

Chapter Ten

CLINICAL APPLICATIONS OF THE MMPI-2

The MMPI-2 has widespread applications for assessing personality and psychopathology in adult men and women. It is routinely used in the clinical assessment of psychiatric inpatients, consumers of psychiatric outpatient and psychotherapy services, and in college counseling centers. It is also commonly used in the course of psychological/psychiatric consultation to general medical services to detect previously undiagnosed mental disorders or identify problems in adjustment that may adversely influence treatment adherence, response, and recovery. It may be a component in test batteries assembled for the evaluation of neuropsychological function and status (see, e.g., Lezak, Howieson, Bigler, & Tranel, 2011). The MMPI-2 is also used in screening and selecting personnel for employment, especially for positions involving high levels of stress and responsibility or occupations in which concern for public safety is a central consideration, such as law enforcement, airplane piloting, nuclear power-plant operation, and other employment contexts in which maturity and emotional adjustment may be considered likely to influence job performance.

The MMPI-2 often figures in criminal forensic proceedings for pretrial assessments of competence to stand trial and ability to aid and assist representative counsel, in sanity evaluations, and in the classification of adjudicated offenders. In civil forensic proceedings for determinations of eligibility for commitment, parental fitness, and child custody; medical or psychological malpractice; evaluating stress, personal injury, disability, and related claims for compensation and damages, the results of the MMPI-2 may be used to assess the psychological adjustment and the credibility of defendants or litigants in order to assist the trier of fact.

The primary focus of this book is on using the MMPI-2 to diagnose and plan treatment of persons being

CAUTION

The topics and guidelines described in this chapter are best suited for patients and clients seen in inpatient or outpatient mental health settings and may be poorly suited to other populations or settings in which the MMPI-2 is used.

seen as patients in psychiatric inpatient or outpatient services and clinics, and for clients receiving or being evaluated for psychotherapy by licensed mental health practitioners. Although the material contained herein may at times bear on questions of medical, neuropsychological, employment, or forensic interest, other publications contain more detailed treatments regarding accepted principles and practices for using the MMPI-2 outside of traditional mental health settings.

This chapter identifies six clinical applications of the MMPI-2:

1. Assessment of self-presentation
2. Assessment of the severity and chronicity of disturbance
3. Assessment of clinical syndromes
4. Assessment of symptomatic status
5. Assessment of personality and social functioning
6. Assessment of personality change and suitability for psychotherapy

Having discussed the major symptoms of psychopathology in the context of the clinical scales in Chapter 6, in this section symptoms will be the starting point to highlight individual scales and patterns that are deemed relevant to the assessment of pathological syndromes, symptoms, and signs.

ASSESSMENT OF SELF-PRESENTATION

The MMPI-2 stands alone in the area of personality assessment in terms of the variety and usefulness of measures to assess a broad range of dimensions related to response styles, attitudes, and approaches to self-presentation. Nichols and Greene (1997) have described seven dimensions along which responses related to self-presentation on the MMPI-2 may vary: inconsistency versus inaccuracy, dissimulation versus simulation, generic versus specific deception, crude versus sophisticated deception, intentional versus nonintentional deception, self-deception versus impression management, and selectivity versus inclusiveness.

The first dimension, *inconsistency versus inaccuracy*, sets the basic condition for protocol interpretation, the requirement that an adequate level of consistency in responding to the test items has been achieved. This condition is evaluated by scores on *VRIN* and *TRIN*. Meeting this condition permits the clinician to make inferences regarding the accuracy of self-report along the dimension of overreporting and underreporting. The presence and extent of overreporting is evaluated using scales *F*, *F_B*, *F_p*, *Ds*, and the *F-K* Index, and underreporting is evaluated using scales *L*, *K*, *S*, *S₈*, *Mp*, and *Sd*.

The second dimension, *dissimulation versus simulation*, draws on the distinction between an approach to the test that seeks to mask actual traits, attitudes, and

dispositions (dissimulation), and one that seeks to mimic such attributes when these are felt to be descriptively inaccurate (simulation). Scales F , F_B , F_P , Ds , and the $F-K$ Index may mask favorable traits and mimic unfavorable ones, whereas scales L , K , S , Sr , Mp , and Sd may mask unfavorable traits or mimic favorable ones.

The third dimension, *generic versus specific deception*, recognizes that examinees may mask and mimic favorable or psychopathological features generically or indiscriminately, or in terms of a set, to claim or deny a specific set of traits or symptoms. For example, an examinee may seek to mask or mimic features of a particular disorder or class of disorder (somatization, anxiety, depressive, psychotic, etc.) or problem area (delinquency, anger, family enmity, etc.) in a highly selective manner, without concealing or simulating other symptoms or problem areas.

