

---

## Paul Everett Meehl: The Cumulative Record



**Niels G. Waller**

*University of Minnesota–Twin Cities*



**Scott O. Lilienfeld**

*Emory University*

In this brief biographical sketch of Paul Meehl, the authors examine the “cumulative record” of his scholarship and mentorship. This record sheds light on why Meehl is widely regarded as one of the most influential clinical psychologists of the 20th century, as well as on Meehl’s remarkable intellectual life. Time has proven that Meehl’s writings are exceptional in their quality, influence, breadth, and depth. In addition, Meehl’s cumulative record raises important questions regarding the reinforcement contingencies in major research-oriented psychology departments. © 2005 Wiley Periodicals, Inc. *J Clin Psychol* 61: 1209–1229, 2005.

Keywords: Paul E. Meehl; clinical psychology; Minnesota Multiphasic Personality Inventory; clinical prediction; statistical prediction, constructs; construct validity; psychopathology; schizophrenia; taxometrics; statistical significance testing

---

In 1996, the American Psychological Association (APA) celebrated its 100th anniversary and presented Centennial Awards to two psychologists who made “the greatest lifetime contribution to clinical psychology.” One of these two awards was given to Paul Everett Meehl, professor of clinical psychology, psychiatry, philosophy, and law at the University of Minnesota. The second was given to Hans J. Eysenck. Sadly, both men would die within 10 years of receiving this prestigious honor. Eysenck passed away on September 4, 1997. Paul Meehl died on February 14, 2003.

---

The authors wish to express their deep appreciation to Ms. Gwen Rekerdres for research assistance and to Drs. Leslie Yonce and David Lubinski for helpful comments on drafts of this article. We also extend a warm “thank you” to the many individuals who shared their memories of Paul Meehl.

Correspondence concerning this article should be addressed to: Niels G. Waller, Psychology Department, N657 Elliott Hall, 75 East River Road, Minneapolis, MN 55455-0344.

On the occasion of Meehl's death, two other notable psychologists, Dante Cicchetti (himself one of Meehl's PhD students) and Stephen Hinshaw (2003), observed that "[w]ith the passing of Paul E. Meehl . . . the world lost one of the most influential clinical psychologists of the 20th century" (p. 497). A snapshot of Meehl's many influences on our field can be found on his Centennial Award:

We consider that you are one of the greatest contributors to the field of clinical psychology during its first century. Your 1954 book on clinical versus statistical prediction promoted empirical rigor in a field overly dominated by armchair theorizing. Your 1955 paper (with Cronbach) on construct validity provided its necessary theoretical complement. Your 1962 paper on schizotaxia, schizotypy, and schizophrenia helped correct the overemphasis on the social environment that was characteristic of thinking about severe mental disorders at that time. Since then, you have led those in our field in considering how to speed the heretofore slow progress in "soft" psychology.

Throughout his long and distinguished career, Paul Meehl received numerous honors and awards for his research and publications. His vita contains no less than 22 awards, honorary doctorates, and citations. Considering this level of professional recognition, one wonders why so little has been written about Meehl's personal and professional life (cf. Eysenck, 1980, 1990, 1991; Gibson, 1981). Perhaps this dearth of historical material is due to a unique aspect of Meehl's brilliance, namely, his tendency to pursue some of the thorniest questions in psychology, philosophy of science, and many other fields (often from the armchair) without regard to the artificial boundaries of a modern education. Consequently, for a reader to fully grasp a Meehl publication often requires more than a cursory knowledge of a half dozen academic subjects, such as psychiatric nosology, personality theory, philosophy of science, history of science, political history, statistics, mathematics, jurisprudence, and theology, to name but a few of the many areas in which Meehl felt at home. Few clinical psychologists are up to the task.

The modal modern academic is a specialist who has little time to read outside of his or her highly specialized area (see Wilson, 1998). In contrast, Meehl was the paragon generalist who worked in an age in which the intellectual Renaissance Man<sup>1</sup> was still highly valued by the academy. Because Meehl's curiosity was the engine that powered his intellectual journeys, he had scant concern for academic popularity contests, institutional power, or political correctness. Those who knew Paul soon realized that his insatiable desire to understand all things intellectual was coupled with a brilliant mind and an almost infallible memory. Due to his unique talents and predilections, Meehl often tackled research questions far from the purview of the traditional clinical psychologist (e.g., the evidentiary support for evolutionary theory; Meehl, 1983a).

Not surprising, Meehl's interests also cut across the artificial divisions of modern psychology. For instance, he authored citation classics on learning theory (MacCorquodale & Meehl, 1948, 1953; Meehl, 1945b, 1950; Meehl & MacCorquodale, 1951), objective personality assessment and diagnosis (Meehl, 1945a, 1945c, 1946; McKinley, Hathaway, & Meehl, 1948), actuarially based (automated) test interpretation (Hathaway & Meehl, 1951; Meehl, 1956; Meehl & Dahlstrom, 1960), clinical versus statistical prediction (Meehl, 1954, 1956, 1957b; Dawes, Faust, & Meehl, 1989; Grove & Meehl,

---

<sup>1</sup>Commenting on this aspect of his character, Meehl remarked, "Now all this 'Renaissance man' syndrome may be good or ill—the bright students rather like it for a change—but one cannot do it without sacrificing time from empirical research. I have chosen to do so, despite experiencing twinges of scientific guilt about it. . . . Certainly it is not a safe model for a young psychologist to emulate, and I am careful to point that out to those who identify too strongly with me" (Meehl, 1989b, p. 374).

1996), the etiology and phenomenology of schizophrenia (Meehl, 1962c, 1972, 1989d, 1990c), taxometric methods (Meehl, 1973a, 1992a, 1995, 1999, 2001, 2004; Meehl & Golden, 1982; Waller & Meehl, 1998), psychoanalysis (Meehl, 1970c,<sup>2</sup> 1983c, 1993), test validation and construct validity (Cronbach & Meehl, 1955), and the limits of statistical significance testing in theory appraisal (Meehl, 1967, 1978c, 1990a; Meehl & Waller, 2002). We know of no other psychologist with such a diverse publication record.

One source of this diversity was undoubtedly his attitude toward truth seeking, an intellectual outlook that forbade Meehl from prejudging a topic before considering the full weight of the evidence. In our experience, Meehl never hesitated to tackle a question considered risqué or outré by his academic brethren. For instance, early in his career, after reading literally hundreds of books on Christian and Eastern theology, Meehl authored several articles and a highly regarded book on the influence of religion on psychological health (e.g., Meehl, 1957a, 1965; Meehl, Klann, Schmieding, Breimeier, & Schroeder-Slomann, 1958). He also wrote articles on parapsychology for *Science* and the *Encyclopedia Britannica* (Meehl, 1962a, 1978a, 1978b; Meehl & Scriven, 1956). Finally, years later, Meehl challenged one of the icons of modern science: evolution by natural selection (Meehl, 1983a). Meehl's doubts concerning the verisimilitude of evolutionary theory were not motivated by religious dogma nor by any embrace of "scientific creationism," which he disdained. On the contrary, after reviewing the evidence from a statistical standpoint, Meehl concluded that there were too many missing branches on the evolutionary tree to regard evolutionary theory as confirmed beyond a reasonable doubt. Commenting on his eclectic interests, Meehl noted,

Scanning my publication list, I come up with some pretty strange creatures. I find papers that I am proud of for their high-level conceptualization, but which few psychologists have read or even heard of. Examples: several papers on the metaphysical mind/body problem; an article with Michael Scriven in *Science* on the compatibility of science and ESP; a paper with Wilfred Sellars on the philosophical concept "emergence"; a paper on the relation between religion and mental health; a paper on the treatment of guilt feelings, delivered to the American Catholic Psychological Association; the article on parapsychology in the *Encyclopedia Britannica*; a paper on Feigl's mind/body identity thesis, which some able philosophers have told me is one of the best they have ever read on this subject; articles in law reviews on the insanity defense, civil commitment, relations of clinical psychology to delinquency; a paper with Feigl on determinism and freedom; two papers in a philosophy journal on the problem of distinguishing psychokinesis from precognitive telepathy; an article in the *American Political Science Review* on a paradox in voting behavior, calling into question the currently fashionable econometric analyses of why people vote as they do or why it is rational to bother voting at all; and an article on statistical procedures for estimating the completeness of the fossil record. (Meehl, 1989b, p. 370)

We hope that this brief review of Meehl's work provides readers with a small taste of the richness, breadth, and complexity of his thinking. Obviously, when summarizing a brilliant career in a short article, biographers are forced to omit many important facts. Indeed, a thorough survey of Meehl's life would surely fill several volumes. Thus, our admittedly modest goal in this article is to highlight a few important milestones of Meehl's cumulative record and to share some anecdotes and memories from individuals who were fortunate to know Paul Meehl during his lifetime.

