dreams and from what he betrays by his slips or parapraxes.

The method of free association is an expression of Methodological subjectivism. Coding: Methodological subjectivism--Acceptance; Contentual subjectivism--Acceptance.

Passage 9 - Example 11

Watson, Meyer, and Weiss seem to lead in a willingness to abandon to the dogs the introspective observation of conscious responses. Many are glad to sound praises to their high scientific standard when they insist that science must stick to observable facts and their relations, and when they lead against any return of psychology to the abandoned fortress in which names are reified or deified.

"Introspective observation of conscious responses" is a phrase which reveals both Methodological subjectivism and Contentual subjectivism. The idea that "science must stick to observable facts and their relations" may be considered a general statement of Contentual objectivism. The author is describing the position of others, not taking a position himself. Coding: Methodological subjectivism--Neutral; Contentual subjectivism--Neutral; Contentual objectivism--Neutral.

Passage 10 - Example 12

[The phenomenological method] consists of examining whatever is found in consciousness, or in other words, the data or phenomena of consciousness. Its primary concern is not the act of consciousness, but the object of consciousness, that is, for instance, all that is perceived, imagined, doubted, or loved. The ultimate goal is to reach and grasp the essences of things appearing in consciousness.

There is no indication here that the author's conception of the phenomenological method is of an experimental nature. Coding: Methodological subjectivism—Neutral; Contentual subjectivism—Neutral; Qualitativism—Neutral.

Passage 11 - Example 13

The psychologists' use of "introspection" as its principal method has been another very serious bar to progress.

Faced with a lack of context to help determine the author's conception of "introspection," a judge may follow the Guideline which considers such references as expressions of Methodological subjectivism. Coding: Methodological subjectivism—Rejection.

Molecularism - "Psychological data most aptly described in terms of

relatively small units. The strategy demanding that the subject matter

of psychology be analyzed into its basic components and described as such.

If the subject matter is conceived as consciousness, then molecularism

takes the form of a search for the elementary units of consciousness (e.g.,

sensations, images, affections); if the subject matter is conceived as

behavior, it takes the form of a search for the elementary units of behavior

(e.g., habits, reflexes, conditioned responses, muscular movements, glan-

dular secretions). Molecularism is sometimes referred to as elementarism

or atomism. Contemporary operant research, which measures rate of res-

ponding, illustrates a molecular approach to behavior.

Molarism - "Psychological data most aptly described in terms of rela-

tively large units."

> molar behavior: 1. a large-unit segment of the total behavior
> stream that possesses essential unity. . . . 3. a behavior unit
> considered as an emergent phenomenon, having qualities not statable
> as a sum of the parts (English & English, 1958).

The following are examples of relatively molar behaviors: going swim-

ming, having a date, studying for an exam.

> The terms [molecular and molar] characterize not so much two classes
> of behavior as two ways of describing or conceiving the same beha-
> vior event. Going to class would probably be called molar beha-
> vior . . . but the same phenomenon can also be described as a
> sequence of molecular units, i.e., as a series of stepping movements
> or even as a succession of neuromuscular processes (English & English,
> 1958).

Passage 1 - Examples 1 & 2

On the one hand, he has defined behavior in terms of its strict underlying
physical and physiological details. . . . We shall designate this as the
molecular definition of behavior. And, on the other hand, he has come to
recognize . . . that behavior, as such, is more than and different from
the sum of its physiological parts. Behavior, as such, is an "emergent"
phenomenon that has descriptive and defining proportios of its own. And
we shall designate this latter as the molar definition of behavior.

The author's preference for Molarism is revealed by his phrase "has

come to recognize . . . that behavior, as such, is more than and different

from the sum of its physiological parts." Coding: Molecularims—Rejection;

Molarism—Acceptance; Contentual objectivism—Acceptance.

Passage 2 - Examples 3 & 4

Ever since Tolman, behavior theorists have been agreeing that psychology is concerned with molar responses, not molecular ones. Accordingly we try to observe and measure what an organism is doing, not how all its muscles are contracting. With this kind of observation on the response side there should be a corresponding kind of observation on the stimulus side. We should try to discover what an organism is responding to, not what excites all the little receptors.

The concepts of molar and molecular are used here in the prescriptive

sense, with an extension to stimuli. The author makes clear his acceptance

of Molarism and rejection of Molecularism. Coding: Molarism—Acceptance;

Molecularism—Rejection; Contentual objectivism—Acceptance.

Passage 3 - Examples 5 & 6

An act of behavior has distinctive properties all its own, to be identified and described irrespective of whatever muscular, glandular, or neural processes underlie it. The molecular facts of physics and physiology upon which behavior rests have identifying properties of their own, which are not the properties of behavior as molar.

Coding: Molecularism—Rejection; Molarism—Acceptance; Contentual

objectivism—Acceptance.

Passage 4 - Example 7

The aim of the psychologist is three-fold. He seeks (1) to analyze concrete (actual) mental experience into its simplest components, (2) to discover how these elements combine, what are the laws which govern their combination, and (3) to bring them into connection with their physiological (bodily) conditions.

Coding: Molecularism—Acceptance; Structuralism—Acceptance; Contentual subjectivism—Acceptance.

Passage 5 - Example 8

As to structural analytic or idea-psychology. This form of psychology is strictly analytical of psychoses, states of consciousness, ideas, as mere phenomena, abstracted from any active psyche. It is after the elements in any psychosis and their quantity, so as to construct a psychic-automaton. It is held to be scientifically irrelevant to ask whose psychosis one is analyzing. Ideas are atoms, instead of being experienced functionings of a self. Explanation is sought in non-psychic terms by

reference to physiological distinctions. It treats its analyzed elements as real parts, whose mechanical composition _is_ the mental life. Whether there is any _personal_ _mind_ back of the stream of ideas, says Titchener, is a question that cannot be raised in psychology.

The author's protest is against Molecularism, Structuralism, and Mechanism. He is not objecting to mentalistic data in psychology but rather to its artificial analysis into elements and their "mechanical composition" ("Ideas are atoms, instead of being experienced functionings of a self."). He calls this "_structural_ analytic or _idea_ psychology." Since the author feels that the self or "personal mind" is missing in structural psychology, his position also illustrates Contentual subjectivism. Coding: Molecularism--Rejection; Structuralism--Rejection; Mechanism-- Rejection; Contentual subjectivism--Acceptance.

<u>Monism</u> - "Fundamental principle or entity in universe is of one kind."

> the view that ultimate reality is of only one kind or quality.
> The view that the phenomena of psychology are of the same kind
> as, or are completely reducible to, those of the physical sciences
> (English & English, 1958).

> A general name for those theories which deny the duality (i.e.
> the existence as two ultimate kinds of substance) of matter and
> mind. Thus materialism and idealism or spiritualism are both
> species of monism; the name is often applied specifically to a
> blind variety, viz. the doctrine that physical and psychical
> phenomena are alike manifestations of a reality which cannot be
> identified with either matter or mind (Murray, 1888-1928).

<u>Dualism</u> -"Fundamental principle or entity in universe is of two kinds,
mind and matter."

> the theory that reality consists of two different, relatively
> independent substances; more specifically, the assumption that
> psychic and physical phenomena are both real but are fundamentally
> different in nature (Warren, 1934).

The major varieties include <u>interactionism</u> (two separate and interacting

processes), <u>parallelism</u> (two separate but correlated series of events), and

<u>occasionalism</u> (one type of event is the occasion for God to produce other

type of event).

<u>Passage 1 - Examples 1 & 2</u>

I feel that <u>behaviorism</u> is the only consistent and logical functionalism.
In it one avoids both the Scylla of parallelism and the Charybdis of inter-
action. Those time-honored relics of philosophical speculation need trouble
the student of behavior as little as they trouble the student of physics.
The consideration of the mind-body problem affects neither the type of
problem selected nor the formulation of the solution of that problem. I
can state my position here no better than by saying that I should like to
bring my students up in the same ignorance of such hypotheses as one finds
among the students of other branches of science.

The author explicitly rules out interactionism and parallelism, which

are varieties of Dualism, and by implication Monism as well, since it too

is an alternative "solution" to the mind-body problem. The author also

expresses a commitment to the study of behavior (Contentual objectivism),

and to conceptualizing that study as a form of functionalism. Coding:

Dualism—Rejection; Monism—Rejection; Contentual objectivism—Acceptance;

Functionalism--Acceptance.