The fourth dimension, *crude versus sophisticated deception*, is fundamentally a dimension of competence in the execution of a strategy, whether implicit or deliberate, to mask or mimic self-favorable or self-negative traits. This dimension acknowledges that examinees bring varying levels of test-taking resources, including intelligence, test-taking experience, and even test-specific knowledge, to the assessment task. Crude approaches are suggested by a bias toward *True* ($T\% > 60$) or *False* ($T\% < 30$), or a preference for endorsing (or denying) psychopathology, resulting in a mean elevation (M8) on the basic clinical scales (Scales 1–4 and 6–9) of 85 or greater (or 45 or less). Scales L and R are also sensitive to this dimension when the approach favors the masking of negative features or the mimicking of positive ones, although they are not particularly sensitive to overreporting.

The fifth dimension, *intentional versus nonintentional deception*, recognizes the limits of ideation and self-awareness in test taking. Because the awareness of one's motives is virtually always incomplete and motives surrounding the communication of psychopathology and adjustment may be in conflict, the revelation and concealment of symptoms and problems are generally not entirely under conscious control. Thus, efforts at masking and mimicking psychopathology may fail to be in accord with the examinee's desire, with the result that such motives or the features on which these motives are focused may be unintentionally exposed. For example, scores on $MAC-R$ and $O-H$ with respect to their primary constructs are difficult, if not impossible, to manipulate. The same might be said of the subtle components of the clinical scales and some of the subscales. Similarly, such features as delusional ideation may be inadvertently exposed despite a desire to conceal it when the pathological implications of such a symptom fall outside of conscious control (i.e., when such ideation is ego-syntonic). Long-cherished self-attributions, whether positive or negative, may likewise infiltrate the response process in ways that affect test findings.

The sixth dimension, *self-deception versus impression management*, distinguishes between the tendency to bias test responses out of a belief that these responses are true and justified and the self-conscious and deliberate attempt to tailor responses to mislead the clinician about the examinee's clinical status and functioning. This dimension grew out of studies of underreporting, but there is no prohibition in principle against applying it to overreporting (see, e.g., Fp , Ds). That is, overreporting, like underreporting, may result from unrealistically negative self-attitudes (self-deception) as well as from a calculated effort to malingering mental disorder (impression management). All of the validity scales have a role in assessing test-taking attitudes in terms of this dimension, as well as some of the others discussed here. Although F , F_b , F_p , Ds , and the $F-K$ Index are sensitive to broadly mimicked pathological features and broadly masked favorable attributes, F is differentially sensitive to psychotic features, F_b is differentially sensitive to negative emotionality, Ds is differentially sensitive to nonpsychotic disability (when F , F_b , and F_p are lower than Ds) and possibly to negative impression management, and F_p appears to be particularly sensitive to overreporting as a function of impression management (malinger). Similarly, although L , K , S , Ss , Mp , and Sd are sensitive to broadly mimicked favorable features and broadly masked pathological attributes, L is differentially sensitive to naively self-serving moral claims, K and S are differentially sensitive to favorable biases stemming from self-deception, Ss is differentially sensitive to ingrained (and usually justified) self-favorable attitudes, and Mp and Sd are differentially sensitive to intentionally deceptive self-favorable presentations (Mp by the denial of common flaws and failings, Sd by the assertion of unusually favorable traits and attitudes).

The seventh dimension, *selectivity versus inclusiveness*, concerns the range of items to be endorsed within particular symptomatic or personological domains, recognizing that some patients will endorse items reflecting a particular state or condition (e.g., depression) in a highly selective and discriminating fashion, whereas others will respond in a more global, inclusive, less discriminating way. For example, a patient's primarily depressive symptoms may become associated with items in adjacent symptomatic domains such as somatization, anxiety, alienation, hypersensitivity, social withdrawal, and so forth, thereby complicating and confounding the patient's self-report. Here again, the validity scales are useful in helping to specify the level of precision that the patient has tried to adopt in communicating symptoms and traits. Elevations on F , F_b , F_p , Ds , $F-K$, and ME , and high $T\%$ (or very low $T\%$ in the case of the overinclusion of somatic symptoms) suggest a general bias toward overinclusion, and an overly inclusive approach to particular symptom domains may be identified by unusual elevations on many of

the unidimensional scales, including Scales 1 and 7 and the content scales, among others. Conversely, elevations on *L*, *K*, *S*, *Ss*, *Mp*, and *Sd* may indicate an overly selective bias in reporting symptoms, especially when the scores on unidimensional scales are more or less uniformly suppressed. The ideal self-presentation in terms of this dimension is suggested by no more than moderate elevations on the validity scales, perhaps excepting *Ss*, and discrete and highly patterned elevations on the clinical and content scale profiles.