---

<sup>2</sup>This has been reprinted in *Psychological Issues*, 1973, 8, 104–115 as well as in Anderson, C.A., & Gunderson, K. (Eds.). (1991). *Meehl, Selected philosophical and methodological papers* (pp. 272–283). Minneapolis: University of Minnesota Press.

### The Iconoclast as a Young Man

We would be remiss not to mention that Meehl (1989b) wrote an autobiographical chapter for Lindzey's *A History of Psychology in Autobiography*, in which he recalled many formative incidents from his childhood and later years. Rather than repeat that colorful material here, we recommend to the reader Meehl's highly informative and often amusing account of his life. To set the stage for our own account of the *wunderkind*, we begin this story by noting that Meehl was an unusually precocious child who displayed signs of brilliance at a very young age. In his own admittedly immodest words, Meehl confesses, "I was aware of my intellectual superiority by age six" (Meehl, 1989b, p. 338). The following story from Dr. Leslie Yonce, Meehl's wife of 30 years, illustrates just how advanced Meehl was when compared with his same-aged peers.

When he was a little boy, Paul once meticulously copied pictures of the heart, lungs, stomach, spleen, liver, etc., from an encyclopedia and carefully colored them with his crayons and cut them out. He persuaded his mother to cut a slit in the belly of his stuffed elephant so he could insert the organs, and then had her stitch it up again. He proceeded to play doctor, repeatedly operating on his elephant for one thing or another and getting his mother to restitch the "surgical incision." (L. Yonce, personal communication, June 14, 2004)

#### *From Surgery to Psychology*

Eventually the young surgeon matured into a young man and, at the age of 18, Paul Meehl entered the University of Minnesota with the intent of becoming a medical doctor—or as Paul would say, "a sawbones." These career ambitions changed, however, and Meehl transferred his intellectual passions to the psychology department, which boasted a collection of some of the world's most renowned psychologists. As an undergraduate, Meehl studied with some of the brightest minds in psychology, such as B. F. Skinner (language, theoretical), D. G. Paterson (individual differences, vocational), C. Bird (abnormal, social), W. T. Heron (learning, comparative), K. E. Clark (psychometrics, attitude measurement, polling), M. A. Tinker (experimental, history), K. H. Baker (laboratory, advanced general), H. P. Longstaff (personnel, advertising), and Starke Hathaway (physiological). It was also during this period that Meehl enrolled in his first philosophy classes and began a lifelong friendship with the recently transplanted logical-empiricist from Vienna, Herbert Feigl (Feigl & Meehl, 1974).

Meehl's brilliance was quickly recognized by his teachers and fellow students. When his reputation had spread across campus, he was invited to join an elite fraternity of brilliant minds known as the Jacobin Club. Meehl spoke of the Jacobin Club in the initial draft of his autobiographical chapter (Meehl, 1989b) but deleted this material to conserve space. He originally wrote,

[As an undergraduate I] joined a sort of "anti-fraternity" called the Jacobin Club, which had no house, was the only group that admitted Jewish members, and was decidedly left of center, although we did have two "liberal Republicans" as members. The main thing, other than being intellectually interesting to talk with, that you had to have to get into the outfit was brains and a manifestation of them in having an extremely high academic average. Every spring the student newspaper would carry an article on the grade point averages of fraternities and the Jacobins always came out way ahead of everybody else, being almost straight A students. We met weekly, in the student union for meals; we sometimes went out for beer and had discussions on a variety of topics. (P. Meehl, personal communication)

The Jacobin Club (the name was derived from a radical political group during the French Revolution) was founded by a small cadre of young Turks who would later go on

to brilliant careers. One of the founders of the club was the famous CBS newscaster, Eric Sevareid. Other prominent Jacobins included Dick Scammon, who later headed the U.S. Census Bureau, Lee Loevinger, who became a state Supreme Court justice, and Art Naftalin, who served as mayor of Minneapolis for four terms.

Within psychology, Meehl found several like-minded souls among his student peers. For instance, William K. Estes, a colleague during this period who later became a prominent learning theorist and editor of *Psychological Review*, had this to say about those heady times:

Paul and I were undergraduate classmates, as you know, and I recall those days mainly regarding the outrage from Paul when I occasionally tied him for top of an exam distribution, which probably didn't happen very often . . . My main global memory of Paul's and my undergrad period is the unequaled, in my experience, intellectual level of our classmates in the psychology department, a level that heavily reflected the weight of Paul's presence. (W.K. Estes, personal communication, April 25, 2003)

Shortly before his death (July 1, 2003), the noted psychologist John B. Carroll recalled these memories of Meehl:

I knew Paul Meehl briefly in about 1940 (or possibly earlier) when I was finishing my student life at the University of Minnesota. To me, the interesting thing about Paul Meehl is that he gained a reputation for brilliance and force of character even when he was still an undergraduate—in this respect, surpassing the accomplishments of most people who were still graduate students. (J. B. Carroll, personal communication, April 12, 2003)

Meehl stayed on at Minnesota for graduate study, choosing to work with Starke Hathaway on the Minnesota Multiphasic Personality Inventory (MMPI). Under Hathaway's supervision, he developed the MMPI K (Subtle defensiveness) scale for his doctoral dissertation (Meehl & Hathaway, 1946). By continuing at Minnesota, Meehl joined an unusually gifted cohort of graduate students that included Frank Baron, Keller and Marian Breland, John B. Carroll, George Collier, William K. Estes, Norman Guttman, Howard F. Hunt, Kenneth MacCorquodale, and William Schofield. Schofield, a major figure in the field of psychotherapy, had this to say about his first encounter with Meehl:

I came out to Minnesota to start graduate study in psychology in the Fall of 1942. Professor Donald G. Patterson was my first advisor and in September, I was in a conference with "Pat" when a young man with shoulder-length straight blond hair stuck his head in and he and Pat had a brief exchange. I thought the young man was a music student who needed to be directed to nearby Scott Hall. After the exchange, Professor Patterson said, "That was Paul Meehl—he's a genius." I thought this appraisal must have been based on the results of psychometric testing, but Paul's evolving career validated Pat's diagnosis. (W. Schofield, personal communication, March 4, 2003)

Four years after starting graduate school, Paul Meehl was awarded a PhD in Clinical Psychology with a Minor in Neuropsychiatry. At the time (1945), Meehl was 25 years old, one year younger than the average graduation age for future presidents of the APA (Meehl was APA president from 1962–1963; Lyons, 1968).

#### Paul Meehl, University Professor

##### Early in his life, Meehl

. . . decided to become a college professor, which troubled the high school counselor because I hadn't chosen what to profess. I said that I might do psychiatry, psychology, philosophy, or

statistics, but whichever it was, a professor I would be. It seemed clearly the only life for my sort of person, and he couldn't dissuade me from that conviction. (Meehl, 1989b, p. 342)

Years later, during his final year of graduate study, Meehl realized his dream and was hired by the University of Minnesota as an Instructor in the Departments of Psychology and Neuropsychiatry (1944). When he obtained his PhD in 1945, Meehl's position was upgraded to Assistant Professor of Psychology. Meehl stayed in this department for his entire career. He was promoted to Full Professor in 1952 and he served as the department's chairman for 6 years (1951–1957).

Throughout his Minnesota tenure, Meehl held joint appointments in other campus departments. For instance, he held adjunct professorships, and lectured regularly, in the Schools of Law (jurisprudence; see Livermore & Meehl, 1967; Meehl, 1970b, 1989a) and Medicine (psychiatric nosology). Moreover, he was a founding member of the Minnesota Center for Philosophy of Science, a faculty member in the university's Philosophy Department, and the author of numerous papers on philosophical topics (Feigl & Meehl, 1974; Meehl, 1966, 1970a, 1989c, 1992b; Meehl & Sellars, 1956;). Table 1 summarizes the many courses that Meehl taught over his almost 60-year teaching career at the University of Minnesota.

A teacher's effectiveness is difficult to quantify. In an academic environment in which students choose their advisers, a crude index of effectiveness might be the total number of advisees that a professor supervised divided by the total number of years that this professor has served (students often shy away from advisors with poor reputations, although weak students often gravitate toward lenient advisors). Another measure of effectiveness—one that is more difficult to quantify—is the number of advisees that go on to prominent careers. Using either indicator, Paul Meehl was a highly successful mentor. Over the approximately 50-year period that Meehl accepted graduate students, he supervised 48 students who went on to complete a PhD. He also served on the dissertation

Table 1  
*Courses Taught or Co-Taught by Paul E. Meehl at the University of Minnesota*

Department	Subject
Law School	Psychology, Psychiatry, and Law (Law School, Medical School)
Law School	Jurisprudence (Law School)
Philosophy	Philosophical Problems of Psychology (Philosophy Department)
Psychiatry	Psychology for Medical Students
Psychiatry	Psychology for MDs in Psychiatry Residency
Psychiatry	Psychotherapy for MDs in Psychiatry Residency
Psychology	General Psychology
Psychology	Introductory Laboratory Psychology
Psychology	Personality Theory
Psychology	Systematic Psychology
Psychology	Psychotherapy for PhD candidates in Clinical Psychology
Psychology	Clinical Psychology (Psychodiagnosis)
Psychology	Forensic Psychology
Psychology	Proseminar: Issues in Clinical Psychology
Psychology	Philosophical Psychology
Psychology	Classification in Psychopathology
Psychology	Taxometrics Seminar

committees of scores of other students (including the second author of this article). Among the 48 individuals who finished under Meehl's wings, we find numerous well-known research psychologists and clinicians. A sampling of names is displayed in Figure 1, which is a plot of the cumulative number of graduate students who worked directly under Meehl's guidance over his career.