Passage 2 - Example 3

I plead for a monistic, naturalistic view of the mental and the physical . . .

Coding: Monism--Acceptance; Naturalism--Acceptance.

Passage 3 - Example 4

The appearance of new qualitative characteristics in the psychological universe not found in the physical universe, points to the need for another concept of uniform sequence than those already described.

The emphasis on the qualitative difference between the "psychological universe" and the "physical universe" suggests a coding of Dualism, although this is equivocal. The author seems to be taking this for granted, so the coding is Dualism--Acceptance; Qualitativism--Acceptance.

<u>Naturalism</u> - "Nature requires for its operation and explanation only principles found within it." The assumption that explanation of events should be sought within the same system as the one in which the events occurred, namely, the system of spatio-temporal phenomena.

> a philosophy which holds that the universe. . . is self-existent, self-explanatory, self-operating, and self-directing; that the world process is not teleological and anthropocentric, but purposeless and only incidentally productive of man. Also, that human life-physical, mental, moral and spiritual—is an ordinary natural event attributable in all respects to the ordinary operations of nature (Ross, 1970).

When explicit mention is made of the naturalistic basis of modern science, it should be coded as Naturalism.

<u>Supernaturalism</u> - "Nature requires for its operation and explanation transcendent guidance as well as principles found within it." The assumption that the explanation of events should be sought within a different system than the system of spatio-temporal phenomena in which the events occurred.

> supernatural = belonging to a higher order or system than that of nature, or transcending the ordinary course of nature (Warren, 1934).

Supernaturalism is accepted when a psychologist conceptualizes scientific psychology within a theistic religious framework.

<u>Passage 1</u> - <u>Examples 1 & 2</u>

When I speak of the psychological tradition I strongly emphasize the fact that the science of psychology has not enjoyed a continuous naturalistic development. As is well known, the evolution of psychology includes periods in which scholars not only limited their studies to human inter-behavior and neglected the behavior of other organisms, but, in addition, failed to describe and interpret that interbehavior as natural events. Instead, they thought of it as at least partially extranatural. Such theological and metaphysical periods must, however, be taken strictly into account because they articulate with and influence the naturalistic stages of psychological tradition. In fact, these scientific dark spots continue to influence the current course of psychological history.

Coding: Naturalism—Acceptance; Supernaturalism—Rejection; Contentual objectivism—Acceptance.

Passage 2 - Examples 3 & 4

Throughout this period [the Patristic and Medieval Period] the ideal
of investigating any kind of events was set aside in favor of such other
interests as man's salvation, his place in a theistic cosmos, and his rights
and duties with respect to God and State. Since the theological and church
civilization placed man and his habitation at the center of the universe,
his essential behavior was envisaged as of a spiritual order. By means
of verbal and symbolic formulations man, in part at least, was removed
far from his actual place in a spatio-temporal world and made into a
being who, because he was endowed with a soul, was in part akin to God
and the angels. Psychological thinking lost the sense of scientific
investigation and became preoccupied with christological doctrines.

This is an explication of the concept of Supernaturalism, which should

be coded as Neutral. The author contrasts this with "[man's] actual place

in a spatio-temporal world" and "the sense of scientific investigation,"

which is enough to receive codings of Naturalism and Methodological

objectivism. Coding: Supernaturalism--Neutral; Naturalism--Neutral;

Methodological objectivism--Neutral; Contentual objectivism--Neutral.

Passage 3 - Examples 5 & 6

No man can give a rational account how it is possible that such a general
flood should come, by any natural means. And if it be supernatural that
grants the thing I am proving, namely, such a Supreme Being as can alter
the course of nature.

Coding: Naturalism--Rejection; Supernaturalism--Acceptance.

Passage 4 - Example 7

Psychology as the behaviorist views it is a purely objective experi-
mental branch of natural science.

The author makes explicit the fact that Naturalism is the philoso-

phical basis of modern science when he refers to "natural science." Also,

since the author identifies himself as a behaviorist, the statement should

be coded for Contentual objectivism. In addition, he says that behavioristic

psychology is purely objective and experimental, a characteristic which

reveals commitments to Methodological objectivism and Empiricism. Coding:

Naturalism--Acceptance; Contentual objectivism--Acceptance; Methodological

objectivism--Acceptance; Empiricism--Acceptance.

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Passage 5 - Example 8

. . . the conception of God as self-conscious Mind and Will struggling with the forces of chaos and constantly expressing Himself, not only through all the various levels of law and order in the universe, but also through all its qualitative aspects--and supremely through the highest creative capacities of man himself, including the latter's scientific triumphs. Not only does this conception not conflict with the claims of science, but also, since God is conceived as involved in all of life and as active on all levels, rather than as shrinking, His realm is really expanding. It also means that man can come to the aid of God as well as God to the aid of man, in the common task of building a new world.

The dominant prescription in this passage is Supernaturalism. A secondary proscription is Qualitativism ("qualitative aspects"). The author's position is one of acceptance of these prescriptions. Coding: Supernaturalism--Acceptance; Qualitativism--Acceptance.

Passage 6 - Example 9

To seek the cultural roots of transcendentalism and supernaturalism, one must turn to the evolution of the church which grew up in the Roman state, competed with it, and replaced it in the history of Western Europe.

Coding: Supernaturalism--Neutral.

Passage 7 - Example 10

The intellectual aspect of this new culture, Transcendentalism, is well named since its votaries built their doctrines and beliefs on the premise that they were in contact with a reality which transcends the things and events of everyday life, and which is known by means that contrast with observation and observational inference, the stand-bys of ordinary scientific investigation.

This definition of Transcendentalism is equally appropriate as a definition of Supernaturalism, which is contrasted with "observation and observational inference." Coding: Supernaturalism--Rejection; Empiricism --Acceptance; Methodological objectivism--Acceptance.

<u>Nomotheticism</u> - "Emphasis upon discovering general laws."

> characterizing procedures and methods designed to discover general laws (English & English, 1958).

Examples of nomothetic research areas include the principles of learning,

theories of emotion, national stereotypes, language development, stages

of cognitive growth.

<u>Idiographicism</u> - "Emphasis upon explaining particular events or

individuals."

> pertaining to, or characterizing, an account of particular individual cases or events (English & English, 1958).

Clinical and counseling psychology, when the stress is on individual

patients or clients, are idiographic activities in psychology.

<u>Passage 1</u> - <u>Examples 1 & 2</u>

It is because of their essential stereotypy and lack of variation that
psychologists like to draw their generalizations from lower animals.
But for my part I venture the opinion that all of the infrahuman verte-
brates in the world differ less from one another in psychological
functioning and in complexity of organization, than one human being does
from any other.
And so I wonder whether the time has not come for students of personality
to shake themselves loose from a too-rigid response set, and perhaps even
to reverse it. Instead of growing impatient with the single case and has-
tening on to generalization, why should we not grow impatient with our
generalizations and hasten to the internal pattern?

The author of this passage is talking about the nomothetic and

idiographic approaches to personality, and stating his preference for the

latter. Coding: Nomotheticism--Rejection; Idiographicism--Acceptance.

<u>Passage 2</u> - <u>Examples 3 & 4</u>

The idiographic point of view is an artistic one that strives for a non-
scientific goal; the nomothetic, a caricature of science that bears little
resemblance to anything that exists today. Since no useful purpose is
served by retaining these mischievous and difficult terms, they had best
disappear from our scientific vocabularies.

Coding: Idiographicism--Rejection; Nomotheticism--Rejection.

<u>Passage 3</u> - <u>Example 5</u>

The science of personality must by its very nature be nomothetic.

Coding: Nomotheticism—Acceptance.

Passage 4 - Example 6

Here we see the issues drawn clearly. Is personology to be an art, devoted to word portraits that seek to evoke in the reader the thrill of recognition, the gratifying (if perhaps illusory) feeling of understanding unique individuals? Or is it to be a science, which enables us to study these same persons in all their uniqueness and to derive from such study general propositions about the structure, development, and other significant aspects of personality? If we elect for a science, we must abandon art whenever it takes us in a different direction than the one demanded by the scientific method, and we must recognize that the ideal of an idiographic science is a will-o'-the-wisp, an artistic and not a scientific goal. Science may be supplemented by art, but not combined with it.