ASSESSMENT OF THE SEVERITY AND CHRONICITY OF DISTURBANCE

The concept of severity of disturbance in the MMPI-2 is inextricably linked to response style because of the latter's influence on scale and profile elevation and on the tendency to endorse the obvious versus the subtle items. It is impossible to arrive at hypotheses regarding severity apart from an adequate analysis of response style. It is also important to distinguish between the severity of distress and discomfort from the severity of dysfunction and disability. In general, *A* is a satisfactory marker for general maladjustment and subjective distress, but some patients with relatively low scores (e.g., some somatoform disorders) will show little apparent distress despite considerable disability, whereas others (e.g., anxiety disorders) will show much distress but little loss in day-to-day functioning. For both of these groups, Scale 2 may be a better index of severity. As a rule, disorders that differentially elevate the right half of the profile (positive slope) are more severe and disabling than disorders that differentially elevate the left half of the profile (negative slope), but here, too, there are many exceptions: Some negative slope hypochondriacal disorders are severely debilitating and all but intractable; some positive slope manic disorders respond to appropriate treatment promptly and recover completely. And then there are the personality disorders in which there may be little subjective distress but high severity in terms of the problems the patient's behavior creates for others.

Regardless of the severity of distress within episodes, some disorders will show a remitting course, whereas others will show a prolonged one. There is some tendency for profiles in which Scales 1, 4, and 8 exceed 2, 3, and 7 to gravitate toward a more chronic course. Additionally, elevations on *F* and low scores on *K* and *Ss* suggest an acceptance of deviance, misfortune, and a compromised or spoiled identity that can lead to a more ready acceptance of a marginalized social role (e.g., "mental patient") and hence a greater tolerance for a chronic status.

ASSESSMENT OF CLINICAL SYNDROMES

Despite its development in a psychiatric inpatient setting and the use of well-diagnosed criterion cases for scale development, there are very few MMPI-2 profile patterns or scores that are quasipathognomonic for specific mental disorders. MMPI-2 characteristics of several broad diagnostic groups are as follows:

Somatoform processes are reflected primarily on Scales 1 and 3 (especially *Hy4* and *Hy-O*), on subscales *Dr3*, *D3*, and *Sc6*, and on *HEA* and *RC1*; and secondarily on Scales 2, 7, and 8, and on *R*, *ANX*, and *DEP*. Representative codetypes include Spike 1, 1-2/2-1, 1-2-3/2-1-3, 1-7, 1-2-7/2-1-7 (somatization/hypochondriasis/chronic pain), 1-3/3-1, 1-3-2/3-1-2 (conversion/chronic pain), 1-8/8-1, 1-8-7/8-1-7/8-7-1 (somatization with psychosis; possible somatic delusions).

Anxiety disorders are reflected primarily on Scale 7 and *ANX*, and secondarily on Scales 1, 2, 3, 8, and 0, and on *GM* (low), *FRS*, *OBS*, *HEA*, *LSE*, and *SOD*. Scales 4 and 9, *CYN*, *ASP*, *RC4*, *AGGR*, and *DISC* tend to be low. Representative codetypes include 7-2/2-7, 3-2/2-3, 3-7/7-3 (with or without 1), 7-8, and 7-2-8/7-8-2. Use *ANX* > *DEP* as an index to help distinguish anxiety from depressive disorders. Phobic patterns may emphasize Scales 7, 0, *FRS*, and *SOD*. Obsessive patterns may emphasize Scales 7, 8, and *OBS*.

Depressive and dysthymic disorders are reflected primarily on Scale 2 and *DEP*, and secondarily on Scales *Fb*, 1, 3 (especially *Hy3*), 4 (especially *Pd5*), 6 (especially *Pa2*), 7, 8 (especially *Sc2* and *Sc4*), 9 (coded low), and 0, and on *R*, *ANX*, *OBS*, *HEA*, *LSE*, *SOD*, *WRK*, *TRT*, *RCd*, and *RC2*. Elevations on Scales 1, 3, and *HEA*, and 9, when not low, may mask depression. Representative codetypes include 2-7, 2-3, 2-4, 2-6, 2-8, 2-0, 2-7-3, and 2-7-8/2-8-7. Use *DEP* > *ANX* as an index to help distinguish depressive from anxiety disorders. There is a tendency for bipolar depressions to test as slightly more undercontrolled than unipolar depressions (look for Scale 9, *MAC-R*, and *DISC* to be slightly higher in bipolar depression, *R* slightly lower).

Manic disorder is reflected primarily on Scale 9, with Scales 2 and 0 coded low, and secondarily on Scales 4, 6, and 8 (especially *Sc5* and *Sc6*), *DISC*, and *MAC-R*, and on *R*, *FRS*, *DEP*, and *LSE*, *SOD*, and *INTR* (all low). Scales 4 and 6 may especially implicate irritability. The pattern of *ANG1*, *ANG2*, *TPA1*, and *Sc5* high, along with *AGGR* and *TPA2*, is not uncommonly seen in mania when irritability is a major symptom. Representative manic codes are Spike 9 (euphoric mania),

9-6 (paranoid mania), 9-8 (disorganized mania), 9-4-8/9-8-4, and 9-6-8 (all combinations).