Several aspects of Figure 1 are noteworthy. The most striking feature of the plot is the number of recognizable names. To keep the plot uncluttered, we selected only a few names from the list of distinguished students who worked under Meehl. We acknowledge that our list is selective and that many other Meehl students merit recognition. (We apologize to all those who are not included in the figure.)

Another striking feature of the plot is the linearity of the cumulative tally of students. Note that the cumulative count is well approximated by a straight line. This tells us that Meehl graduated a consistent number of PhD students on a yearly basis. Specifically, each year an average of 1.23 ( $SD = 1.71$ ) Meehl advisees obtained their PhD. This is a remarkable record when one considers the quality of Meehl's students.

To acquire a better sense of the types of questions that Meehl and his students tackled during these years, we conducted a word frequency count on the 48 dissertation titles from those students who worked under Meehl. The results of this analysis were fascinating. The 12 most highly used words (excluding nondenoting terms such as "and," "a," and "the") in dissertation titles were personality, psychiatric, study, psychometric, prediction,

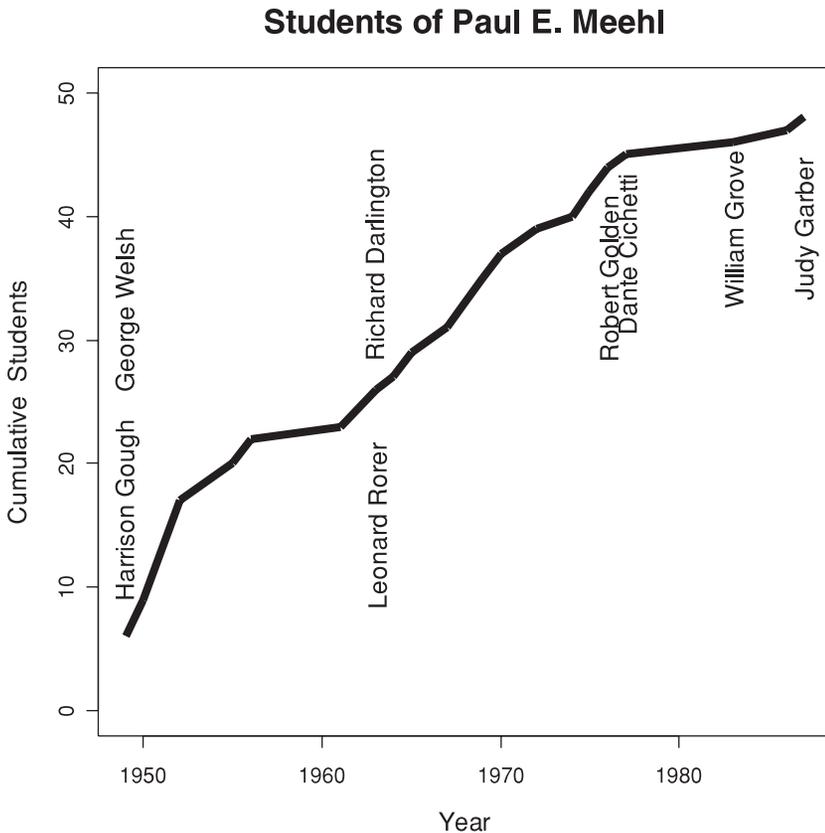


Figure 1. Cumulative number of graduate advisees of Paul E. Meehl.

MMPI, development, patients, investigation, test, schizophrenics and depression. Clearly, these words represent themes that occupied Meehl throughout his career.

Our word frequency analysis might convey the impression that all of Meehl's students worked on similar projects relating to psychopathology and nosology. That impression would be wrong, as shown by a simple scan of the dissertation titles. The dissertations display a diversity of themes that is well captured by these examples: "Personality Correlates of Social and Ethnic Attitudes Among High School Students" (Harrison Gough, 1949); "Studies in Motivation and Conflict in the Rat" (Alexander Buchwald, 1952); "Increasing Test Validity Through the Use of Interitem Correlations" (Richard Darlington, 1963); "Nystagmus and Arousal in Compensated Schizophrenics" (Raymond Gustaf, 1967); "The Seven Deadly Sins: Their Meaning and Measurement" (Donald Backus, 1969); and "A Criticism of Statistical Significance Testing Methodology in Psychology with Suggestions for an Alternative Approach to a Theory of Scientific Methodological Rationality Based in Part on a Psychological Theory of Knowledge" (William Hazelett, 1975).

As an advisor, by all accounts, Meehl was a decidedly "hands off" mentor who had little interest in the bureaucracy of university guidelines or in graduate student "hand-holding." This is not to say that Meehl was a distant or absent advisor. To the contrary, his door was always open to students in search of intellectual stimulation. Moreover, he would frequently spend hours at a time with an advisee (or any other graduate student, for that matter), who paid him a visit. One of Meehl's last students, William Grove (PhD, 1983), recalled his advisor as follows.

I had a most un-advisor-like experience of Paul as advisor; we didn't really collaborate on research, papers, or even my dissertation. Instead, we met frequently ad hoc to chat about a wide range of topics, sometimes triggered by increasingly frequent "Meehl-o-grams" (memorandum forms sent to one or more people at the U or elsewhere), containing summarized arguments or, more often, a query: Do you know where Fisbee discusses ABC? Where's this Freud quote come from? Suppose the following statistical-epistemological situation obtains—do you think XYZ is true, and do you think you can prove it? We would argue (to the extent that we could—I have a similar temperament to his, our approach to argumentation was similar, and my interests were almost entirely a subset of his—I always thought of myself, I hope not too immodestly, as kind of like a junior Paul Meehl, but without the brains) about the merits of some psychological theory, how to establish (or disprove) some proposition in philosophy of science or taxometrics, or about the viability of some ethical system. We had as much fun as you can have with your clothes on. (W. Grove, personal communication, June 10, 2004)

### Meehl's Cumulative Impact as a Researcher

Outside of Minnesota, Meehl is known primarily as the author of numerous classic articles on constructs and construct validity (e.g., MacCorquodale & Meehl, 1948; Cronbach & Meehl, 1955), psychopathology (e.g., Meehl, 1962c), taxometrics and classification (e.g., Meehl, 1973a; Meehl & Golden, 1982), and statistical significance testing and its shortcomings (e.g., Meehl, 1978c), as well as a classic book on clinical judgment and prediction (Meehl, 1954).<sup>3</sup> To some, it appeared that Meehl produced classic publications at will and that manuscripts flowed effortlessly from his pen. Such an impression is erroneous. Meehl often spent years thinking and working on a problem before publicizing his views, and in his study and files are numerous notebooks and project folders with notes, memos, and manuscripts in various stages of completion. After mulling over a

<sup>3</sup>This has been reprinted as Meehl, P.E. (1996). *Clinical versus statistical prediction: A theoretical analysis and a review of the evidence* (New Preface). Lanham, MD: Rowan & Littlefield/Jason Aronson.

question from all conceivable angles (logical, philosophical, and mathematical), Meehl would dictate an initial draft of an article (years ago, he recorded onto magnetized belts—“dictabelts”, later onto small cassette tapes, and most recently onto a digital recorder). These dictation sessions often occurred upon his return from a walk (for years, his “round trip” was 5 miles), which he took daily when he could. These walks were important for Paul’s intellectual life, pacing or walking facilitated thinking for him. He tried out different ways of optimally expressing ideas as he went, a (kindly tolerated) practice that gave him a reputation for talking to himself. (A new neighbor once told his own wife he had seen Paul standing and staring out at the river and wondered if he should have offered him a ride. The woman, who had known Paul much longer, asked, “Was he talking?” “Yes.” “Then he’s all right.”) Persons who collaborated with Meehl were frequently amazed by the clarity and organization of his first drafts; but the copy they saw had usually been edited at least once. Manuscripts might go through 10 or more carefully numbered drafts, older ones always relegated to a study cupboard to be saved until an article was finally published, in case something needed to be checked against an earlier draft. Paul worked with a clean desk; everything was immediately returned to files, bookshelves, or assigned places on a credenza each time he stopped work.