The predominant theme of this paragraph is the author's rejection of Idiographicism. At first it may seem that he is clearing the way for a nomothetic approach to personality, but closer scrutiny indicates that he is advocating a comprehensive, inductively-based science. Evidence for Inductivism may be found in his preference for "a science, which enables us to study these same persons in all their uniqueness and to derive from such study general propositions about the structure, development, and other aspects of personality." Coding: Idiographicism—Rejection; Inductivism —Acceptance; Methodological objectivism—Acceptance.

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<u>Peripheralism</u> - "Stress upon psychological events taking place at

periphery of body."

> a point of view that emphasizes, for psychological explanation,
> the events that take place at the periphery or boundaries of
> the body rather than events in the central nervous system (English
> & English, 1958).

> peripheralist position. A view held by some psychologists that
> all thinking goes on in action (in speech or other movements)
> (Hilgard, Atkinson, & Atkinson, 1971).

<u>Centralism</u> - "Stress upon psychological events taking place within

the body."

> centralist psychology: a point of view that gives major importance
> in explanation of behavior to events that take place in the brain
> (English & English, 1958).

> centralist position. A theoretical position held by certain
> psychologists who believe that thinking can best be explained as
> processes going on inside the brain or nervous system, with muscu-
> lar movements as mere accompaniments or facilitators of the central
> processes (Hilgard, Atkinson,& Atkinson, 1971).

<u>Passage 1 - Examples 1 & 2</u>

Another distinction which is perhaps of growing importance is that
between "centralists" and "peripheralists." The former hold that behavior
cannot be accounted for by correlations between stimuli and responses but
that account has to be taken of central processes in the brain or nervous
system that determine the course of both perception and response. To this
extent they call in question the . . . [viewpoint for] . . . correlating
events at the "periphery" of the organism, that is, the stimuli impinging
on it and the . . . observable responses made.

Coding: Centralism—Neutral; Peripheralism—Neutral; Contentual

objectivism—Neutral.

<u>Passage 2 - Example 3</u>

We thus think and plan with the whole body. But since, as I pointed
out above, word organization is, when present, probably usually dominant
over visceral and manual organization, we can say that "<u>thinking</u>" is
largely <u>subvocal talking</u>—provided we hasten to explain that it can occur
without words.

This is a "decentralized" or peripheral conception of thinking.

Coding: Peripheralism—Acceptance.

Passage 3 - Example 4

A stimulus arouses in a receptor an impulse, a, which is transmitted to the cortex. In the cortex, the impulse is propagated along a series of neurons, b, until, some time later, it leads to some motor impulse, c, to an effector, at which time the response occurs. Thinking would correspond to the nervous impulses in the cortex, b.

This is an exposition of the centralist position in psychology.

Coding: Centralism--Neutral.

<u>Purism</u> - "Seeking of knowledge for its own sake."

<u>Utilitarianism</u> - "Seeking of knowledge for its usefulness in other activities."

> the philosophical doctrine that makes practical usefulness the criterion of value (English & English, 1958).

Utilitarianism is expressed wherever the application of knowledge is evident, <u>e.g.</u>, clinical, counseling, educational, and industrial psychology.

<u>Passage 1</u> - <u>Examples 1 & 2</u>

The matter I wish to examine is an aspect of a familiar issue in psychology: the relation between our science and its applications. Concern with the issue is about as old as the field itself. Titchener, for example, dealt with it: he proposed that we reserve the name psychology for the science and designate its application as psychotechnology.

Here the author states what in prescriptive terms is called the Purism --Utilitarianism issue. On the basis of what is given, the author's position should be coded as Neutral. Coding: Purism--Neutral; Utilitarianism--Neutral.

<u>Passage 2</u> - <u>Examples 3 & 4</u>

The point is rather that we note a marked difference of emphasis between text-books of functional psychology and text-books of other sciences. A text-book of physics will discuss various types of engines and machines, but it will discuss them as illustrative of physical laws. A text-book of physiology may discuss various types of pathological phenomena, but it will discuss them in connection with physiological methods and physiological principles. The text-books of functional psychology, on the other hand, tend--it is true, in varying degree--to make of psychology either an introduction to philosophy or an aid to individual and social welfare. In so far as these tendencies prevail: in so far as functional psychology, in its exposition of psychology proper, goes out to meet the problems of philosophy or of our customary human life: in so far there is real danger that the pains and seriousness which are the due of psychology as science are withdrawn from psychology and expended in those other fields.

The author takes a position against psychology as "an aid to individual and social welfare" and for psychology as "science." Therefore, this passage should be coded for Utilitarianism and Purism. Since the focus of the author's protest is the application of knowledge rather than functional psychology as such, Functionalism should probably be coded as Neutral. Coding: Utilitarianism--Rejection; Purism--Acceptance;

Functionalism—Neutral.

Passage 3 - Example 5

[The psychologist's] business is to know the laws of that part of nature which we call human nature, and to use those laws, as fast as discovered, for solving the problems presented by the human individual or group.

Coding: Utilitarianism—Acceptance; Naturalism—Acceptance.

Passage 4 - Example 6

I have deliberately borrowed the phrase "the welfare of man" from the ethical code of the American Psychological Association. In my view, it is the ethical responsibility of all psychologists—as individuals and as members of their scientific and professional associations—to see to it that psychology is used for peace rather than war, for reducing the arms race rather than intensifying it, for eliminating ethnocentrism and prejudice rather than fostering them, for removing social and economic injustices and inequalities rather than perpetuating them. Since Hiroshima we can no longer pretend that science or scientists can plead innocence with respect to the social consequences of their scientific activities.

The author mentions specific social problems to which he believes psychological knowledge should be applied, including peace and war, the arms race, ethnocentricism and prejudice. Coding: Utilitarianism—Acceptance.

<u>Quantitativism</u> - "Stress upon knowledge which is countable or measureable."

> quantity = a characteristic whose variations admit of numerical expression (Warren, 1934).

A concern with measureability, or comparison of results of various quantities, or counting with the aim of being objective, <u>e.g.</u>, characteristic current research in psychological testing, psychophysics, learning.

<u>Qualitativism</u> - "Stress upon that which is different in kind or essence."

> Having to do with the most distinguishable aspects of experience—sour, blue, middle C, etc. These are called "qualitative" aspects of experience or merely "qualities," in contrast to the intensive or "quantitative" aspects of experience, such as the sourness of what is sour, the brightness of blue, the loudness of middle C, etc. (Munn, Fernald, & Fernald, 1969).

Examples of areas in psychology which are likely to reflect qualitativism and psychotherapy and counseling.

<u>Passage 1 - Examples 1 & 2</u>

To make a clear distinction between quantitative and qualitative differences let us define quantitative differences as those which can be stated in terms of amount or position. Two facts or relations are qualitatively different when one cannot be described completely in terms of a different amount or arrangement of the other. A new quality is discovered when there is something in the fact or in the relation more than in the mere summation of the qualities previously described.

Coding: Quantitativism—Neutral; Qualitativism—Neutral.

<u>Passage 2 - Examples 3 & 4</u>

When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science.

This passage is a endorsement of Quantitativism. Qualitativism is almost synonymous with lack of measureability, so that is the best description of what the author is talking about. Coding: Quantitativism—Acceptance; Qualitativism—Rejection.

Passage 3 - Examples 5 & 6

This problem of measurement has remained a stumbling block even at the present writing. Since the pioneer work of Weber and Fechner and Helmholtz, psychologists have found many opportunities fro exact measurement in their subject-matter; yet there remain many facts of psychological observation to which direct measurement cannot be applied . . .

In addition to mention of the problem of measurement, the author

believes there are many psychological _facts_ to which direct measurement

cannot be applied. This belief assumes that such facts are qualitative

in nature. Coding: Quantitativism--Neutral; Qualitativism--Acceptance.

Passage 4 - Example 7

A broad view of the place of psychology in science should recognize that psychology is especially favored in any effort to discover qualitative differences. The data with which it deals are more complex, more rare in nature and more likely to show new qualities of content and relationship. Psychology should, therefore, be especially keen to detect and to describe qualitative differences in facts and in their relations.

The author of this passage seems to be using the word "qualitative"

in the prescriptive sense, and his position is clearly one of acceptance.

Coding: Qualitativism--Acceptance.

Rationalism$_2$ (vs. Irrationalism) - "Emphasis upon data supposed to

follow dictates of good sense and intellect." The belief that the essence

of man is his rationality, or that intellectual factors play a greater role

in human life than emotional ones.