Paranoid (delusional) disorders are reflected primarily on Scale 6 (especially *Pa1*) and *RC6*, and secondarily on Scales 4 (especially *Pd4*) and 8 (especially *Sc1*), and on *BIZ* (especially *BIZ1*) and *CYN*. Uncomplicated Delusional Disorder (pure paranoia/paranoia vera) is associated with Spike 6 (need not exceed *T*-65) and elevations on *Pf3* and *Pf4*. In some defensive patterns, *L* may spike; in others *FRS* may be elevated while *CYN* is suppressed. Representative codetypes include Spike 6, 6-4/4-6, 6-5/5-6, 6-7/7-6. False-negative scores on Scale 6 are relatively common in paranoid disorders, but false-positives are relatively rare.

Thought disorder is reflected primarily on *DisOrg* and *RC8*, Scales 6 and 8 (especially *Sc3*), *BIZ*, and *PSYC*, and secondarily on Scales *F*, 2 (especially *Dr4* and *D4*), 4 (especially *Pd1* and *Pd4*), 7, and 0, and on *ANX*, *DEP*, *OBS*, *FAM*, and *SOD*. Representative codetypes include 8-6/6-8, especially with 2, 4, 7, and 0 next highest in any order, 8-2, 8-2-4, 8-2-7/8-7-2, and 8-7-4/7-8-4.

Substance use disorders are reflected primarily on Scale 4, *RC4*, and on *AAS*, *MAC-R*, and *APS*, and secondarily on Scales 1 and 3 (especially for the abuse of soporifics, hypnotics, and analgesics), 2, 7, 8, and 9 (alcohol and street drugs), and on *ASP* and *DISC*. Representative codetypes include 4-2, 3-4/4-3, 4-6/6-4, 4-8/8-4, 4-9/9-4, 2-4-7 (all combinations), 2-4-8 (all combinations), 2-4-9 (all combinations), and 4-7-8 (all combinations).

ASSESSMENT OF SYMPTOMATIC STATUS

Because the correspondence between MMPI-2 profile patterns or scores and formal psychiatric diagnostic categories cannot be taken for granted, the MMPI-2 clinician may approach the task of differential diagnosis more successfully by starting from the bottom up—that is, by considering the MMPI-2 data as a source of signs and symptoms that may be evaluated for pattern and coherence in much the same way that the psychiatrist uses the data of history and mental status to arrive at a diagnosis. The assessment of disturbed mood is complex, requiring reference not only to matters related to mood and affect as narrowly construed, but also to aspects of thinking and behavior that may be affected by mood states. The remarks that follow borrow extensively from the MMPI-2 Structural Summary (Nichols & Greene, 1995).

Depression

Dysphoric mood is most directly assessed by *Dr1*, *DEP2*, *D1*, and *RC2*, with *D5* and *Pa2* providing additional information. Depressive ideation and attitudes, encompassing ideas of pessimism, helplessness, hopelessness, worthlessness, and dissatisfaction, may be assessed from *DEP* (especially *DEP1* and *DEP3*), *Hp*, *Sc2*, and *TRT1*. Anhedonia is suggested most directly by *SOD1* and *INTR*, although various relevant aspects are contained in *Sc2* (loss of interest), *Sc4*, *DEP1*, and *TRT1* (apathy and amotivation), *Dr2*, *D-S*, and *D2* (inhibited aggression). Problems of memory, attention and concentration, and judgment, and of mental insufficiency and cognitive depletion are indicated by *CogProb*, *Dr4*, *D4*, and *Sc3* and, secondarily, by *Sc4* and *D2*. *Sc2* and *Sc4* are sensitive to the affective deficits characteristic of schizophrenia as well as in depressive mood disturbance. Aspects of shame and social anxiety are indicated on *Si1*, *SOD2*, *Pd3* (low), and *Hy1* (low). Guilt, guilt-proneness, and negative self-esteem are suggested by *Pd5* and *DEP3*, and secondarily by *D5* and *LSE* (especially *LSE1*). The vegetative symptoms of depression, such as anorexia, constipation, weight loss/gain anergia/fatigue, and sleep disturbance, are reflected in *Dr3*, *D3*, *Hy3*, *D2*, *HEA* (especially *HEA3*), and *Ma2* when low. The Lachar-Wrobel (1979) critical item list contains six items reflecting sleep disturbance: 5, 30, 39, 140F, 328, and 471. Suicidal ideation is directly indicated by the SPS items 150, 303, 506, 520, 524, and 530, and risk may be assessed via *Hp*; see also *DEP4*.