In Figures 2 and 3 we examine Meehl’s publication record from two perspectives. First, we consider the quantity of his publications. At the time of his death, Meehl had published 181 articles and books (several articles have been posthumously accepted for publication). When viewed over his career, one of the most striking features of this record

### Cumulative Publication Record of Paul E. Meehl

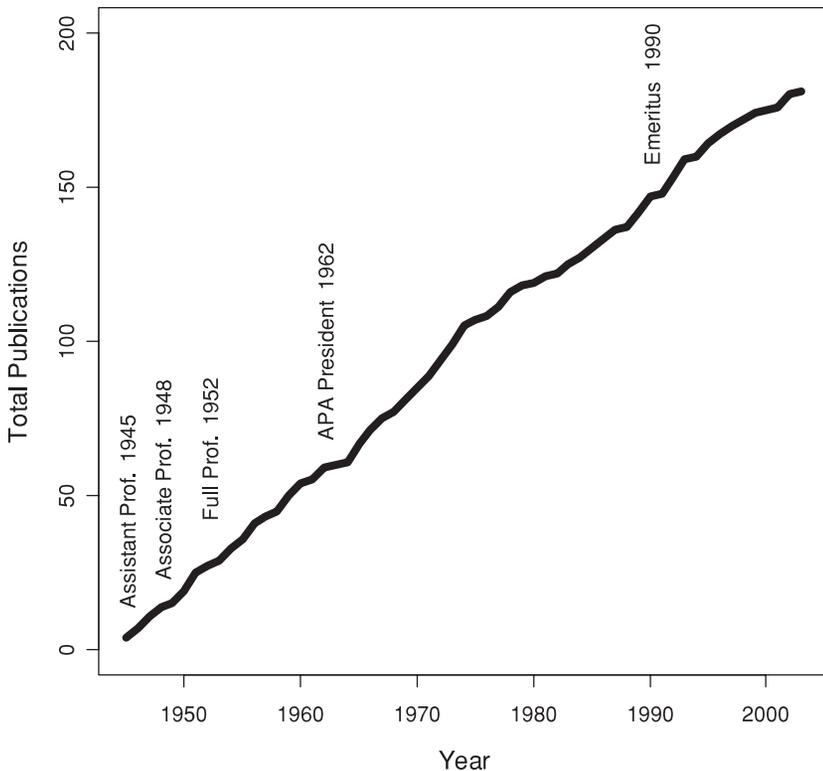


Figure 2. Cumulative publication record of Paul E. Meehl.

is the consistency of Meehl's publication rate. As illustrated in Figure 2, Meehl published his first article in 1945 ("The Dynamics of 'Structured' Personality Tests"), after which he continued to publish approximately 3.23 ( $Mdn = 3.00$ ,  $SD = 1.57$ ,  $Min = 1$ ,  $Max = 6$ ) articles per year. He maintained this rate for over 50 years even in the face of competing demands such as the APA presidency (although his presidency corresponds with a slight dip in the graph). Note that Meehl published well after his retirement from university service (Meehl continued to teach his most famous course, Philosophical Psychology, for an additional 13 years after becoming Professor Emeritus in 1990).

Focusing on publication counts, however, fails to convey the quality of Meehl's ideas and the impact of his writings. Although quality judgments are necessarily subjective, we have followed the lead of others (Myers, 1970; Rushton, 1984) by using citation counts as a rough gauge of professional impact. For the analyses reported below, we consulted the Web of Science and tallied all citations for "P.E. Meehl," "Meehl," "P. Meehl," "P.E. Mehl," "B.E. Meehl," and "B. Meehl." (By inspecting article titles, we confirmed that the last three names, although typographical errors, corresponded to articles written by Paul Everett Meehl.) Citations were included in the aggregate tally if the publication year corresponded to an entry in Meehl's curriculum vitae. Although no method of counting citations is without error, our tallies should provide a reasonably accurate picture of Meehl's influence on his colleagues.

Using citation counts as a measure of professional impact, Figure 3 illustrates Meehl's publication record from another perspective. The  $x$ -axis in the figure reports Meehl's age

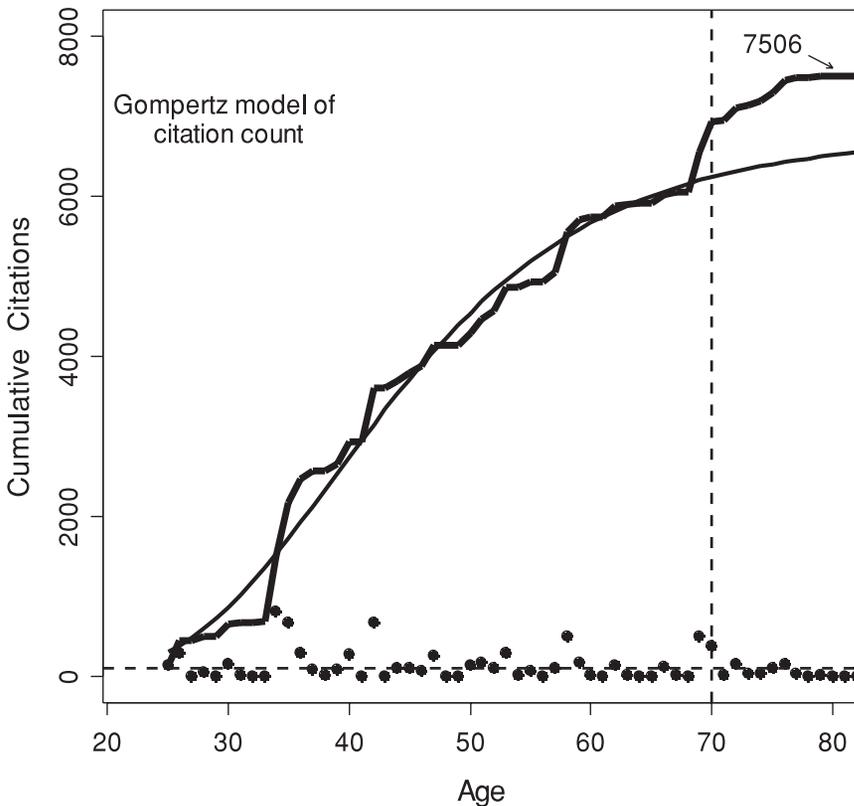


Figure 3. Cumulative citation count of Paul E. Meehl.

and the y-axis reports the cumulative citation count for all articles that were published before a specific year (i.e., age). Black circles (representing articles) that fall above the dashed line at the bottom of the plot indicate works that have been cited more than 100 times (*citation classics* by traditional definition). On average, each article or book has been cited 129.4 times ( $Mdn = 56$ ,  $SD = 184.26$ ,  $Max = 814$ ). These numbers are of course lower-bound estimates.

The figure also includes two monotonically increasing lines: a jagged line and a smooth line. The jagged line depicts the cumulative citation count by year. Note that by the end of his career, Meehl had tallied *at least* 7,506 citations. The smooth line in the figure represents a Gompertz curve fitted to the cumulative tallies. We fit a Gompertz curve because this model is often used to describe a self-limited growth process in which growth decreases exponentially with time. Many systems that exhibit growth are well described by a Gompertz curve. Indeed, the model successfully approximates Meehl's cumulative citation count between ages 25 and 70 (the latter being the age at which Meehl retired from university service). Note, however, that Meehl clearly beats the model in his later years. In other words, Meehl's influence continues to grow and shows no sign of diminishing. (Articles published more recently have lower citation counts because of publication time lags.)

Did Meehl exhibit "hot streaks" or years characterized by relatively greater intellectual vigor and output? We addressed this question by taking a closer look at the citation counts for the 160 (of 182) articles or books that we located in the Web of Science. According to our previous definition in which a citation classic is operationalized as an article or book cited 100 or more times, 19 of Meehl's publications qualify as classics. Did these classics appear at random points during Meehl's career or did the publication of one classic increase the conditional probability that a second classic would soon follow? If the latter scenario were correct, we would observe a phenomenon analogous to the "hot-hand" effect in sports (which appears to be illusory, at least in basketball; Gilovich, Vallone, & Tversky, 1985). Hot-hand questions can be investigated with a Wald-Wolfowitz Runs test on dummy-coded sequences of hits or misses. Depending upon context, a "hit" is defined as a basket in basketball, a home run in baseball, or in our case, a citation classic in academic publishing. Our analysis of Meehl's citation record produced no support for the hot hand (or "hot brain") hypothesis (runs test  $z = -.079$ ,  $p = .937$ ). In other words, the evidence indicates that Meehl was a steady producer of classic articles and that each article had a 12% probability of becoming a citation classic.

### Professional Recognition

Earlier we noted that Meehl's curriculum vitae lists 22 entries under the heading, "Honorary Societies and Honors." By the end of his career, he had been awarded virtually every honor available to a psychologist. Figure 4 displays a cumulative record of these awards and lists the eight awards from the APA. Other awards given to Meehl include honorary doctorates and invitations to join the American Academy of Arts and Sciences (1965) and the National Academy of Sciences (1987). Space limitations preclude us from discussing all of these awards in detail.