> rational behavior, rational conduct = behavior of organisms which
> rests upon reasoning or which is interpreted or judged as proceeding
> in a logical manner (Warren, 1934).

Some personality theories reflect this proscription.

Irrationalism - "Intrusion or domination of emotive and conative

factors upon intellectual processes." The conception of human nature in

which personal, particularly emotional, factors interfere with intellectual

processes. The result of this interference may be illogical or irrational

acts. Man is often swayed by emotion rather than reason. The extreme

irrational view is that man is the pawn of his instincts and passions.

Some personality theories reflect this prescription.

Passage 1 - Examples 1 & 2

  Man is sometimes referred to as a rational animal. He is intelligent;
he exercises reason; he uses logic; and he argues from a scientific
standpoint. Indeed, man is considered by man to be the only rational
animal.
  An individual's action or behavior, of course, is sometimes considered
irrational. This is the opposite of rational. The irrational person
defies the laws of reason; he contradicts that which is considered rational
by some particular community of people.

  Coding: Rationalism$_2$--Neutral; Irrationalism--Neutral.

Passage 2 - Example 3

When we speak of man-the-scientist we are speaking of all mankind and not
merely a particular class of men who have publicly attained the stature
of "scientists." . . . we may . . . propose that every man is, in his own
particular way, a scientist. . . . Now what would happen if we were to re-
open the question of human motivation and use our long-range view of man
to infer just what it is that sets the course of his endeavor? . . . Might
not the individual man, each in his own personal way, assume more of the
stature of a scientist, ever seeking to predict and control the course of
events with which he is involved? Would he not have his theories, test
his hypotheses, and weigh his experimental evidence? And, if so, might not
the differences between the personal viewpoints of different men corres-
pond to the differences between the theoretical points of view of dif-
ferent scientists?

The general conception of man as scientist, and the specific emphasis

on testing hypotheses and weighing evidence, argue for codings of Rationalism$_2$

—Acceptance; Empiricism—Acceptance; Methodological objectivism—Acceptance;

Rationalism$_1$—Acceptance.

Passage 3 - Example 4

We may insist as much as we like that the human intellect is weak in
comparison with human instincts, and be right in doing so.

This is a statement of extreme Irrationalism, which is accepted by

the author. Coding: Irrationalism—Acceptance.

Passage 4 - Example 5

The logical laws of thought do not apply in the id, and this is true above
all of the law of contradiction. Contrary impulses exist side by side,
without cancelling each other out or diminishing each other; at the most
they may converge to form compromises under the dominating economic
pressure towards the discharge of energy.

This passage is primarily an expression of Irrationalism, which is

accepted by the author. Coding: Irrationalism—Acceptance; Structuralism

—Acceptance; Dynamicism—Acceptance.

<u>Staticism</u>₁ (vs. Developmentalism) - "Emphasis upon cross-sectional

view." The view which stresses the control of behavior in the present,

or viewing the most prominent features of the subject matter irrespective

of changes with time. Staticism₁ exists in animal psychology; one pro-

cedure in animal studies is to control the history of the animals as much

as possible so that all the animals will have the same developmental his-

tory and their behavior may then be studied as a function of the experi-

mental condition. This type of behavioral explanation is conceived as

the interaction of variables in the present situation.

<u>Developmentalism</u> - "Emphasis upon changes with time." Emphasis upon

continuous change in an organism over time. Specifically, emphasis on

the historical roots of present behavior, focusing on accumulating ex-

perience as the individual grows and learns. The following areas reflect

Developmentalism; developmental psychology, psychoanalysis, cognitive

growth, and certain personality theories.

<u>Passage 1 - Example 1</u>

The purpose of this study was to demonstrate that the development
of adequate depth perception depends partly upon the activity of the
organism. Thus, one kitten traveled about the experimental room using
normal self-locomotion, while the other traveled the same route passively,
riding in a gondola. By these restrictions, and by rearing the kittens
in darkness, their visual experiences were controlled and kept essentially
the same. When tested later for depth perception, the active kitten
showed normal visual development and the passive one was retarded.

In this study, the experimenter controlled the visual experiences

of the animal subjects so that he could test the effects of activity on

their depth perception. This is a static explanation, not a developmental

one. Coding; Staticism₁—Acceptance; Empiricism—Acceptance; Methodolo-

gical objectivism—Acceptance.

<u>Passage 2 - Example 2</u>

. . . we shall here strongly defend the thesis that neither past nor
future psychological facts but only the present situation can influence
present events. This thesis is a direct consequence of the principle that

only what exists concretely can have effects. Since neither the past nor the future exists at the present moment it cannot have effects at the present. In representing the life space therefore we take into account only what is contemporary.

The author shows a strong preference for the static type of explanation. Coding: Staticism$_1$—Acceptance.

Passage 3 - Example 3

Functional psychology is a bit less abstract. It has at least processes instead of cross-sections of consciousness, or rather of the psycho-physical organism in its reaction to external environment.

The reference to "cross-sections of consciousness" suggests Staticism$_1$, toward which the author implies disapproval. The object of the cross-sectional view is consciousness, so it should also be coded for that feature. The author's position is ambiguous, but the suggested coding is: Functionalism—Acceptance; Staticism$_1$—Rejection; Contentual subjectivism —Neutral.

Passage 4 - Example 4

Whenever we try to understand growth, it is well to remember the epigenetic principle which is derived from the growth of organisms in utero. Somewhat generalized, this principle states that anything that grows has a ground plan, and that out of this ground plan the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole.

This is a statement of Developmentalism, which is accepted by the author, although Developmentalism need not include the epigenetic principle. Coding: Developmentalism—Acceptance.

Passage 5 - Example 5

Here is my answer: Psychology is one of the sciences of human nature which, from the existential and the genetic point of view, deals with the concrete ways in which human beings are impressed by, and respond to, their physical and social environment.

The word "genetic" connotes a developmental, and "existential" a subjective, point of view. The main part of the definition is an example of Functionalism. Because it is the author's own definition, the three proscriptions are accepted. Coding: Developmentalism—Acceptance;

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Contentual subjectivism—Acceptance; Functionalism—Acceptance.

Passage 6 - Example 6

Personality can be said to develop according to steps predetermined in the human organism's readiness to be driven toward, to be aware of, and to interact with, a widening social radius, beginning with the dim image of a mother and ending with mankind, or at any rate that segment of mankind which "counts" in the particular individual's life.

 Coding: Developmentalism—Acceptance.

Passage 7 - Example 7

. . . psychology—the science which describes and explains the evolution —the self-realizing and ripening of the soul, self, personality, or spirit that forms the central subject-matter of psychology.

The most striking feature of this statement is its emphasis on subjective phenomena as the subject matter of psychology, which makes it an example of Contentual subjectivism. But the words "evolution", "self-realizing," and "ripening" connote personal growth or development. The author is presenting his personal conception of psychology, so all the prescriptions are accepted. Coding: Developmentalism—Acceptance; Contentual subjectivism—Acceptance.

[Psycho-analysis]Example 8

[Psycho-analysis] implies more than the mere analysis of composite phenomena into simpler ones. It consists in tracing back one psychical structure to another which preceded it in time and out of which it developed . . . Thus from the very first psycho-analysis was directed toward tracing developmental processes. It . . . was led . . . to construct a genetic psychology . . .

This passage shows the emphasis on developmental processes in psychoanalysis, and should receive a coding of Developmentalism. Also the reference to psychological structures warrents a coding of Structuralism. Since the author is describing psychoanalysis, and not necessarily defending it, his position should be coded as Neutral. Coding: Developmentalism—Neutral; Structuralism—Neutral.

Staticism₂ (vs. Dynamicism) - "Emphasis upon enduring aspects." A

lack of change is considered characteristic of some aspects of the subject

matter, e.g., traits, defense mechanisms.

Dynamicism - "Emphasis upon change and factors making for change."

The conception of the subject matter of psychology as undergoing change,

either from internal motives or social factors.

> dynamic = pertaining to the causes and effects of behavior and
> mental activities, often with special emphasis on motivation
> (Warren, 1934).

Examples of areas where Dynamicism may be found include psychoanalysis,

field theory, and group dynamics.

Passage 1 - Examples 1 & 2

It should be kept in mind that these drawings [Lewin's diagrams] represent
momentary situations. There is nothing fixed or static about them, and
they are constantly changing as a result of dynamic forces.