Elation

There are no MMPI-2 measures of sufficient purity to be recommended for identifying elation in isolation. However, several scales and patterns are consistent with elated and euphoric mood. The most general is that of *Ma* higher than *D*, with elation being suggested at a difference of 20T or greater and strongly implicated at differences of 30T or greater, especially when $Ma-S > Ma-O$. Low scores on Scale 0 ($< T-40$) and *INTR* are good secondary measures of elation when Scale 9 is at least moderately elevated. Several additional scales emphasize various facets of elation/euphoria, including *Ma4* (self-importance, grandiosity, control avoidance); *DEP2* and *LSE* (both low; grandiosity); *FRS* (low; fearlessness, recklessness); Scale 2 and *DEP* (both low; freedom from normal cares and concerns), and possibly the difference, $RC9 - AGGR$, when Scales 2 and 0 are low.

Anxiety

ANX is the most specific measure of anxiety on the MMPI-2, but many other scales are sensitive to various aspects of anxiety, such as obsessive rumination

(Scale 7, especially when 7 is higher than 8 and both are elevated), anxious hypersensitivity (*Mf2*), apprehensiveness (*FRS*), indecision (*OBS*), depression and lack of drive (*DEP*, *TRT*), cardiorespiratory and other somatic manifestations of anxiety (*HEA*), feelings of self-doubt and inadequacy (*LSE*), and performance concerns (*WRK*). These aspects are also reflected in Scales 1, 2, 3, 7, and 8 and their various components. The relative success of somatization to reduce anxiety may be judged from $(1 + 3) - (2 + 7)$ and by *HEA - ANX*, with large differences suggesting the successful binding of anxiety by somatic symptoms.

Anger/Irritability/Hostility/Resentment/Rage

Anger and related emotions vary in terms of their characteristic duration and cognitive accompaniments, with some appearing to be more directly mood-centered and state-like, and others being characteristically linked to cognitive patterns, beliefs, and attitudes that act to incite emotional response under certain conditions and to shape and direct its expression. *R* and *DISC* are broadly sensitive to emotional and behavioral control, respectively, influencing how emotions are experienced and expressed. Both *ANG* and *TPA* are sensitive to state and especially trait anger, with *ANG1* emphasizing the felt pressure to express and release angry affect, particularly as a response to frustration and deficits in control, and *ANG2* and *TPA1* emphasizing more trait-like features of an abnormally low threshold for anger arousal but better control over its expression. *TPA2* and *AGGR* reflect chronically antagonistic trends with clearly vindictive and sadistic aims, making them sensitive to hostility as distinct from mere anger. Scale 8 is sensitive to a diffuse and alienated enmity toward others (especially *Sc1*) and to a sense of internal chaos and instability that may manifest itself in rage (especially *Sc5*). These too may influence the intensity, occasion, and focus (or lack thereof) of angry or hostile expressions. Scale 6, *Pa1*, and especially *Pf1* are sensitive to resentment and therefore also tend to influence the threshold for angry or hostile expressions, usually in the context of rationalized responses to perceived provocations.

It is useful to distinguish between the degree of focus that attends angry expression. When $ANG > TPA > Sc5$, angry expressions are likely to be focused on specific issues, perceived offenses, or persons. Conversely, when $Sc5 > TPA > ANG$, “blind” or diffuse expressions may occur that are often seen as inappropriate and very poorly modulated, with the targets determined by opportunity and convenience. The component scales for *ANG* and *TPA* can provide additional interpretive guidance in these contexts. A second useful distinction is between “hot” expression, in which the release of crude affect is the primary goal, and “cool” expression, in which the goal is the infliction of emotional or physical injury to the target. *ANG1*, *ANG2*, *TPA1*, and *Sc5* are relatively hot scales, whereas

AGGR and *TPA2* suggest a calculated or even predatory desire to inflict harm on others, an orientation that may require patience and emotional and behavioral control if such a goal is to be achieved.

Assault

As a very low base rate event in most mental health settings, rough gauges of assault risk are available in the following formulas: $(4 + 6 + 8 + 9) - (1 + 2 + 3 + 7)$, and $(AGGR + DISC + 8 + BIZ + PSYC + RC9) - (R + Dr2 + GF + INTR + Es + 2Ss)$, with high values suggesting impaired controls against the physical expression of hostility.

In addition to the preceding insights, a variety of cognitive and attitudinal features of psychopathology may be identified from MMPI-2 scales and indices as follows.

Unconventional Thought Processes

Sc2, *Ma2*, and *F*, as well as $BIZ2 > BIZ1$, are all sensitive to ways of thinking and thought content that may be infrequent and unconventional but are not clearly bizarre or psychotic. Indeed, the number of items of frankly psychotic content on the MMPI-2 is rather small. Elevations on these scales may alert the clinician to the presence of unusual ideation that may not be identified by scales such as *Pa1*, *Rc6*, *BIZ1*, *PSYC*, *RC8*, and especially *DisOrg* and *Pfβ*, which contain relatively high proportions of psychotic content.