### Paul Meehl: The Cumulative Record

When speaking of Paul Meehl the word "genius" invariably creeps into the conversation. Over the years many individuals have told us, rather matter-of-factly, that Paul Meehl

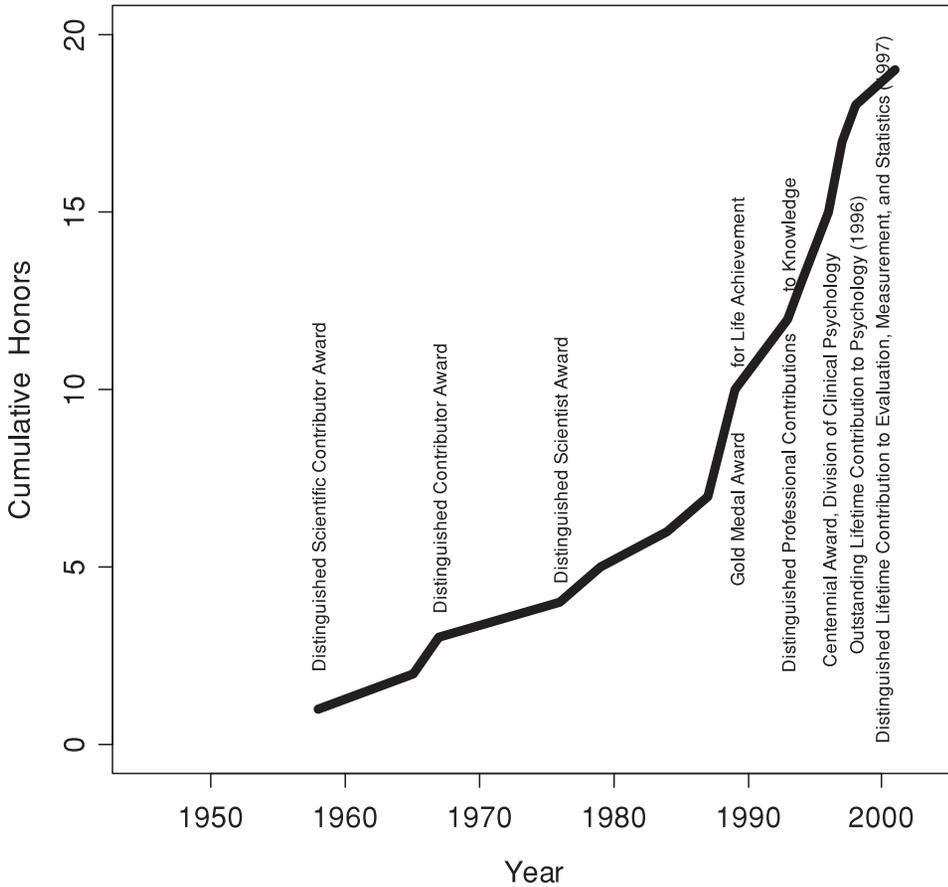


Figure 4. Cumulative academic honors of Paul E. Meehl.

was not only a genius, but he was the smartest individual they had ever met. Paul Meehl was undoubtedly blessed with good genes, but he was not merely the passive recipient of quality DNA. Like many intellectually gifted persons, throughout his life, Meehl sought out and created environments that fostered his intellectual growth (see Benbow & Stanley, 1996; in behavior genetics this phenomenon is called *active genotype–environment correlation*; Scarr & McCartney, 1983).

For instance, upon entering college Meehl quickly *recognized* the talent pool in the Minnesota Psychology Department and realized that his gifted professors could guide him in his quest to understand the human mind (Allison & Long, 1990). Meehl also continued his formal education well after receiving his doctorate. For instance, while engaged in the myriad activities of an assistant professor, Meehl enrolled in advanced mathematics and logic courses. (Meehl's curriculum vitae notes that he enrolled in advanced mathematics courses for 7 years post doctorate.) Meehl continued to hone his skills in these areas because of a deep-seated belief in the importance of mathematics for all sciences, including the behavioral sciences. In his Cattell Award address to the APA, Meehl bemoaned the poor mathematical skills of most psychologists and stated, "I see no excuse, given the history of the other sciences and the relative rate of progress of various fields of psychology, for the abysmally poor mathematical education that we require of our students." (Meehl, 1998a, p. 9)

Later he suggested that

The failure of some in our profession to recognize solutions to quantitative problems or to apply them to controversies is partly due to self-selection in the social sciences for poor quantitative talent; but in psychology, it is even more due to the lamentable lack of mathematical education of psychology majors. I had to learn the slight mathematics I know by taking 23 credits of college algebra, analytic geometry, differential and integral calculus, and probability theory . . . Students have lots of pressures and demands, they have to set priorities; and most humans are happier to take the easy way, which never means mathematics. A senior planning to go to graduate school contemplates his advisor, a tenured professor who never took college algebra and doesn't know what a partial derivative is or the inverse of a matrix. The student thinks, "Well, he seems to have done very well, and writes these articles and books without knowing any math, so why should I bother with it?" (Meehl, 1998a, p. 11)

Meehl's lifelong habit of voracious reading was another way in which he broadened his knowledge throughout his career. To say that Meehl was a bibliophile would be a massive understatement. Meehl read prodigiously across a wide array of topics and notes in his autobiography that

. . . during my dozen years as a Lutheran, I read over 300 treatises on theology. When I was on the Law School faculty I read more books and articles on jurisprudence and the appellate decision process than any of my law colleagues had done (e.g., none of them had suffered through Roscoe Pound's six-volume *Jurisprudence*, but I did). (Meehl, 1989b, p. 374)

As luck would have it, we can take a closer look at Meehl's reading habits over the past 30 years because of his predilection for lists and organization. According to his Excel files labeled *Fiction.xls* and *NonFiction.xls* (maintained by his wife, Leslie Yonce) Meehl read at least 1,227 fiction and 4,078 nonfiction books between 1973 and 2003. This list does not include any of the journal or textbook reading that Meehl undertook as part of his job. Considering the sheer number of books on this list, one wonders how any mortal could have achieved this feat, which translates into reading one book every 2 days. A personal note at the top of one of the Excel files provides a clue: "PEM reading speed 5/98: 300 page book, middle difficulty, no math—8 hours." In other words, Meehl was an extremely fast reader. Moreover, he read continually and rarely watched television or read the newspaper. Although his reading speed was impressive, perhaps the most remarkable aspect of Meehl's reading habits was the diversity of subjects that captured his eye.

Figure 5 provides an inkling of just how broadly Meehl read. To construct this figure, we randomly sampled 300 entries from Meehl's list of fiction books and 300 entries from his list of nonfiction and classified each book according to its Library of Congress designation. Weighted proportions were used for Figure 5 to take into account the relative number of fiction and nonfiction books in Meehl's master lists. As can be seen, without consciously attempting to do so, Meehl read books—often hundreds of them—from virtually every category used by the Library of Congress. According to this analysis, he seemed to prefer categories B: Philosophy, Psychology, and Religion; D: History (General) and History of Europe; E: American History; H: Social Sciences; P: Language and Literature; and Q: Science. He read very few books on agriculture.

Paul read much on a daily basis that was not recorded in his reading list (e.g., from scholarly publications and his personal reference books). The high column for P in Figure 5 might suggest that he spent more reading time on fiction than was true. Of course, fiction books were read more quickly than most other material. Finding "good" fiction was a challenge for Paul. Once he returned from a walk (the turnaround point of which was St. Thomas University in St. Paul, where he often visited the library before starting

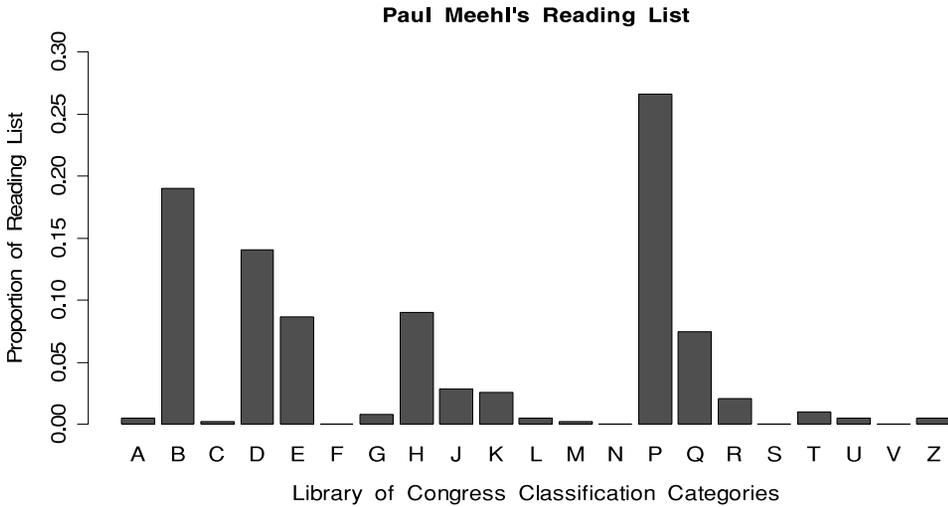


Figure 5. Paul Meehl's reading habits. A = General Works; B = Philosophy, Psychology, Religion; C = Auxiliary Sciences of History; D = History (General) and History of Europe; E = History: America; F = History: Local; G = Geography, Anthropology, Recreation; H = Social Sciences; J = Political Science; K = Law; L = Education; M = Music and Books on Music; N = Fine Arts; P = Language and Literature; Q = Science; R = Medicine; S = Agriculture; T = Technology; U = Military Science; V = Naval Science; Z = Bibliography, Library Science, Information Resources (General).

home again) and reported happily that he had devised a scheme for finding good fiction. He would go to the literature section, select a book randomly, and start reading; if it held his interest enough to keep reading past the first page, he would bring the book home. He ultimately found many good books by this method. Anything he brought home was subject to his 25-page rule: If he was not engaged ("grabbed" was his word) by a book by the time he had read 25 pages, he simply quit. (Earlier in life, he would give a book 50 pages, but after about age 70, he decided 25 pages were sufficient.) Sampling in the literature section also put him in the way of biographies of writers, and he often selected those. He had favorite books that he reread from time to time; some of these were Hesse's *The Glass Bead Game*, P. C. Wren's *Beau Geste*, and Crawford Power's *The Encounter*. "Merely going into a library had a positive, mellowing effect on Paul. More than once, I took him for 'library therapy' to cheer him up or soothe away irritation, depending on what was needed." (Leslie J. Yonce, personal communication, July 3, 2004)

#### Who Was Paul Meehl?

Although our quantitative analyses shed considerable light on Meehl's remarkable record of scholarship and mentorship, they only begin to provide a true measure of the man. To fully grasp Paul Meehl's intellectual attitude and approach, it is as important to consider what he did not do as what he did.

Meehl was among the last of a dying breed in psychology, a "big picture" conceptual thinker. Sadly, the past few years have witnessed the passing of several of the few remaining thinkers of this ilk, including Paul Meehl, Donald Campbell, Donald Fiske, Lloyd Humphreys, John B. Carroll, and Lee J. Cronbach (who collaborated with Meehl on the seminal paper on construct validity; Cronbach & Meehl, 1955). Like these other giants, Meehl was remarkably catholic in his interests and writing. He also shared with them a

pendant for publishing widely, both inside and outside of psychology. Moreover, although some of Meehl's earliest papers were empirical investigations of latent learning in rats, the overwhelming majority of his articles were theoretical (but see Golden & Meehl, 1979, for an exception). For instance, he published "thought pieces," which contained little or no data in areas concerning psychiatric classification, the meaning of causation in social science (Meehl & Waller, 2002; Waller & Meehl, 2002), the free will–determinism debate and the mind–body problem (Feigl & Meehl, 1974; Meehl, 1989c<sup>4</sup>), the insanity defense (Meehl, 1983b), the slow progress of soft psychology (Meehl, 1978c), and the scientific status of psychoanalytic theory (Meehl, 1970c).

Meehl often moved in a seemingly effortless fashion from one intellectual interest to another. His work was not narrowly focused in the theoretically myopic, endlessly ad hoc and programmatically degenerating style of much funded psychology research today. Arguably, his main "research program" was his theory of schizophrenia (Meehl, 1962c, 1989d, 1990b, 1990c), and his pursuit of it led him into areas that sometimes appeared unrelated or, at best, tangential—e.g., elucidating the methodology of scientific understanding generally, analyzing the weaknesses of statistical significance testing in social science, explicating the meanings and roles of etiology and causality in psychopathology, and development of new taxometric procedures. He started with the clinical picture of schizophrenia, conjectured how the various phenomena associated with it might best be explained (theorizing a neural integrative defect), specified clearly how his proposed theory might be tested, and, seeing that the traditional statistical tools of psychologists were inadequate, devised a taxometric method (coherent cut kinetics) to do the job. Thus, his interests in seemingly diverse areas over the years in fact sprang from and were contributing to answering the clinical question he set himself years before; and it is the good fortune of psychology and philosophy of science that derivative applications resulted from Meehl's efforts to clarify his thinking and to answer that initial clinical question.

If there is one latent higher-order dimension that unites all of Meehl's remarkably diverse lower-order interests, it is perhaps his abiding passion for thinking clearly about difficult conceptual problems (see Cicchetti & Grove, 1991). Indeed, although Meehl was an uncommonly kind, caring, and giving mentor, he displayed little patience for sloppy reasoning. As a consequence, many individuals who have read some of Meehl's more combative writings (e.g., Meehl, 1973b) may mistakenly conclude that he was an ornery or interpersonally unpleasant individual, which is anything but the case:

"I have never fully recovered from the shock of realizing that one can become a college professor and not be able to think straight. This has led to a note of petulance creeping into my scholarly publications, for which I have been faulted." (Meehl, 1989b, p. 343)

In addition to his lack of concern with any narrowly programmatic empirical research, Meehl displayed precious little interest in the increasingly valued academic game of grant-seeking. In his career, Meehl received only one major grant, which resulted in an underservedly neglected set of items for assessing normal and abnormal personality that was never published in a peer-reviewed journal (Meehl et al., 1962). Moreover, he applied for few other grants (one major grant proposal designed to test his dominant gene hypothesis of schizophrenia, submitted with several collaborators in the 1980s, was rejected for funding).

Meehl was also surprisingly unconcerned with prestige, fame, or the accoutrements of academic success. He was preoccupied largely or entirely with disseminating his ideas

---

<sup>4</sup>This has been reprinted in Anderson, C.A., & Gunderson, K. (Eds.). (1991). Meehl, Selected philosophical and methodological papers (pp. 136–168). Minneapolis: University of Minnesota Press.

regardless of the venue in which they appeared, and he displayed little interest in the accepted hierarchy of psychological journals. This fact may explain why (to the bewilderment of many of his colleagues) Meehl published many of his later articles in *Psychological Reports*, a journal that is generally perceived as extremely low on the “totem pole” of publication outlets. In addition, many journals, including APA journals, rejected his publications on taxometric methods, including several that have exerted a substantial impact on the fields of psychiatric classification and statistical methodology. For example, his classic piece on MAXCOV-HITMAX (Meehl, 1973a),<sup>5</sup> now a standard taxometric technique used by hundreds of researchers was rejected by several APA journals. In the later stages of his career, Meehl tired of the often onerous requirements of the peer-review process at APA journals, not to mention their draconian restrictions on manuscript content and length. As a consequence, *Psychological Reports*, which permitted Meehl to publish both freewheeling disquisitions on conceptual topics (e.g., Meehl, 1998b) and detailed Monte Carlo simulation studies of taxometric techniques (replete with complex derivations of mathematical formulas (e.g., Meehl & Yonce, 1994, 1996), became a favorite outlet. It’s perhaps worth mentioning that Meehl often said that the manuscript reviews he received at *Psychological Reports* were typically just as rigorous, if not more rigorous, than those he received at other journals. This may be because the editors of this journal routinely sent his manuscripts to exceptionally distinguished reviewers, including Hans Eysenck and Lee J. Cronbach.

It is also worth noting that Meehl was a remarkably apolitical figure in the often politically charged world of academia. Meehl viewed the typical academic department much like a primate dominance hierarchy, with alpha males and females competing with other (human) primates for status and resources: “Ethology rules the academy more than logic” (Meehl, 1989b, p. 357). He showed remarkably little interest in inter- and intra-departmental politics, and attempted to avoid fruitless power struggles whenever possible.

Would Paul Meehl receive tenure at a major academic institution today? Would he even be hired? The answers are sobering to contemplate. Meehl authored few empirical articles (after his animal learning work early on), published extensively (later in his career) in lower-tiered journals (although he also published numerous articles in such prestigious outlets as *Psychological Review*, *Psychological Bulletin*, *Journal of Abnormal Psychology*, *Archives of General Psychiatry*, and *Science*), pursued an ostensibly nonprogrammatic path of diverse intellectual interests, received only one grant and applied for few others, and displayed minimal interest in academic politics. In short, he fulfilled virtually none of the currently fashionable expectations for faculty members in major research-oriented clinical psychology programs. Yet Meehl is widely regarded as one of the most influential, and perhaps the most influential, clinical psychologist of the 20th century (Cicchetti & Hinshaw, 2003). Nor is it clear that Meehl would be valued in most major psychiatry departments. Meehl once informed the second author of this article that the then chief of psychiatry at the University of Minnesota, Paula Clayton, referred to him as “a luxury that the psychiatry department cannot afford” because of his low output of empirical publications and federal grant applications. We leave it to readers to answer the two questions that began this paragraph. Nevertheless, if readers’ answers to these questions are either “No” or “Doubtful,” they may wish to pause to ask themselves whether something might be seriously amiss in the hiring and promotion procedures of today’s academic departments.