This quotation refers to diagrams which represent the person in his

"life space" at a particular moment, a method for which Lewin became

famous. The author rejects Staticism₂ and accepts Dynamicism. In addi-

tion to these two prescriptions, the kind of atemporal, cross-sectional

view which is being referred to suggests Staticism₁. Hence, this quotation

illustrates a position in which one type of Staticism is rejected and the

other type is accepted. Coding: Staticism₂--Rejection; Dynamicism--

Acceptance; Staticism₁--Acceptance.

Passage 2 - Example 3

. . . it has been possible to follow the development of several hundred
individuals over a period of about a dozen years, and while many have
shown sharp fluctuations in weight, we have discovered no case in which
there has been a convincing change in the somatotype. . . . It can be
said that the case has yet to occur in which a nutritional disturbance
has caused a physique either to become unrecognizable or to simulate
another somatotype strongly enough to cause any justifiable confusion.

The emphasis on the permanence of somatotypes, which the author

bases on empirical evidence, warrents a coding of Staticism₂--Acceptance;

Empiricism--Acceptance; Methodological objectivism--Acceptance.

Passage 3 - Example 4

It is clear that the inferences involved in identifying a trait imply
consistency. Thus, by definition, a trait is known only by virtue of
certain regularities or consistencies in the manner in which an individual
behaves.

Coding: Staticism$_2$--Neutral.

Passage 4 - Example 5

Our purpose is not merely to describe and classify the phenomena,
but to conceive them as brought about by the play of forces in the mind
. . . which work together or against one another. We are endeavouring
to attain a dynamic conception of mental phenomena.

This statement expresses Dynamicism coupled with Contentual subjectivism.

The former prescription is expressed as the underlying "play of forces,"

while the later is expressed by the specification that the forces are "in

the mind." The author is committed to both prescriptions. Coding:

Dynamicism--Acceptance; Contentual subjectivism--Acceptance.

Passage 5 - Example 6

The human organism is a complicated energy system, deriving its energy from
the food it eats and expending it for such purposes as circulation, res-
piration, digestion, nervous conduction, muscular activity, perceiving,
remembering, and thinking. There is no reason to believe that the energy
which runs the organism is essentially any different from the energy
which runs the universe. Energy takes many forms--mechanical, thermal,
electrical, and chemical--and is capable of being transformed from one
form into another. The form of energy which operates the three systems
of personality is called psychic energy. . . . It performs work or is capable
of performing work as does any form of energy. Psychic energy performs
psychological work--e.g., thinking, perceiving, and remembering--just as
mechanical energy performs mechanical work.

The conception of man as a complicated energy system warrents a coding

of Dynamicism--Acceptance. Since the form of energy is psychic energy,

the author may be regarded as favoring mentalistic terminology and his con-

ceptual bias coded as Contentual subjectivism--Acceptance. The reference

to three systems or structures of personality suggests Structuralism,

which is also accepted by the author. Coding: Dynamicism--Acceptance;

Contentual subjectivism--Acceptance; Structuralism--Acceptance.

Passage 6 - Example 7

The forces which we assume to exist behind the tensions caused by the

needs of the id are called <u>instincts.</u> They represent the somatic demands upon the mind. Though they are the ultimate cause of all activity, they are of a conservative nature; the state, whatever it may be, which an organism has reached gives rise to a tendency to re-establish that state so soon as it has been abandoned.

Coding: Dynamicism—Acceptance; Contentual subjectivism—Acceptance;

Structuralism—Acceptance.

Passage 7 - Example 8

We approach the id with analogies; we call it a chaos, a cauldron full of seething excitations. We picture it as being open at its end to somatic influences, and as there taking up into itself instinctual needs which find their psychical expression in it, but we cannot say in what substratum. It is filled with energy reaching it from the instincts, but it has no organization, produces no collective will, but only a striving to bring about satisfaction of the instinctual needs subject to the observance of the pleasure principle.

This vivid description of the id justifies a coding of Dynamicism.

The id is a personality structure, which means the author accepts Structuralism. Since the author uses mentalistic terminology ("psychic expression"), a coding for Contentual subjectivism also seems warrented. Coding:

Dynamicism—Acceptance; Structuralism—Acceptance; Contentual subjectivism

—Acceptance.

Passage 8 - Example 9

Psychical energy is released when the psychic system (the person) attempts to return to equilibrium after it has been thrown into a state of disequilibrium. Disequilibrium is produced by an increase of tension in one part of the system relative to the rest of the system, either as a result of external stimulation or internal change. When tension throughout the system becomes equalized again, the output of energy is halted and the total system comes to rest.

Coding: Dynamicism—Acceptance; Contentual subjectivism—Acceptance.

Passage 9 - Example 10

[Psycho-analysis is] a dynamic conception which reduces mental life to the interplay of reciprocally urging and checking forces.

Coding: Dynamicism—Neutral; Contentual subjectivism—Acceptance.

IV. General Guidelines for Coding

(1) The prescriptions should be treated singly and individually. This means that when a judge is coding an address he should consider each of the 36 prescriptions separately as much as possible, so that whatever relations exist among prescriptions are permitted to emerge from the data.

(2) The question arises as to whether a judge should code for the prescriptions as they become evident in an article or wait until he has finished reading the article in its entirety. It has been found by the writer that the strategy of immediately coding is superior. It reduces the strain on the judge's memory. But the judge must be alert to changes in the author's position as evidence increases, and make revisions accordingly. The suggestion offered is that the coding be done at the time a prescription becomes evident, subject to later revision.

(3) If a prescription is mentioned twice in the same address, with the author's "position" expressed differently, the general rule is that codings of Acceptance or Rejection take precedence over a coding of Neutral.

(4) A prescription should generally be verbalized explicitly in an address for it to be coded. Some of the ways prescriptions are expressed include: reference by name or synonym, description of general meaning, a sub-type or specific instance of its use.

(5) How much evidence must be present for an address to be coded into a particular category on a particular prescription? There can be no amount specified. It may be as little as one sentence, one phrase, or even one word. At the other extreme, there could conceivably be as much as a whole address devoted to the explication of a single prescription.

(6) Since the prescriptive approach was formulated to encompass the history of psychology from ancient times on, there is considerable variation in expression of prescriptions in the relatively short history of

American psychology. Nevertheless, the coding should be based solely on

the contents of the addresses. In no case should the judge's decision be

based on what he thinks is the generally accepted position in American

psychology, independent of the address in question. For example, if there

is no evidence in an address for the acceptance of Naturalism, Nomotheticism,

Determinism, or Functionalism, they should not be coded.

Coding Form
for Content Analysis
of Presidential Addresses of APA

Code Number of Address _____

Name of Coder _____

Date of Coding _____

————(Leave Blank)————

Author of Address _____

Year of Presidency _____

Title of Address _____

_____

Instructions: Code the address with respect to the prescriptive concepts below. Circle the number in one of the corresponding three categories which most closely reflects the author's position. Make the decisions on the basis of the information in the Coding Manual. When a prescription is not present in the address leave the categories blank.

Prescription	Acceptance	Neutral	Rejection
Conscious mentalism	1	0	-1
Unconscious mentalism	1	0	-1
Contentual objectivism	1	0	-1
Contentual subjectivism	1	0	-1
Determinism	1	0	-1
Indeterminism	1	0	-1
Empiricism	1	0	-1
Rationalism$_1$ (vs. Empiricism)	1	0	-1
Functionalism	1	0	-1
Structuralism	1	0	-1
Inductivism	1	0	-1
Deductivism	1	0	-1

Prescription	Acceptance	Neutral	Rejection
Mechanism	1	0	-1
Vitalism	1	0	-1
Methodological objectivism	1	0	-1
Methodological subjectivism	1	0	-1
Molecularism	1	0	-1
Molarism	1	0	-1
Monism	1	0	-1
Dualism	1	0	-1
Naturalism	1	0	-1
Supernaturalism	1	0	-1
Nomotheticism	1	0	-1
Idiographicism	1	0	-1
Peripheralism	1	0	-1
Centralism	1	0	-1
Purism	1	0	-1
Utilitarianism	1	0	-1
Quantitativism	1	0	-1
Qualitativism	1	0	-1
Rationalism$_2$ (vs. Irrationalism)	1	0	-1
Irrationalism	1	0	-1
Staticism$_1$ (vs. Developmentalism)	1	0	-1
Developmentalism	1	0	-1
Staticism$_2$ (vs. Dynamicism)	1	0	-1
Dynamicism	1	0	-1

Code Number of Address_____ Date of Coding_____

Name of Judge_____

————(Leave Blank)————

Author of Address_____ Year of Presidency_____

Title of Address_____

_____

Note: At the end of this Coding Form you will be asked about the nature and scope of the address. Each of these two questions requires a dichotomous decision.