Psychotic Thought Processes

There are several general indicators of psychosis, including the Goldberg Index (1965; $L + Pa + Sc - Hy - Pt > 45$; see also Goldberg, 1972, and Zalewski & Gottesman, 1991), for which the difference between Scales 8 and 7 contain most of the variance; and a newer but similar index: $PSYC > NEGE$. False-positive decisions for $8 > 7$ and $PSYC > NEGE$ may be reduced by requiring that differences between their components exceed 10T. *DisOrg*, *RC6*, *RC8*, *BIZ1*, and $BIZ1 > BIZ2$ are the most specific indicators of bizarre and psychotic thought content, followed by *Pa1* and *PSYC*. *Scale 8*, *Sc3*, and to a lesser extent *D4*, are sensitive to psychotic thought processes, but are considerably less specific. When *Scale 8* is elevated and $Sc3 > D4$ (or, better, $DisOrg > CogProb$), and the latter scales are accompanied by elevations on *BIZ*, *PSYC*, and/or *RC8*, psychosis is strongly suggested. Because *BIZ*, *RC8*, and *RC6* are suppressed by low *T%*, *Ss*, *S*, *Es*, and *K*, raw scores of even 2 or 3 are a cause for concern, because these items may have been endorsed on an ego-syntonic basis.

Grandiosity

See discussion under *Elation*.

Paranoid Thought Processes

Scale 6 is probably the most sensitive indicator of paranoid ideation, with *Pa1* and, especially, *RC6*, *Pf3*, and *Pf4* the most specific, although such content is shared with *BIZ*, *PSYC*, *CYN* (especially *CYN2*), *RC3*, and, to a lesser extent, with *Pd4*, *Sc1*, and *Pa3* (low). Items reflecting delusional ideation are most concentrated on *RC6*, and *Pf3*, whereas the items on *CYN*, *Pd4*, *Sc1*, *RC3*, and *Pa3* (low) emphasize features of mistrust, suspiciousness, and severe alienation from others (especially when *Sc1* > *Pd4*). Specific appraisals of categories of paranoid thought content are available through scores on *Pf1*, *Pf2*, *Pf3*, and *Pf4*.

Obsessions/Ruminations/Compulsions

Scale 7 and the difference between Scales 7 and 8 (when both are elevated and $7 > 8$ by at least $10T$) remain the most sensitive measures of obsessional processes. Scale 7 is limited in this regard by its saturation with First Factor variance. It is likely to function best for identifying obsessional processes when required to exceed *A* and *NEGE* by at least $10T$. *OBS* is especially sensitive to indecision, and *HEA* may be somewhat elevated by an obsessional focus on infection, germs, and the like. These considerations are likely to apply to ego-dystonic obsessive symptoms rather than to compulsive personality traits, which are characteristically ego-syntonic.

Cynicism

Items related to cynicism are widely dispersed throughout the MMPI-2. Misanthropic beliefs and attitudes are reflected in *CYN1*, *RC3*, *Pa3* (low), and *Ho*. *Hy2* (low) reflects the view that the self is no better than others. The pattern created by scores on *Hy2* and *Pa3* (both low, *Hy2* high but *Pa3* low, etc.) can be informative. For example, high *Hy2* with low *Pa3* may suggest cynical attitudes that emphasize competitiveness, narcissism, suspiciousness, or a combination of these. *ASP*, especially *ASP1*, suggests considerably less fearfulness, including social fearfulness, than *CYN* and *CYN1*, and implies a more corrosive and predatory form of cynicism, with willingness to implement cynical attitudes by cheating and exploiting others.

Memory, Attention, Concentration, and Judgment

Experienced problems in these areas are most specifically addressed by *CogProb*, *Dr4*, and *D4*, with their emphasis on thinking as effortful, taxing, and prone to error and failure, and *Sc3*, with its emphasis on thinking as subject to intrusion and disruption.

Psychomotor Abnormality

Sc6 and *HEA2* are both sensitive to motor and sensory concerns and experienced malfunction. High scores may raise the question of neurological or neuropsychological referral in some cases.

ASSESSMENT OF PERSONALITY AND SOCIAL FUNCTIONING

Introversion/Extroversion

Scale *0* and *SOD* are both sensitive to this dimension, with *Si1* and *SOD2* emphasizing shyness, self-consciousness, social anxiety and discomfort, awkwardness, and ease of embarrassment, and *Si2* and *SOD1* emphasizing the avoidance of groups, crowds, and interaction. *Hy1* emphasizes the seeking of attention, approval, support, and affection, and *Pd3* emphasizes social aggressiveness, insouciance, and fearlessness.