---

<sup>5</sup>The text in which this paper appears has been reprinted as Meehl, P.E. (1977). Psychodiagnosis: Selected papers. New York: Norton.

Finally, Meehl displayed that rare blend of attributes that characterizes the best scientists: an openness to novel and unusual beliefs at the early stages of scientific investigation, on the one hand, and a rigorous and unbending skepticism at the later stages of scientist investigation, on the other (Sagan, 1995). This synergy of superficially contradictory attitudes helps to explain Meehl's willingness to entertain psychoanalytic propositions that many of his colleagues found dubious. For example, Meehl felt perfectly at home with highly speculative discursions on psychodynamics:

No philosophically educated Freudian would have trouble guessing which of these four philosophers wrote a little-known treatise on *wind*: Kant? Locke? Hume? Santayana? A Freudian would call to mind Kant's definition of a moral act as one done *solely* from a sense of duty (rather than, say, a spontaneous loving impulse or a desire to give pleasure); the pedantic punctuality of his daily walk, by which the housewives allegedly set their clocks; his remarkable statement that "there can be nothing more dreadful than that the actions of a man should be subject to the will of another"; and his stubborn refusal over many years to speak with a sister following a minor quarrel. But I doubt that a panel of (otherwise knowledgeable) psychologists, ignorant of Freudian theory, would tend to identify Kant as having a scholarly interest in wind—even if we helped them out by adding the fact of Kant's excessive concern with constipation in his later years. The same thing would no doubt be true of my rash prediction (upon first descending the stairs inside the Washington monument) that the wall plaques would show more financial contributions by fire departments than by police departments. (They do.) (Meehl, 1970c, pp. 409–410)

Meehl perceived no contradiction between such unbridled conjecture and his insistence on methodological rigor, because he had no problem acknowledging conjecture as conjecture. What he refused to tolerate was the cavalier passing off of conjecture as corroborated fact.

Despite his long-lasting fascination with psychoanalysis (a theory whose scientific status he came increasingly to question over time), Meehl was quick to invoke Occam's razor (the principle of parsimony) to account for the causes of psychopathology: "The patient is not being sabotaged by his thanatos, or his will to defeat the therapist, or by his unconscious guilt; he is merely the victim of the binomial theorem" (Meehl, 1962b, p. 67). Indeed, Meehl (1978c) believed that clinical psychologists had long overlooked perhaps the most obvious cause of psychopathology: bad luck. Meehl's writings on this topic were prescient, as they foreshadowed findings from behavior–genetic investigations suggesting that idiosyncratic nonshared environmental influences are critical in the etiology of personality and psychopathology (Turkheimer & Waldron, 2000).

### Concluding Thoughts

Paul Meehl's cumulative record affords rich insights not merely into the mind of one of the few genuine geniuses of 20th century psychology, but also into the mind of creative scientific thinkers in general. His cumulative record also raises significant and perhaps troubling questions regarding our contemporary academic reinforcement contingencies, particularly the growing emphasis of major psychology departments on narrowly programmatic research and external funding in hiring, promotion, and tenure decisions. Finally, Meehl's extraordinary intellectual accomplishments both humble us and inspire us to emulate the clear thinking that he cherished.

### References

- Allison, P., & Long, J.S. (1990). Departmental effects on scientific productivity. *American Sociological Review*, 55, 469–478.

- Benbow, C.P., & Stanley, J.C. (1996). Inequity in equity: How "equity" can lead to inequity for high-potential students. *Psychology, Public Policy, and Law*, 2, 249–292.
- Cicchetti, D., & Hinshaw, S.P. (2003). Conceptual, methodological, and statistical issues in developmental psychopathology: A special issue in honor of Paul E. Meehl. *Development and Psychopathology*, 15, 497–499.
- Cicchetti, D., & Grove, W.M. (Eds.). (1991). *Thinking clearly about psychology: Essays in honor of Paul Everett Meehl. Vol. I. Essays on matters of public interest.* Minneapolis: University of Minnesota Press.
- Cronbach, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281–302.
- Dawes, R.M., Faust, D., & Meehl, P.E. (1989). Clinical versus actuarial judgment. *Science*, 243, 1668–1674.
- Eysenck, H.J. (1990). *Rebel with a cause.* London: W.H. Allen.
- Eysenck, H.J. (1980). Hans Jurgen Eysenck. In G. Lindzey (Ed.), *A history of psychology in autobiography* (Vol. 7, pp. 153–187). San Francisco: W.H. Freeman.
- Eysenck, H.J. (1991). Maverick psychologist. In C.E. Walker (Ed.), *The history of clinical psychology in autobiography* (Vol. 1, pp. 39–86). Pacific Grove, CA: Brooks/Cole.
- Feigl, H., & Meehl, P.E. (1974). The determinism–freedom and mind–body problems. In P.A. Schilpp (Ed.), *The philosophy of Karl Popper* (pp. 520–559). LaSalle, IL: Open Court.
- Gibson, H.B. (1981). *Hans Eysenck: The man and his work.* London: Owen.
- Gilovich, T., Vallone, R., & Tversky, A. (1985). The hot hand in basketball: On the misperception of random sequences. *Cognitive Psychology*, 17, 295–314.
- Golden, R., & Meehl, P.E. (1979). Detection of the schizoid taxon with MMPI indicators. *Journal of Abnormal Psychology*, 88, 217–233.
- Grove, W.M., & Meehl, P.E. (1996). Comparative efficiency of informal (subjective, impressionistic) and formal (mechanical, algorithmic) prediction procedures: The clinical–statistical controversy. *Psychology, Public Policy, and Law*, 2, 293–323.
- Hathaway, S.R., & Meehl, P.E. (1951). *An atlas for the clinical use of the MMPI.* Minneapolis: University of Minnesota Press.
- Livermore, J.M., & Meehl, P.E. (1967). The virtues of M'Naghten. *Minnesota Law Review*, 51, 789–856.
- Lyons, J. (1968). Chronological age, professional age, and eminence in psychology. *American Psychologist*, 23, 371–374.
- MacCorquodale, K., & Meehl, P.E. (1948). On a distinction between hypothetical constructs and intervening variables. *Psychological Review*, 55, 95–107.
- MacCorquodale, K., & Meehl, P.E. (1953). Preliminary suggestions as to a formalization of expectancy theory. *Psychological Review*, 60, 55–63.
- MacCorquodale, K., & Meehl, P.E. (1954). E.C. Tolman. In W.K. Estes, S. Koch, K. MacCorquodale, P.E. Meehl, C.G. Mueller, W.N. Schoenfeld, et al. (Eds.), *Modern learning theory* (pp. 177–266). New York: Appleton-Century-Crofts.
- McKinley, J.C., Hathaway, S.R., & Meehl, P.E. (1948). The Minnesota Multiphasic Personality Inventory: VI. The K scale. *Journal of Consulting Psychology*, 12, 20–31.
- Meehl, P.E. (1945a). The dynamics of "structured" personality tests. *Journal of Clinical Psychology*, 1, 296–303.
- Meehl, P.E. (1945b). An examination of the treatment of stimulus patterning in Professor Hull's principles of behavior. *Psychological Review*, 52, 324–332.
- Meehl, P.E. (1945c). An investigation of a general normality or control factor in personality testing. *Psychological Monographs*, 59(4, Whole No. 274).
- Meehl, P.E. (1950). On the circularity of the law of effect. *Psychological Bulletin*, 47, 52–75.