Instructions: Code the address with respect to the prescriptive concepts below, by circling the appropriate symbol. Consider implicit as well as explicit prescriptions. When a prescription is not expressed in the address leave the categories blank. The dimension of centrality is a continuum as follows:

Central			Peripheral
1	2	3	4
Salient	Notable	Moderate	Incidental

Prescription	Author's Position	Centrality Dimension	Explicit; Implicit
Conscious mentalism	Acc. Neut. Rej.	1 2 3 4	E I
Unconscious mentalism	Acc. Neut. Rej.	1 2 3 4	E I
Contentual objectivism	Acc. Neut. Rej.	1 2 3 4	E I
Contentual subjectivism	Acc. Neut. Rej.	1 2 3 4	E I
Determinism	Acc. Neut. Rej.	1 2 3 4	E I
Indeterminism	Acc. Neut. Rej.	1 2 3 4	E I

Empiricism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Rationalism₁ (vs. Empiricism)	Acc.	Neut.	Rej.	1	2	3	4		E	I
Functionalism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Structuralism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Inductivism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Deductivism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Mechanism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Vitalism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Methodological objectivism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Methodological subjectivism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Molecularism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Molarism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Monism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Dualism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Naturalism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Supernaturalism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Nomotheticism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Idiographicism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Peripheralism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Centralism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Purism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Utilitarianism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Quantitativism	Acc.	Neut.	Rej.	1	2	3	4		E	I
Qualitativism	Acc.	Neut.	Rej.	1	2	3	4		E	I

Rationalism$_2$ (vs. Irrationalism)	Acc.	Neut.	Rej.	1	2	3	4	E	I
Irrationalism	Acc.	Neut.	Rej.	1	2	3	4	E	I
Staticism$_1$ (vs. Developmentalism)	Acc.	Neut.	Rej.	1	2	3	4	E	I
Developmentalism	Acc.	Neut.	Rej.	1	2	3	4	E	I
Staticism$_2$ (vs. Dynamicism)	Acc.	Neut.	Rej.	1	2	3	4	E	I
Dynamicism	Acc.	Neut.	Rej.	1	2	3	4	E	I

I. **Nature of Address** (check category):

_____ **Expository-orientation** (Characterized by an exposition of the meaning of some aspect of or all of psychology, whose burden does not directly depend upon empirical data.)

_____ **Research-orientation** (Characterized by the presentation of information based upon empirical, but not necessarily experimental, data, or the presentation of a viewpoint deriving from empirical data.)

II. **Scope of Address:**

_____ **Broad** (Encompasses psychology as a whole, or treats a problem which transcends specific areas and is significant for psychology as a whole.)

_____ **Narrow** (Limited to a specialized area or problem within psychology.)

APPENDIX F

Reliability of Judges

This appendix contains three kinds of results pertaining to the reliability of judges: (1) information concerning the use of the coding categories by the three judges; (2) inter-judge reliability coefficients; (3) intra-judge reliability coefficients. Inter- and intra-judge reliability values are given for both of the major decisions made by the judges: Presence or Absence of prescriptions, and the author's position (Acceptance, Neutral, Rejection).

The conventional method of measuring reliability is to use the percentage of agreement of coding responses among the judges involved, i.e., the percentage of judgments on which two judges agree, out of the total number of judgments. In this study, the agreement is represented by simultaneous Presence or Absence codings, or by simultaneous Acceptance, Neutral, or Rejection codings. However, the writer considered the percentage-of-agreement method to be incomplete when used alone, because it does not reveal the percentage of agreement due to chance. Agreement would be expected to increase, by chance alone, as fewer categories are used in the coding system. Hence, there is no way of telling how far the actual empirical

agreement exceeds the chance level of agreement. For this reason, a supplementary method of reporting reliability was used.

The method of measuring reliability developed by Scott (1955) was found suitable for the writer's purposes. Scott's Index of Inter-Coder Agreement, pi, may be interpreted as the extent to which the coding reliability exceeds chance. It is appropriate for nominal scale coding, it corrects for both the number of categories in the coding question and the frequency with which each is used, and it varies from 0 to 1. The most important factor to consider, however, is that Scott's Index provides a conservative measure of reliability. Since it is a measure of the extent to which the coding reliability exceeds chance, it will almost always yield lower values than the corresponding empirical percentage agreement values, and hence it is not directly comparable to reliability values reported in the literature which are based upon empirical percentage agreement.

Table 6

Average Number of Prescriptions Coded Present in Each

Address Out of 36 Possibilities

Judge	Prescriptions/Address
Judge 1 (Gibson)	12.3
Judge 2 (Goodman)	13.0
Judge 3 (Merrifield)	15.5

Table 7

Use of Coding Categories as Percentage of Total Number of Prescriptions Coded Present

Judge	Author's Position			Centrality				Form of Expression	
	A	N	R	1	2	3	4	E	I
Judge #1 (Gibson)	75	16	7	41	23	19	14	68	31
Judge #2 (Goodman)	83	11	5	21	23	28	25	64	35
Judge #3 (Merrifield)	76	16	6	15	20	26	37	72	27
Mean	78	14	6	26	22	24	25	68	32

Table 8

Percentage of Agreement Between Judges on

Coding the Presence or Absence of 36 Prescriptions in

Each of 75 APA Presidential Addresses

(Scott's Index is in Parentheses.)

	Gibson	Goodman
Goodman	.79(.54)	
Merrifield	.76(.49)	.74(.46)

Note. -- Mean of three coefficients = .76(.50).

Table 9

Percentage of Agreement Between Judges on

Coding the Author's Position on Prescriptions Expressed in

Each of 75 APA Presidential Addresses.

(Scott's Index is in Parentheses.)

Based on 573 Prescriptions Coded Present by

All Three Judges

	Gibson	Goodman
Goodman	.83(.47)	
Merrifield	.80(.46)	.83(.49)

Note. -- Mean of the three coefficients = .82(.47).

Table 10

Intra-Judge Reliability on Coding Presence or

Absence of 36 Prescriptions in Each of

Four APA Presidential Addresses

(Scott's Index is in Parentheses.)

Judge	Reliability
Judge 1 (Gibson)	.88 (.75)
Judge 2 (Goodman)	.78 (.53)
Judge 3 (Merrifield)	.90 (.80)

Note. -- Mean of three coefficients = .85 (.69).

Table 11

Intra-Judge Reliability on Coding Author's Position on

Prescriptions Expressed in Four APA Presidential Addresses

(Scott's Index is in Parentheses.)

Based on the Number of Prescriptions Coded Present on Each

of Two Codings for Each Judge

Judge	Reliability
Judge 1 (Gibson)	.97(.90)
Judge 2 (Goodman)	.91(.62)
Judge 3 (Merrifield)	.84(.42)

Note. -- Mean of three coefficients = .91(.65).

APPENDIX G

Prominence of Prescriptions

The expression of a prescription in an address is
defined operationally in terms of Present codings. Prominence
is thus the relative frequency of Present codings of a
particular prescription in comparison with all others.

Prediction 5: Since the prescriptive approach was formulated
to encompass the history of psychology from ancient times on,
there is undoubtedly extreme variation in the expression of
prescriptions in the relatively short history of American
psychology. In this period, the following prescriptions will
be among the most prominent of the 36 prescriptions, irrespec-
tive of temporal considerations: Conscious mentalism, Con-
tentual objectivism, Contentual subjectivism, Empiricism,
Methodological objectivism, Methodological subjectivism, and
Nomotheticism. The following prescriptions will be among the
least prominent of the group: Vitalism, Monism, Dualism,
Naturalism, Supernaturalism, Idiographicism, $Rationalism_2$,
Irrationalism, $Staticism_1$, and $Staticism_2$. This prediction
is based on the writer's general background reading and per-
sonal judgments.