Internalization/Externalization

As a personality style variable, this dimension may be expressed as a ratio between the sum of Scales $2 + 5 + 0$ ($2 + 5 + [50 - 5 \times 2] + 0$ for women) over the sum of $3 + 4 + 9$. This ratio provides a rough index of the tendency to cope with distressing or unwanted emotionality by acting out that is relatively free of pathological implications. An alternative ratio of greater significance for the assessment of psychopathology, $2 + 7 + 0$ over the sum of $4 + 6 + 9$, suggests a coping style marked by emotional constriction and the internalization of stress and of taking responsibility for deficits and failures when values are greater than 1. Values of less than 1 suggest an externalizing coping style, one marked by the export of distress to others through anger, blaming, avoiding responsibility, and acting out.

Control/Impulsivity

(See *Internalization/Externalization*) Various qualities of emotional and behavioral control are suggested in most of the MMPI-2 scales. Emotional control (inhibition, constriction) is best indicated by *R*, with *Dr2*, *D2*, *D-5*, *ANG* (low), *TPA* (low), and *Hy5* having various implications for inhibited angry/hostile

emotionality. Behavioral control is best indicated by *DISC* (low), with *Pd2* (low), *Re*, *GF*, *MAC-R* (low), *ASP* (low), *Pd-O* (low), *RC4* (low), *RC9* (low), and *O-H* having implications for how behavioral control is motivated and manifested. Hathaway and Monachesi (1963) found that Scales 2, 5, and 0 acted as suppressors of delinquency, whereas Scales 4, 8, and 9 acted as excitors for these trends. In general, Scales 2, 5 (low scores in women), and 0 do appear to inhibit or soften some of the more socially offensive characteristics of the other clinical scales, with Scales 4, 8, and 9 making the latter characteristics more visible, problematic, or even dangerous. In particular, see the description of the 3-4/4-3 and 4-9/9-4 codetypes.

Social Alienation

Feelings of estrangement, emotional distance, and isolation from others are reflected in *Pd4* and especially *Sc1*, as well as in their parent scales, albeit in more diffuse form. *Pd4* has a relatively greater emphasis on emotional deprivation, and a sense of not being treated fairly or well, with residual sadness and longing. *Sc1* reflects a sense of interpersonal aversiveness and a more hardened and resolved preference for distance from and noninvolvement with others.

Self-Criticism/Negative Self-Esteem

See discussion for *Depression*.

Aggression

Many MMPI-2 scales and patterns have implications for one or another form of aggression. Benign social aggression is suggested in Scale 0, *SOD* and their components (low scores), and *Hy1*. *Pd3* connotes a somewhat more clearly aggressive sociability with overbearingness. Scale 4 likewise connotes more intrusive and visible social aggressiveness, especially when accompanied by Scale 9 and not contradicted by scores on Scale 0 and *SOD*. Such social aggression takes on a more clearly hostile quality as Scales 6 and/or 8 enter the code (e.g., 4-6, 4-8, 4-6-9, 4-8-9). Primary predatory aggression is best marked by *AGGR*.

Dependency/Passivity/Submissiveness versus Confidence/Assertiveness/Dominance

Although few or none of the MMPI-2 scales were intended as explicit measures of these dimensions, several are related to them on an approximate basis. Dependency is related to *Si3*, *LSE*, *WRK*, *GM* (low), *Hy1* (low), and *Pd3* (low), primarily

through implications of inadequacy and incompetence, and therefore needs for approval and assistance. Passivity and submissiveness are variously suggested in *LSE2* (submissiveness), *Hy2* (going along to get along), *D2* and *Dr2* (avoiding risk or offense), *Ma4* (low; tolerance of domination), *Pd2* (low; submitting to rules), *LSE1* (self-doubt), and *AGGR* (low; passivity, submissiveness, subassertion). These trends are contrasted in scores for *Do* (charismatic dominance), *LSE* (low; self-confidence), *Pd3* (low; fear of disapproval), *Si1* (low; freedom from self-consciousness; social confidence), *Si* (low; extroversion), and *GM* (strength and composure). Conflicts, passive-aggressive struggles, or both, in this area are suggested by *Sc4* (evading compliance by pleading extenuating circumstances) and *Ma4* (rebellious counter-submissiveness or counterdependency). See also Scale 5.

Masculinity/Femininity

The assessment of masculinity-femininity encompasses aspects of identity, role, and interests. Scale 5 and subscales, along with *GM* and *GF*, may be used together as a basis for inferences in this area. Recall that scores on Scale 5 are an unreliable basis for inferences about stereotypical interests; the subscales *must* be consulted. Scores on both *GM* and *GF* are strongly suppressed by psychopathology and should be interpreted with caution when either *A* or *DISC* exceeds *T*-60.