- Meehl, P.E. (1954). *Clinical versus statistical prediction: A theoretical analysis and a review of the evidence*. Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1956). Wanted—A good cookbook. *American Psychologist*, 11, 263–272.
- Meehl, P.E. (1957a). Religion and the maintenance of mental health. In *Society's stake in mental health* (pp. 52–61). Minneapolis: University of Minnesota, Social Science Research Center.
- Meehl, P.E. (1957b). When shall we use our heads instead of the formula? *Journal of Counseling Psychology*, 4, 268–273.
- Meehl, P.E. (1962a). Parapsychology. In *Encyclopedia Britannica* (Vol. 17, pp. 267–269). Chicago: Encyclopedia Britannica.
- Meehl, P.E. (1962b). Psychopathology and purpose. In P. Hoch & J. Zubin (Eds.), *The future of psychiatry* (pp. 61–69). New York: Grune and Stratton.
- Meehl, P.E. (1962c). Schizotaxia, schizotypy, schizophrenia. *American Psychologist*, 17, 827–838.
- Meehl, P.E. (1965). Philosophy of science and Christian theology. In J. Bodensieck (Ed.), *Encyclopedia of the Lutheran Church* (Vol. 3, pp. 1894–1896). Minneapolis: Augsburg Publishing House.
- Meehl, P.E. (1966). The compleat autocerebroscopist: A thought experiment on Professor Feigl's mind–body identity thesis. In P.K. Feyerabend & G. Maxwell (Eds.), *Mind, matter, and method: Essays in philosophy and science in honor of Herbert Feigl* (pp. 103–180). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1970). Theory-testing in psychology and physics: A methodological paradox. In D.E. Morrison & R.E. Henkel (Eds.), *The significance test controversy* (pp. 252–266). Chicago: Aldine. (Reprinted from *Philosophy of Science*, 34, 103–115, 1967)
- Meehl, P.E. (1970a). Psychological determinism and human rationality: A psychologist's reactions to Professor Karl Popper's 'Of clouds and clocks.' In M. Radner & S. Winokur (Eds.), *Minnesota studies in the philosophy of science: Vol. IV. Analyses of theories and methods of physics and psychology* (pp. 310–372). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1970b). Psychology and the criminal law. *University of Richmond Law Review*, 5, 1–30.
- Meehl, P.E. (1970c). Some methodological reflections on the difficulties of psychoanalytic research. In M. Radner & S. Winokur (Eds.), *Minnesota studies in the philosophy of science: Vol. IV. Analyses of theories and methods of physics and psychology* (pp. 403–416). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1972). A critical afterword. In I.I. Gottesman & J. Shields (Eds.), *Schizophrenia and genetics: A twin study vantage point* (pp. 367–416). New York: Academic Press.
- Meehl, P.E. (1973a). MAXCOV-HITMAX: A taxonomic search method for loose genetic syndromes. In *Psychodiagnosis: Selected papers* (pp. 200–224). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1973b). Why I do not attend case conferences. In *Psychodiagnosis: Selected papers* (pp. 225–302). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1978a). Precognitive telepathy I: On the possibility of distinguishing it experimentally from psychokinesis. *NOÛS*, 12, 235–266.
- Meehl, P.E. (1978b). Precognitive telepathy II: Some neurophysiological conjectures and metaphysical speculations. *NOÛS*, 12, 371–395.
- Meehl, P.E. (1978c). Theoretical risks and tabular asterisks: Sir Karl, Sir Ronald, and the slow progress of soft psychology. *Journal of Consulting and Clinical Psychology*, 46, 806–834.
- Meehl, P.E. (1983a). Consistency tests in estimating the completeness of the fossil record: A neo-Popperian approach to statistical paleontology. In J. Earman (Ed.), *Minnesota studies in the philosophy of science: Vol. X, Testing scientific theories* (pp. 413–73). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1983b, Summer). The insanity defense. *Minnesota Psychologist*, 32, 11–17.

- Meehl, P.E. (1983c). Subjectivity in psychoanalytic inference: The nagging persistence of Wilhelm Fliess's Achensee question. In J. Earman (Ed.), *Minnesota studies in the philosophy of science: Vol. X, Testing scientific theories* (pp. 349–411). Minneapolis: University of Minnesota Press.
- Meehl, P.E. (1989a). Law and the fireside inductions (with Postscript): Some reflections of a clinical psychologist. *Behavioral Sciences and the Law*, 7, 521–550.
- Meehl, P.E. (1989b). Paul E. Meehl. In G. Lindzey (Ed.), *A history of psychology in autobiography* (Vol. 8, pp. 337–389). Stanford: Stanford University Press.
- Meehl, P.E. (1989c). Psychological determinism or chance: Configural cerebral autoselection as a tertium quid. In M.L. Maxwell & C.W. Savage (Eds.), *Science, mind, and psychology: Essays in honor of Grover Maxwell* (pp. 211–255). Lanham, MD: University Press of America.
- Meehl, P.E. (1989d). Schizotaxia revisited. *Archives of General Psychiatry*, 46, 935–944.
- Meehl, P.E. (1990a). Appraising and amending theories: The strategy of Lakatosian defense and two principles that warrant using it. *Psychological Inquiry*, 1, 108–141, 173–180.
- Meehl, P.E. (1990b). Schizotaxia as an open concept. In A.I. Rabin, R. Zucker, R. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 248–303). New York: Springer.
- Meehl, P.E. (1990c). Toward an integrated theory of schizotaxia, schizotypy, and schizophrenia. *Journal of Personality Disorders*, 4, 1–99.
- Meehl, P.E. (1992a). Factors and taxa, traits and types, differences of degree and differences in kind. *Journal of Personality*, 60, 117–174.
- Meehl, P.E. (1992b). The miracle argument for realism: An important lesson to be learned by generalizing from Carrier's counter-examples. *Studies in History and Philosophy of Science*, 23, 267–282.
- Meehl, P.E. (1993). If Freud could define psychoanalysis, why can't ABPP? *Psychoanalysis and Contemporary Thought*, 16, 299–326.
- Meehl, P.E. (1995). Bootstraps taxometrics: Solving the classification problem in psychopathology. *American Psychologist*, 50, 266–275.
- Meehl, P.E. (1998a, May 23rd). The power of quantitative thinking. Speech delivered upon receipt of the James McKeen Cattrell Fellow award at the meeting of the American Psychological Society, Washington, DC. Available: <http://www.tc.umn.edu/~pemeehl/>
- Meehl, P.E. (1998b). Relevance of a scientist's ideology in communal recognition of scientific merit. *Psychological Reports*, 83, 1123–1144
- Meehl, P.E. (1999). Clarifications about taxometric method. *Journal of Applied and Preventive Psychology*, 8, 165–174.
- Meehl, P.E. (2001). Comorbidity and taxometrics. *Clinical Psychology: Science and Practice*, 8, 507–519.
- Meehl, P.E. (2004). What's in a taxon? *Journal of Abnormal Psychology*, 113, 39–43.
- Meehl, P.E., & Dahlstrom, W.G. (1960). Objective configural rules for discriminating psychotic from neurotic MMPI profiles. *Journal of Consulting Psychology*, 24, 375–387.
- Meehl, P.E., & Hathaway, S.R. (1946). The K factor as a suppressor variable in the Minnesota Multiphasic Personality Inventory. *Journal of Applied Psychology*, 30, 525–564.
- Meehl, P.E., Klann, R., Schmieding, A., Breimeier, K., & Schroeder-Slomann, S. (1958). *What, then, is Man?* St. Louis: Concordia Publishing House.
- Meehl, P.E., & MacCorquodale, K. (1951). Some methodological comments concerning expectancy theory. *Psychological Review*, 58, 230–233.
- Meehl, P.E., Schofield, W., Glueck, B.C., Studdiford, W.B., Hastings, D.W., Hathaway, S.R., et al. (1962). *Minnesota-Ford Pool of Phenotypic Personality Items, August 1962 edition*. Minneapolis: University of Minnesota.
- Meehl, P.E., & Scriven, M.J. (1956). Compatibility of science and ESP. *Science*, 123, 14–15.

- Meehl, P.E., & Sellars, W. (1956). The concept of emergence. In H. Feigl & M. Scriven (Eds.), *Minnesota studies in the philosophy of science: Vol. I. The foundations of science and the concepts of psychology and psychoanalysis* (pp. 239–252). Minneapolis: University of Minnesota Press.
- Meehl, P.E., & Waller, N.G. (2002). The path analysis controversy: A new statistical approach to strong appraisal of verisimilitude. *Psychological Methods*, 7, 283–300.
- Meehl, P.E., & Yonce, L.J. (1994). Taxometric analysis: I. Detecting taxonicity with two quantitative indicators using means above and below a sliding cut (MAMBAC procedure). *Psychological Reports*, 74, 1059–1274.
- Meehl, P.E., & Yonce, L.J. (1996). Taxometric analysis: II. Detecting taxonicity using covariance of two quantitative indicators in successive intervals of a third indicator (MAXCOV procedure). *Psychological Reports*, 78, 1091–1227.
- Myers, C.R. (1970). Journal citations and scientific eminence in contemporary psychology. *American Psychologist*, 25, 1041–1048.
- Rushton, J.P. (1984). Evaluating research eminence in psychology: The construct validity of citation counts. *Bulletin of the British Psychological Society*, 37, 33–36.
- Sagan, C. (1995). *The demon-haunted world: Science as a candle in the dark*. New York: Random House.
- Scarr, S., & McCartney, K. (1983). How people make their own environment: A theory of genotype-environment effects. *Child Development*, 54, 424–435.
- Turkheimer, E., & Waldron, M.C. (2000). Nonshared environment: A theoretical, methodological, and quantitative review. *Psychological Bulletin*, 126, 78–108.
- Waller, N.G., & Meehl, P.E. (1998). *Multivariate taxometric procedures: Distinguishing types from continua*. Newbury Park, CA: Sage.
- Waller, N.G., & Meehl, P.E. (2002). Risky tests, verisimilitude, and path analysis. *Psychological Methods*, 7, 323–337.
- Wilson, E.O. (1998). *Consilience: The unity of knowledge*. New York: Random House.