The following computer printout contains a ranking
of the 36 prescriptions in terms of their prominence: from
most frequently expressed to least frequently expressed. It
shows which prescriptions were most frequently expressed in
the presidential addresses and therefore the ones most rele-
vant to modern American psychology. In this context "relevance"
means expressed in American psychology, whether it be an
acceptance of the prescription, a neutral expression of the
prescription, or a rejection of the prescription. Of the
seven prescriptions predicted to be among the most prominent,
six are among the top ten listed in the printout. The most
frequently expressed of all the prescriptions was Empiricism.
Contentual subjectivism and Contentual objectivism, two of
the basic prescriptions pertaining to the nature of the sub-
ject matter of psychology, were both among the most prominent,
as predicted. Methodological objectivism was more frequently
expressed than either Contentual subjectivism or Contentual
objectivism, which suggests that American psychology is
oriented toward the use of objective methods at least as much
as toward a particular conception of its subject matter.
Some of the most prominent prescriptions were unpredicted.
These include Purism, Functionalism, Utilitarianism, and
Quantitativism.

The printout also shows which prescriptions were

least frequently expressed in the presidential addresses and therefore the ones least relevant to modern American psychology. Of the ten prescriptions predicted to be among the least prominent, eight are among the lowest ten listed in the printout. With the exception of Naturalism, the prescriptions at the bottom of the list played some role in American psychology but that role was minor in comparison to the role of other prescriptions. Many of these prescriptions, such as Supernaturalism and Vitalism, are more relevant to other historical periods. In the case of Naturalism, it appears that this prescription is so strongly accepted in psychology that it is taken for granted and provides no objective evidence for its existence.

The role of prescriptions in psychology may take different forms. The most frequent form of expression of a prescription is that of acceptance on the part of an author. In fact, 78.3% of all prescriptions were judged accepted in this study. However, there was considerable variation around the mean. The printout shows the proportion in which each prescription was Accepted, Neutral, and Rejected relative to the total number of times it was expressed. The prescriptions which are most likely to be accepted when they are expressed (over 90% of the time) are: Inductivism, Nomotheticism, Empiricism, and Purism. The prescriptions which are most

likely to be rejected when they are expressed are Super-naturalism (63% of the time), Rationalism$_1$ (43%), and Vitalism (35%).

In terms of the Dimension of Centrality, the pre-scriptions which were most often salient when they were expressed were Empiricism (44%) and Contentual subjectivism (43%). In the case of Empiricism, the 44% is based on 32 times the prescription was considered Salient out of 73 times it was expressed. Contentual subjectivism was considered Salient 25 times out of 58 times expressed. The data show that when Empiricism and Contentual subjectivism are expressed they are salient themes almost one-half of the time. On the other hand, Supernaturalism and Unconscious mentalism were never salient themes in the addresses, but were mostly incidental when they were expressed.

The mode of expression of the prescriptions was pre-dominantly Explicit: 68% Explicit vs. 32% Implicit, for all prescriptions (Appendix F-9). All but four prescriptions were more frequently Explicit in expression than Implicit. The four exceptions were Nomotheticism (74% Implicit), Purism (70%), Staticism$_1$ (56%), and Inductivism (53%).

APPENDIX G

PROMINENCE OF PRESCRIPTIONS

PRESCRIPTION		PRESENCE	AUTHOR'S POSITION			CENTRALITY				FORM OF EXPRESSION	
			A	N	R	1	2	3	4	E	I
7 EMPIRICISM	FREQ	73.33	67.67	5.67	0.00	32.67	22.67	13.67	4.33	51.67	21.67
	%	100.00	92.27	7.73	0.00	44.55	30.91	18.64	5.91	70.45	29.55
27 PURISM	FREQ	64.00	59.00	3.67	1.33	12.33	19.67	19.00	13.00	19.33	44.67
	%	100.00	92.19	5.73	2.08	19.27	30.73	29.69	20.31	30.21	69.79
15 METHODOLOGICAL OBJECTIVISM	FREQ	59.67	53.33	5.33	1.00	19.33	18.67	12.67	9.00	40.67	19.00
	%	100.00	89.39	8.94	1.68	32.40	31.28	21.23	15.08	68.16	31.84
4 CONTEXTUAL SUBJECTIVISM	FREQ	57.67	50.00	4.00	3.67	25.00	12.33	12.67	7.67	44.67	13.00
	%	100.00	86.71	6.94	6.36	43.35	21.39	21.97	13.29	77.46	22.54
3 CONTEXTUAL OBJECTIVISM	FREQ	50.00	42.33	5.00	2.67	15.00	15.67	12.00	7.33	36.33	13.67
	%	100.00	84.67	10.00	5.33	30.00	31.33	24.00	14.67	72.67	27.33
9 FUNCTIONALISM	FREQ	47.33	37.67	9.00	0.67	11.67	10.67	15.33	9.67	33.67	13.67
	%	100.00	79.58	19.01	1.41	24.65	22.54	32.39	20.42	71.13	28.87
28 UTILITARIANISM	FREQ	46.33	40.67	5.00	0.67	18.33	8.33	6.67	13.00	39.33	7.00
	%	100.00	87.77	10.79	1.44	39.57	17.99	14.39	28.06	84.89	15.11
29 QUANTITATIVISM	FREQ	45.00	36.67	7.67	0.67	11.67	9.67	11.67	12.00	36.67	8.33
	%	100.00	81.48	17.04	1.48	25.93	21.48	25.93	26.67	81.48	18.52
23 MONOTHETICISM	FREQ	40.33	37.67	2.33	0.33	12.67	9.00	14.00	4.67	10.67	29.67
	%	100.00	93.39	5.79	0.83	31.40	22.31	34.71	11.57	26.45	73.55
1 CONSCIOUS MENTALISM	FREQ	38.33	33.00	4.00	1.33	12.00	7.33	10.00	9.00	24.33	14.00
	%	100.00	86.09	10.43	3.48	31.30	19.13	26.09	23.48	63.48	36.52
10 STRUCTURALISM	FREQ	36.67	20.67	10.67	5.33	6.67	8.33	9.00	12.67	28.00	8.67
	%	100.00	56.36	29.09	14.55	18.18	22.73	24.55	34.55	76.36	23.64
34 DEVELOPMENTALISM	FREQ	31.67	27.67	3.67	0.33	9.00	6.33	7.67	8.67	26.33	5.33
	%	100.00	87.37	11.58	1.05	28.42	20.00	24.21	27.37	83.16	16.84
5 DETERMINISM	FREQ	29.67	25.33	3.67	0.67	2.33	8.00	10.67	8.67	19.67	10.00
	%	100.00	85.39	12.36	2.25	7.87	26.97	35.96	29.21	66.29	33.71
17 MOLECULARISM	FREQ	27.33	16.33	6.00	5.00	4.00	6.33	9.00	8.00	18.00	9.33
	%	100.00	59.76	21.95	18.29	14.63	23.17	32.93	29.27	65.85	34.15
36 DYNAMICISM	FREQ	26.00	21.00	5.00	0.00	4.67	5.33	6.33	9.67	24.33	1.67
	%	100.00	80.77	19.23	0.00	17.95	20.51	24.36	37.18	93.59	6.41
26 CENTRALISM	FREQ	25.33	21.00	2.67	1.67	9.33	5.33	6.33	4.33	16.67	8.67
	%	100.00	82.89	10.53	6.58	36.84	21.05	25.00	17.11	65.79	34.21
30 QUALITATIVISM	FREQ	25.00	20.00	4.33	0.67	1.33	4.33	6.00	13.33	16.33	8.67
	%	100.00	80.00	17.33	2.67	5.33	17.33	24.00	53.33	65.33	34.67
16 METHODOLOGICAL SUBJECTIVISM	FREQ	24.67	16.00	3.00	5.67	5.33	3.67	5.67	10.00	18.00	6.67
	%	100.00	64.86	12.16	22.97	21.62	14.86	22.97	40.54	72.97	27.03

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2	UNCONSCIOUS MENTALISM	FREQ	22.67	16.00	5.00	1.67	0.00	1.67	3.67	17.33	18.33	4.33
		%	100.00	70.59	22.06	7.35	0.00	7.35	16.18	76.47	80.88	19.12
24	IDIOGRAPHICISM	FREQ	22.00	17.00	3.67	1.33	6.00	3.67	8.00	4.33	17.00	5.00
		%	100.00	77.27	16.67	6.06	27.27	16.67	36.36	19.70	77.27	22.73
11	INDUCTIVISM	FREQ	21.33	20.33	0.67	0.33	3.67	4.67	6.00	7.00	10.00	11.33
		%	100.00	95.31	3.13	1.56	17.19	21.87	28.13	32.81	46.88	53.13
13	MECHANISM	FREQ	21.00	8.33	8.67	4.00	6.33	3.00	3.00	8.67	15.33	5.67
		%	100.00	39.68	41.27	19.05	30.16	14.29	14.29	41.27	73.02	26.98
16	MOLARISM	FREQ	20.67	16.00	4.00	0.67	2.67	4.67	7.00	6.33	15.00	5.67
		%	100.00	77.42	19.35	3.23	12.90	22.58	33.87	30.65	72.58	27.42
20	DUALISM	FREQ	19.67	8.67	7.33	3.67	5.33	3.33	3.67	7.33	16.67	3.00
		%	100.00	44.07	37.29	18.64	27.12	16.95	18.64	37.29	84.75	15.25
12	DEDUCTIVISM	FREQ	19.33	15.00	3.67	0.67	2.33	4.00	5.00	8.00	11.67	7.67
		%	100.00	77.59	16.97	3.45	12.07	20.69	25.86	41.38	60.34	39.66
25	PERIPHERALISM	FREQ	16.67	11.67	3.33	1.67	4.33	4.67	4.00	3.67	9.67	7.00
		%	100.00	70.00	20.00	10.00	26.00	28.00	24.00	22.00	58.00	42.00
35	STATICISM$_2$	FREQ	14.00	8.00	3.33	2.67	1.00	2.00	5.00	6.00	9.67	4.33
		%	100.00	57.14	23.81	19.05	7.14	14.29	35.71	42.86	69.05	30.95
21	NATURALISM	FREQ	13.00	10.67	2.33	0.00	0.67	2.67	4.67	5.00	9.33	3.67
		%	100.00	82.05	17.95	0.00	5.13	20.51	35.90	38.46	71.79	28.21
32	IRRATIONALISM	FREQ	12.00	9.00	2.00	1.00	2.00	3.33	3.00	3.67	9.33	2.67
		%	100.00	75.00	16.67	8.33	16.67	27.78	25.00	30.56	77.78	22.22
14	VITALISM	FREQ	11.33	4.67	2.67	4.00	2.00	1.00	2.67	5.67	9.00	2.33
		%	100.00	41.18	23.53	35.29	17.65	8.82	23.53	50.00	79.41	20.59
19	MONISM	FREQ	11.33	5.33	4.67	1.33	4.00	0.67	2.33	4.33	10.67	0.67
		%	100.00	47.06	41.18	11.76	35.29	5.88	20.59	38.24	94.12	5.88
33	STATICISM$_1$	FREQ	10.67	8.00	1.33	1.33	1.33	2.33	3.00	4.00	4.67	6.00
		%	100.00	75.00	12.50	12.50	12.50	21.87	28.13	37.50	43.75	56.25
31	RATIONALISM$_2$	FREQ	10.00	7.00	2.67	0.33	1.00	2.33	3.00	3.67	7.33	2.67
		%	100.00	70.00	26.67	3.33	10.00	23.33	30.00	36.67	73.33	26.67
8	RATIONALISM$_1$	FREQ	10.00	1.67	4.00	4.33	1.67	0.67	1.00	6.67	9.00	1.00
		%	100.00	16.67	40.00	43.33	16.67	6.67	10.00	66.67	90.00	10.00
6	INDETERMINISM	FREQ	8.33	5.67	1.00	1.67	2.33	1.33	2.33	2.33	7.00	1.33
		%	100.00	68.00	12.00	20.00	28.00	16.00	28.00	28.00	84.00	16.00
22	SUPERNATURALISM	FREQ	7.33	0.00	2.67	4.67	0.00	1.33	1.67	4.33	5.67	1.67
		%	100.00	0.00	36.36	63.64	0.00	18.18	22.73	59.09	77.27	22.73

CORE USAGE   OBJECT CODE=   8528 BYTES, ARRAY AREA=   4608 BYTES, TOTAL AREA AVAILABLE= 164464 BYTES

DIAGNOSTICS   NUMBER OF ERRORS=   0, NUMBER OF WARNINGS=   1, NUMBER OF EXTENSIONS=   0

COMPILE TIME=   1.91 SEC, EXECUTION TIME=   52.06 SEC, WATFIV - VERSION 1 LEVEL 3 MARCH 1971   DATE= 72/182

APPENDIX H

Form of Acceptance of Prescriptions

This appendix considers the relative proportion of explicitly and implicitly accepted prescriptions over time.

Prediction 13: There will tend to be a higher proportion of explicitly accepted prescriptions before 1930 than after, because during the period of the schools of psychology the issues were controversial, whereas afterward psychologists became more tolerant of alternative viewpoints and less likely to defend their own. Therefore, the proportion of implicitly accepted prescriptions will increase as one moves closer to the present.

Figure 22 shows that the form of acceptance of the prescriptions considered together has changed over time: the explicit form of expression has decreased in proportion, while the implicit form has increased. There is a higher proportion of Explicit codings of prescriptions which were accepted before 1930 than after, as predicted, and the proportion of Implicit codings increases as one moves closer to the present. Overall, the relative proportions have changed from about 70% explicit - 30% implicit, to about 55% explicit - 45% implicit. These trends show that the conceptual bases of
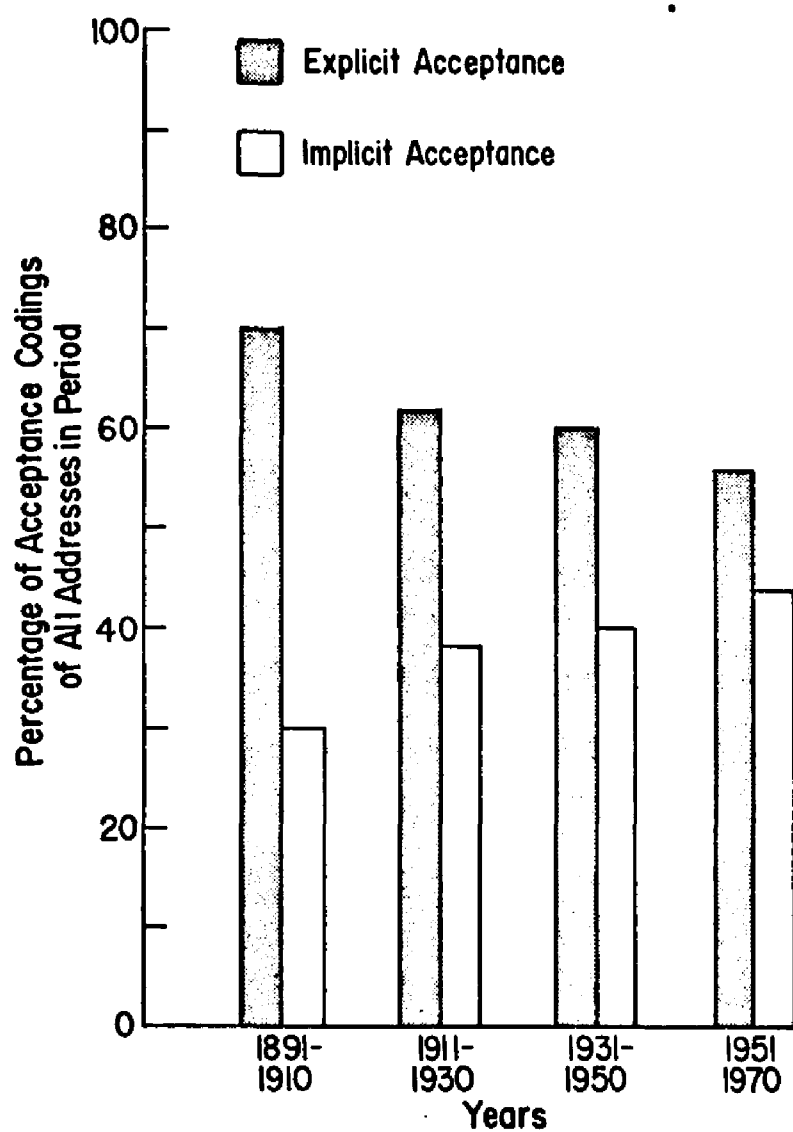
Fig. 22. Explicit and implicit forms of acceptance of 36 prescriptions coded in 75 APA presidential addresses by three judges.

American psychology are becoming more and more deeply

ingrained.

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