CHAPTER 1: BACKGROUND
MMPI Background

- Developed in 1930s by Hathaway and McKinley
- Intended to function as a differential diagnostic instrument
- Clinical scales designed to assess common “Kraepelinian” syndromes
  - Hypochondriasis, Depression, Hysteria, Psychopathic Deviate, Paranoia, Psychasthenia, Schizophrenia, Hypomania
- Published in 1943

Theoretical Foundations:
1. Kraepelinian descriptive nosology
2. Items as stimuli for behavioral responses, the aggregates of which may have certain empirical correlates, including diagnostic group membership
3. Rejection of content-based test interpretation as overly susceptible to misleading responding
4. #3 notwithstanding, test takers do attend to item content and may intentionally or unintentionally respond in a misleading manner
MMPI Background

• Scale Development:
  – Follows methodology used by Strong to develop his Vocational Interest Blank
  – Responses (to an assembled pool of items) of eight criterion groups diagnosed with the targeted disorders (n=20-50) contrasted with those of a “normal” group
  – Result: Eight original Clinical Scales
    • Later augmented by Masculinity/Femininity and Social Introversion scales

Hathaway & McKinley 1944, p. 155

The normal groups most commonly used for item by item contrast were composed of 339 persons selected from among the general Minnesota normals and of 265 precollege cases from among high school graduates applying for admission to the University. The general sample was divided into 139 men and 200 women, tabulated separately to show sex differences. These persons were between the ages of 26 and 43 inclusive and were all married. They declared themselves to be not under a doctor’s care at the time of taking the inventory and are considered normal on that single basis. The modal years of schooling was 8 and few had gone beyond high school. These particular persons were used because they were felt most likely to be stable and representative. The tabulation
Hathaway & McKinley 1944, p. 155

To establish the validity of the various scales as they were derived, their power to differentiate test cases from normals was used as an indicator. Test cases is the term used in this paper to designate cases identified relatively or entirely independently of the criterion groups. For the most part, these cases were drawn from among hospitalized patients that were diagnosed routinely by the staff during the preliminary derivation of items and before any scale was made available. Where possible, test cases were obtained from a variety of diagnostic settings. The specificity of the test cases varied from one with a distinct pathological condition to another with a mild pathological condition.

Hathaway & McKinley 1944, p. 170

The diagram illustrates the distribution of test scores for different groups. The x-axis represents the standard score, and the y-axis represents the number of cases. The graph shows the distribution of scores for Pd Clinic Test Cases, Federal Reformatory Cases, and Normals. The percentages of males and females are also indicated.
MMPI Background

• By mid-1940s, clear that the scales did not work as intended
  – Non-discriminating profiles (i.e., multiple elevations)
  – Excessive False Positives

• Paradigm Shift 1 – Code Types:
  – Focus shifts to pattern of scores
  – Scales names replaced with numbers to facilitate code typing
  – Empirical studies conducted to identify code-type correlates

MMPI Background

• Paradigm Shift 2 – Content-Based Assessment
  – Item content largely ignored in Clinical Scale construction
  – Began to play role in interpretation with several developments in the 1950s:
    • Welsh Factor Scales
    • Harris-Lingoes subscales
    • Weiner-Harmon subscales
  – Content used by Wiggins to construct a set of scales in the 1960s
MMPI Background

• Appraisals and Thoughts about Revision:
  – By late 1950s, MMPI becomes most widely used and studied objective measure of personality
  – Scholarly appraisals are more negative
  – Including Hathaway himself:

Hathaway (1960)

Our most optimistic expectation was that the methodology of the new test would be so clearly effective that there would soon be better devices with refinements of scales and general validity. We rather hoped that we ourselves might, with five years experience, greatly increase its validity and clinical usefulness, and perhaps even develop more solidly based constructs or theoretical variables for a new inventory.
MMPI Background

Hathaway (1972)

If another twelve years were to go by without our having gone on to a better instrument or procedure for the practical needs [it fulfills,] I fear that the MMPI, like some other tests, might have changed from a hopeful innovation to an aged obstacle.