Strengths/Social Adequacy/Positive Mental Health

The assessment of positive traits and dispositions with the MMPI-2 is complex, encompassing aspects of social functioning, self-control, self-esteem, and tolerance for stress, among others. Candor in test-taking attitude and scores on scales like *Do* (high), *INTR* (low), *R* (average), *DISC* (average), *LSE* (average to low), *Es* (high), *Ho* (low), *GM* (average to high), *GF* (average to high), and *WRK* (average to low) may all indicate strengths, even in profiles with a few significant clinical scale elevations.

ASSESSMENT OF PERSONALITY CHANGE AND SUITABILITY FOR PSYCHOTHERAPY

The MMPI-2 is suitable for the assessment of the effects of clinical interventions, including psychotherapy, chemotherapy, and milieu-based measures to effect therapeutic change, as well as for normal personality changes that may occur over time. The interpretation of changes between a protocol obtained at Time 1 and another obtained at Time 2 is somewhat complex, as observed changes cannot

always be attributed to changes in clinical status as a consequence of response to treatment. Shifts caused by the imperfect reliability of scales and patterns and by regression toward the mean should not be overlooked as potential sources of observed changes in test scores and profiles. Given the potential for these factors to act as noise, obscuring true treatment effects (“signal”), merely examining baseline and subsequently gathered protocols to observe what aspects have changed over the time separating them is not recommended. However, when used in connection with a hypothesis-testing approach that specifies antecedently the particular scales or aspects of pattern expected to change in response to targeted interventions, the MMPI-2 is sensitive to treatment influences and informative about their efficacy.

For example, the success of interventions directed toward the amelioration of depression may be evaluated with reference to scores on those scales or patterns known to reflect aspects of depressed mood and ideation (Scale 2, *D1-5*, *Hy3*, *Pa2*, *Sc2*, *Sc4*, *DEP*, *DEP1* and 2, *RC2*, *LSE*, etc.). The clinician should also bear in mind that different symptoms are likely to respond to treatment at different rates, even when the interventions selected are highly effective. Thus, one would expect abnormal mood to respond to effective treatment more promptly than somatization, which, in turn, would be expected to respond more rapidly than personality traits such as dependency. At times, the clinician may wish to assess the source and consequences of changes observed independently of treatment. For example, the adequate assessment of clinical changes that may be a function of course of illness, such as the transition from a manic to a depressed phase, may also justify periodic retesting (see, e.g., Nichols, 1988, pp. 82–87).

A variety of treatment issues have been discussed in relation to the clinical scales (Chapter 6). Although much remains to be learned about the MMPI-2 and prognosis for psychotherapy, factors such as ego-strength (*Es*), better resources (*Sr*), less alienation (*Pd4*, *Sc1*), a socially constructive approach to others (*Ho low*), the absence of cognitive disorganization (*DisOrg*, *RC8*, and *Scale 8* all low), and the ability to contain impulse (*DISC*) and experience feelings (*R*) appear likely to be related to retention and successful outcomes. A rough general index of trends favorable to persistence and change in psychotherapy is $(2 + 7 + 0) - (3 + 4 + 9)$, with positive scores suggesting motivating distress; a capacity for self-awareness, reflection, introspection, and doubt; a sense of agency and responsibility; and a capacity for restraint, leading to better prognosis.

DON'T FORGET

The basic clinical scales of the MMPI-2 are not independent. Their average intercorrelation among normals is about .37 and higher among abnormal samples (.55–.60).

**TEST YOURSELF**

1. **Establishing an adequate level of response consistency is desirable but not a necessary precondition for proceeding with MMPI-2 interpretation.** True or False?
2. **Although the distinction between self-deception and impression management emerged from studies of underreporting, it may be applied to overreporting as well, at least in principle.** True or False?
3. **The concept of severity in MMPI-2 scores is largely a function of elevation and relatively independent of response style.** True or False?
4. **False-negative scores on Scale 6 are relatively common in paranoid disorders, but false-positives are relatively rare.** True or False?
5. **Among the clinical scales of the MMPI-2, substance abuse is most reliably associated with**
 - (a) Scale 2.
 - (b) Scale 4.
 - (c) Scale 8.
 - (d) Scale 9.
6. **Distinguishing between psychotic and nonpsychotic conditions may be aided by which of the following?**
 - (a) 8 minus 6
 - (b) 8 minus 7
 - (c) 8 minus F
 - (d) *PSYC* minus *NEGE*
 - (e) a and c
 - (f) b and c
 - (g) b and d
 - (h) c and d
7. **The pattern of masculine versus feminine interests may be adequately assessed with reference to Scale 5, but only in the context of scores on *GM* and *GF*.** True or False?

Answers: 1, False; 2, True; 3, False; 4, True; 5, b; 6, g; 7, False.