• Appraisals and Thoughts about Revision:
  – In 1970, *Fifth Annual MMPI Research Symposium*, convened in honor of Hathaway, devoted to discussion of whether and, if so, how to revised the MMPI
    • Produces book: *Objective Personality Assessment: Changing Perspectives* (Butcher, 1972)
    • Includes chapters by conference attendees
    • Jackson (1971) also weighs in
    • Meehl responds in final chapter (his last word on the MMPI)
Jackson (1971, p. 232)

The first general principle is that personality measures will have broad import and substantial construct validity to the extent, and only to the extent, that they are derived from an explicitly formulated, theoretically based definition of a trait. This principle is based on the broad assumption that every
Norman (1972, p. 60)

Thus, I come not to bury the Mult nor to praise it. The first would surely be premature, and the second unnecessary. Instead, I propose to consider some general issues and problems of theory construction, diagnosis, and measurement and relate them to some of the present characteristics and uses of the MMPI.

Norman (1972, p. 64)

Let us begin with the original criterion categories. Whether or not Kraepelinian nosology was an appropriate system on which to base a psychiatric diagnostic instrument in the early 1940s, its relevance for that purpose in the late 1960s has surely become tenuous, at best. In one respect, the MMPI already reflects this shift away from classical terminology by the substitution of numerical designations for the old scale names and by the shift in interpretative emphasis from the original, single scales to profile code types. But the scales themselves have remained, by and large, unaltered in this process. Whatever justification each scale derived initially from the nosological category it was designed to map is rapidly vanishing, if not already lost.
Norman (1972, p. 82)

However, the MMPI itself, especially when given to "normal" subjects, displays a large first factor variously known as "alpha," "A," "ego strength," "social desirability," or "general pathology" depending on one's predilections. But, in general, with adequate domain sampling of traits and with application to relevant populations, a general personality factor seems less likely to appear or to be interpretable than is true in the ability and aptitude area. When such a factor is present, however, I would argue that clarity of interpretation and meaningfulness of the assessments are likely to be best served by dealing with such a component separately from the others implicit in the residual sources of variation.

Meehl (1972, p. 150)

... other. I now think that at all stages in personality test development, from initial phase of item pool construction to a late-stage optimized clinical interpretative procedure for the fully developed and "validated" instrument, theory—and by this I mean all sorts of theory, including trait theory, developmental theory, learning theory, psychodynamics, and behavior genetics—should play an important role. In this view, I seem to diverge from my...
Meehl (1972, p. 155)

...sentence completion responses elicited from large numbers of patients. I now believe (as I did not formerly) that an item ought to make theoretical sense, and without too much ad hoc “explaining” of its content and properties. But going in the other direction, I would still argue that if an item has really stable psychometric (internal and external) properties of such-and-such kinds, it is the business of a decent theory to “explain” its possession of those properties in the light of its verbal content. If the theory can’t handle such...
Meehl (1972, pp. 170-171)

Unfortunately, one can achieve a moderate and sometimes rather high elevation on Scale 4 without being a sociopath—not surprising when we look at the items scored for this variable. Life-history type admissions about family strife and “institution troubles” to achieve a T-score at $T = 70$. We all recognize today that this kind of thing happens, and is one source of error which we attempt to “correct for” mentally by taking the patient’s situation into account as well as looking at the rest of his profile. But it would be nice if such error were eliminated from the $P_a$ key entirely. As a factor analyst once complained to me during a heated discussion on criterion keying, internal consistency, scale “purity,” and related topics, “If you Minnesotans are going to eyeball the profile and do a subjective factor analysis in your head that way, why not let the computer do it better, at the stage of key construction?” Not an easy argument to answer.

MMPI-2 (1989)

- New Norms
- Clinical Scales left intact
- New items introduced via Content Scales
- New Validity Scales
- Initial Skepticism
- Relatively quick acceptance by clinicians
- Disappointment by (some of) the scholarly community
For additional information on this chapter, please reference: