Defense Mechanisms in Psychology Today

Further Processes for Adaptation

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Although the concept of the defense mechanism was rejected from academic psychology for a number of years, recent empirical studies show renewed interest in defenses. Cognitive psychologists have confirmed the existence of unconscious psychological processes, a requisite for defenses. Developmental, personality, and social psychologists have all found evidence for defense mechanisms that explicate psychological functioning. The relevance of this new information for clinical practice is discussed.

In many studies of human reaction to stress, it is assumed that adaptation occurs as a result of coping processes. In this article, I consider a second process used for adaptation: the defense mechanism. Following a brief review of the history of the defense mechanism in academic psychology, I discuss current renewed interest and findings regarding defenses in the areas of cognitive, developmental, social, and personality psychology. The final section focuses on the importance of defense mechanisms for clinical problems, including therapeutic noncompliance, diagnosis, and demonstration of positive treatment outcome.

Although there may be points of overlap between coping and defense mechanisms, there are also clear theoretical differences, as outlined in Table 1. Coping and defense mechanisms may be differentiated on the basis of their status as conscious or unconscious processes and on the basis of their being intentional or nonintentional operations. Two other characteristics sometimes thought to differentiate between coping and defense mechanisms—whether they are determined by situation or disposition, and whether they may be hierarchically arranged—are in fact more a matter of emphasis than critical differences. In addition, the idea that coping is related to psychological or physical health, while defense is related to pathology, is not supported by research, once the problems associated with self-report measures and context are controlled. For a more extensive discussion of these issues, see Cramer (1998a).

With defenses seen as an alternative type of adaptational strategy, it would seem critical to study them when investigating how people deal with stress. Yet, this happens only infrequently. Why did the study of defense mechanisms disappear from the groves of academe? A brief look at the history of the concept of defense may help explain this situation.

"Ups and Downs" of Interest in Defense Mechanisms

The concept of the defense mechanism in psychology began with Sigmund Freud's early papers (1894/1962, 1896/1966), in which he described a mental operation that kept painful thoughts and affects out of awareness. Sigmund Freud's (e.g., 1915/1957, 1926/1959) ideas about defenses varied over the years. The theory of defense mechanisms was expanded in the important work of Anna Freud (1936/1946).

Within academic psychology, the 1930s produced a series of empirical studies of defense mechanisms. Most of these laboratory studies focused on either the defense of repression or the defense of projection. The majority of the investigations of repression were of two types: (a) experiments on learning and memory and (b) studies of perceptual defense.

Although these studies flourished from the 1930s to the 1960s, they eventually had their critics. Chief among these was D. S. Holmes (1972, 1974, 1990), who concluded that the majority of memory results previously attributed to repression were better explained by differences in attentional processes. The perceptual defense studies were also criticized on methodological grounds. The difficulty individuals had in perceiving taboo words might well have been due to factors such as word length, differential stimulus familiarity, and social unacceptability (whereby the perceiver suppresses verbalization; Howes & Solomon, 1950; McGinnies, Comer, & Lacy, 1952). The net result of these critiques was the decision that repression, if defined as a defense process that occurs without awareness, does not exist. The critiques by Holmes and others had a decisive impact on the field of academic research, and by the end of the 1970s the laboratory study of repression had virtually disappeared (Holmes & McCaul, 1989; Paulhus, Fridhandler, & Hayes, 1997).

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Table 1
Coping and Defense Mechanisms: How Do They Differ?

Feature		
Coping process	Defense mechanism	Difference
Conscious	Unconscious	Critical
Used intentionally	Nonintentional	Critical
Situationally determined	Dispositional	Not a critical difference; a matter of emphasis
Nonhierarchical	Hierarchical	Not a critical difference; a matter of emphasis
Associated with normality	Associated with pathology	No difference, when self-report and context are controlled

Note. From Cramer (1998a).

The other defense being studied in the laboratory during this time was projection. Again, the paradigms were primarily of two types: the attribution of personal characteristics to ambiguous stimuli and the *self–other paradigm* (the attribution of traits to self and others). Although the self–other paradigm appeared to produce results demonstrating the defense of projection, a number of criticisms were directed at both the experimental design and the logic of these experiments. In two reviews, Holmes (1968, 1978) concluded that there was no evidence for unconscious projection. One should be clear here that Holmes did not say the phenomenon of projection does not exist (see Holmes, 1978, p. 678). Rather, he believed that the same process was more parsimoniously labeled *attribution*. The study of this process, sans its connotation as a defense mechanism, was taken up by social psychologists and incorporated into attribution theory (Jones & Davis, 1965; Kelly, 1967).

Thus, as the 1970s rang in, the death knell was being sounded for the study of defense mechanisms in academic psychology. Repression was explained by attentional processes and response suppression, while projection was explained by attribution. At least as studied in the laboratory, these processes were not seen to involve unconscious functioning and thus, by definition, did not involve defense mechanisms.

Clinicians, however, continued to use the concept of defense, arguing that the laboratory research lacked ecological validity. Interest in defense mechanisms also continued in the field of personality assessment. One of the problems here was to find an adequate measure of defense. Although several paper-and-pencil measures of defenses were developed (Byrne, 1961; Haan, 1965; Joffe & Naditch, 1977), each of these measures had psychometric inadequacies (Davidson & MacGregor, 1998). The most widely used of the paper-and-pencil assessment procedures was the Defense Mechanism Inventory, developed by Gleser and Ihilevich (1969). Although this measure assured objectivity, evidence for reliability and validity was mixed (Cramer, 1991b). More recently, Bond has developed another self-report Defense Style Questionnaire (DSQ; Andrews, Pollock, & Stewart, 1989; Bond, 1986).

In the past decade, new ideas about defense mechanisms have begun to develop. Notably, there has been a shift both in the theoretical ideas about defenses and in the research approach to defense assessment. While the classical psychoanalytic theory had explained defenses as counterforces to the expression of instinctual drives, contemporary psychoanalytic self-psychology and object relations theory broadened the role of defense to include the maintenance of self-esteem and the protection of self-organization (Cooper, 1998; Fenichel, 1945). Along with this shift in theory have come new approaches to the assessment of defense mechanisms. Dissatisfied with the logical inconsistency of asking people to self-report on operations that are, by definition, unconscious, researchers have developed several new approaches. These observational methods—including ratings of defense use in clinical interviews (Perry & Cooper, 1989; Vaillant, 1971), coding of narrative material (Cramer, 1991b), and Q-sorts (Davidson & MacGregor 1996; Haan, 1985; Roston, Lee, & Vaillant, 1992)—allow for the free expression of thought content and style, while at the same time providing the observer with a systematic plan to assess the presence of defense mechanisms. The specificity of the rules for coding makes it possible to determine both the reliability and the validity of the measures. The advantages and disadvantages of both the self-report and the observational methods have been discussed by Davidson and MacGregor (1998) and by Perry and Ianni (1998).

Where Are Defenses Today?

Recently, the negative conclusions of Holmes have been called into question. Paulhus et al. (1997) pointed out that "equally careful reviewers (Cooper, 1992; Erdelyi, 1985) have drawn much more favorable conclusions from the same literature" (p. 568). In fact, defense mechanisms and defensive processes are being discussed today across the broad field of psychology.

Defenses in Cognitive Psychology

Although there were procedural errors in many of the early experimental studies of defense, the real sticking point in the refusal to accept the conclusions of these earlier studies was that they implied the existence of unconscious cognition (see Lazarus, 1998). Yet, recently cognitive psychologists have rediscovered the existence of unconscious mental processes. Virtually every leading cognitive psychologist today accepts the premise that mental processes go on outside of awareness (e.g., Greenwald, 1992; Jacoby, 1991; Kihlstrom, 1987; Roediger, 1990; Schachter, 1987). Currently, any basis for skepticism in academic psychology regarding the existence of "significant unconscious phe-

nomena has crumbled in the face of recent research" (Greenwald, 1992, p. 773). Although this research has not focused on motivated unconscious processes such as defense mechanisms, it does provide support for the existence of unconscious mental processes, which is a requisite for defense mechanisms.

Memory Without Conscious Awareness

There is an extensive body of research showing that memories unavailable to consciousness nevertheless influence conscious memory and task performance. Such implicit memory is demonstrated in priming experiments, in which the activation of memories outside of awareness subsequently influences conscious recall and judgment (e.g., Cramer, 1965; Marcel, 1983). Schacter (1987) and Roediger (1990) provide extensive reviews of this work. Drawing on this research, some cognitive psychologists are considering how processes such as repression might function (Greenwald, 1992).

Decision Making Outside of Awareness

Computer simulations of the defensive process of projection have been written and tested by Colby (1981). As described by Erdelyi (1985), these studies have demonstrated cognitive "processing that is not available to conscious inspection either during or after its performance" (p. 243); they have also shown that computers can "selectively regulate their own input (and thus perceive at one level without perceiving at another level)" (p. 254). Further studies have provided evidence for erroneous nonconscious inferential processes (Lewicki, Hill, & Czyzewska, 1992). As summarized by Jacoby, Lindsay, and Toth (1992), "there is now a great deal of support for the notion that an unconscious inference or attribution process underlies the subjective experience of perceiving . . . and remembering" (p. 803).

Selective Attention

Whereas Holmes believed the evidence for repression was better explained by attentional processes, today research on attention may be used to support defense concepts. It has been demonstrated (Bonano & Wexler, 1992; Cherry, 1953) that attention may be divided between stimuli, such that one stimulus is consciously recognized, the other not; such division of attention is the cognitive process that contributes to the defenses of splitting and dissociation. Further, despite the lack of conscious awareness of the "unattended" stimulus, research shows that both the physical and semantic features of that stimulus are being analyzed (Greenwald, 1992) and that stimuli not attended to influence behavior (Jacoby et al., 1992). This has also been demonstrated in studies of subliminal psychodynamic activation, which have recently been reviewed by Hardaway (1990) and by Paulhus et al. (1997). In addition, procedures previously requiring attention may become automatized and thus unconscious, in that the person performing them is unaware of their operation (Jacoby et al., 1992; Kihlstrom, 1987). These findings provide an important basis for the study of the cognitive processes that are involved in the functioning of defense mechanisms.

Defenses in Social Psychology

Psychologists in the field of social psychology have continued to (re)discover the existence of processes by which humans deceive themselves, enhance self-esteem, and foster unrealistic self-illusions. These defensive processes have been "relabeled or rediscovered under the aegis of social cognition or other current theoretical frameworks" (Baumeister, Dale, & Sommer, 1998, p. 1116). "Certain core concepts, for example, cognitive dissonance, were simply euphemisms for the study of defense mechanisms" (Paulhus et al., 1997, p. 563).

Renaming of Defense Mechanisms

As discussed earlier, the cognitive processes involved in the defense of projection were taken into social psychology and studied under the name of attribution, or, later, the *false consensus effect*. The defense of displacement formed the basis for early work in *scapegoating*. The phenomenon of defensive isolation appeared as *dissonance reduction*. Reaction formation is represented in *self-presentation ploys* associated with counteracting prejudice, racism, and sexism through overly positive behavior. More recently, aspects of denial (e.g., refusal to recognize reality implications) have been recast as *positive illusions*, and undoing has been relabeled *counterfactual thinking*. As noted by Paulhus et al. (1997), "social psychologists have begun to address virtually the full gamut of psychoanalytic defenses, albeit with different labels" (p. 564).

Evidence for Defense Mechanisms

In a recent review, Baumeister et al. (1998) have discussed research from modern social psychology that provides evidence for the use of defense mechanisms in situations where there is a threat to self-esteem. They conclude that the evidence for a number of defenses is substantial—an impressive result given that these studies and measures were not designed to study defense.

Defenses in Developmental Psychology

Within developmental psychology, recognition of the importance of defenses for understanding children's behavior has been increasing. Recent studies have demonstrated that children's use of defense mechanisms changes in a developmentally predictable pattern (Cramer, 1991b; Cramer & Gaul, 1988), a finding that has been validated both cross-sectionally (Porcerelli, Thomas, Hibbard, & Cogan, 1998) and longitudinally (Cramer, 1997a). Cognitively simpler defenses. such as denial, predominate during the early years; more complex defenses predominate during adolescence and young adulthood. Further, by including defense mechanisms among the psychological processes available to children, behaviors that were previously puzzling could be understood. Selected examples are described below.

Attachment and Abuse

One would assume that a 12-month-old infant who has been separated from his or her mother and left in a strange place would, when the mother returns, show signs of relief and eagerness to be held by her. Yet, research shows that some infants avoid contact with the returned mother. It is tempting to think that these infants are simply not distressed by the mother's absence. However, physiological monitoring indicates otherwise. Developmental psychologists who study this area of attachment understand the avoidant response as the infant "using a psychological defense mechanism" (Colin, 1996, p. 40) to defend against the presence of a caretaker who, because of previous experiences, evokes unpleasant emotions (Cassidy & Kobak, 1988; Sroufe & Waters, 1977).

Defensive processes have also been invoked to explain why some, but not all, mothers imbue the same attachment style in their children as was instilled in them, and why some, but not all, mothers who were themselves abused as children become abusive (Fonagy, Steele, & Steele, 1991; Main & Goldwyn, 1984; Main, Kaplan, & Cassidy, 1985). Logically, the mother who can remember her negative experiences, who can reflect on the past rather than defensively not remember it, will have the option of *deciding* not to act that way with her children (Eagle, 1995). To "not remember" is to be at the mercy of unconsciously driven behavior.

Self-Esteem

Developmental psychologists no longer take children's self-reports of high self-esteem at face value (Cassidy, 1988). Research shows that children who present themselves in an extremely positive way are often denying or defending against an underlying sense of imperfection. Further, it has been shown that preschoolers with low self-esteem are likely to continue using the immature defense of denial into early adulthood (Cramer & Block, 1998).

Emotions

Studies of children's emotional development frequently rely on each participating child's verbal report of his or her emotional state after being exposed to emotionally distressing events. Yet, when the self-reported positive emotion is compared with a concurrent assessment of facial expression, there is often a high degree of disagreement. This disjunction between positive verbal and negative facial expression is now understood as being due to "denial as it has been classically defined" (Strayer & Roberts, 1997, p. 641): Socially unacceptable negative emotions are unavailable to conscious experience. Further, laboratory studies have demonstrated that children who experience failure increase their use of defense mechanisms (Cramer & Gaul, 1988). Clinically, it has been found that children who increase their use of defenses following a traumatic event are then protected from psychological upset (Dollinger & Cramer, 1990).

Moral Development

Recently, the role of defense mechanisms in the development of moral judgment has been investigated, with striking results. In two longitudinal studies, it was found that adolescents with strong defense use showed lower levels of moral judgment. Even more important was the finding that the earlier defense use predicted moral judgment both in later adolescence (Matsuba & Walker, 1998) and in early adulthood (Hart & Chmiel, 1992).

Defenses in Personality Psychology

A recent chapter in the *Handbook of Personality* (Paulhus et al., 1997) and a special issue of the *Journal of Personality* (Cramer & Davidson, 1998) have been devoted to defenses in personality research. The following discussion will be selective, focusing on two areas of personality study that have included a consideration of defense mechanisms. Other programs of research (Conte & Plutchik, 1995; Erdelyi, 1990; Haan, 1977; Horowitz, 1988; Ihilevich & Gleser, 1986; Vaillant, 1992) are reviewed by Paulhus et al. (1997) and by Singer (1990).

Identity and Identity Status

The process of identity development, a major task of adolescence, is often fraught with anxiety. According to theory, defense mechanisms function to control anxiety. Thus, one might expect the use of defenses to be related to identity development, as has been found. Late adolescents in the noncommitted identity statuses show strong use of defenses, in contrast to those in the committed statuses (Cramer, 1995, 1998b). Further, it has been demonstrated that the use of defenses is a linear function of the degree of crisis associated with the identity status (Cramer, 1997b).

In the laboratory, several studies have demonstrated that experimental threat to an individual's identity results in heightened use of defense mechanisms. This increased defense use is greater when the threatened characteristic is more central to the person's self-representation (Cramer, 1991a, 1998c; Grzegolowska-Klarkowska & Zolnierczyk, 1988, 1990).

Gender Role Conflict and Sexual Identity

Earlier studies found sex differences in the use of defense mechanisms. Perhaps more interesting were findings showing that men *and* women with a strong feminine gender identity were more likely to use typically female defenses (e.g., turning against the self), whereas those with a strong masculine identity were more likely to use male defenses (e.g., turning against the object; Cramer, 1991b).

Recent work has demonstrated that gender role conflict is related to increased defense use (e.g., Mahalik, Cournoyer, DeFranc, Cherry, & Napolitano, 1998). Specifically, men with a feminine personality organization and women with a masculine personality organization were found to show greater defense use than those with a gender-consistent personality organization (Cramer, 1999b; Cramer & Blatt, 1993). Further, threat to gender identity in-

tensifies the use of defenses: college students given (bogus) cross-sex-role feedback significantly increased their defense use (Cramer, 1998c). Similarly, two studies of gay men found an increase in defense use when they were required to tell stories to pictures involving heterosexual activity, a situation inconsistent with their sexual identity (Luciano, 1999; Luciano & Brice, 1999).

Defense Mechanisms and Clinical Psychology

Regardless of theoretical orientation, the increasing body of evidence for psychological functioning outside of awareness and for defenses has important implications for anyone involved in the treatment of patients, either medical or psychiatric.

Therapeutic Noncompliance

Studies of patients with serious medical conditions, such as cancer, diabetes, kidney failure, or obesity, find that those who do not comply with medical advice also show strong use of defense mechanisms (Farberow, 1980; Goldstein, 1980; Katz, Weiner, Gallagher, & Hellman, 1970; Oettingen, 1996). Although defenses protect these patients from anxiety about being ill, they also keep them from recognizing the importance of obtaining the needed treatment. Psychologists may differ on this point (cf. Colvin & Block, 1994; Taylor & Brown, 1994), but there appears to be no disagreement that strong *positive illusions*, in which the implications of adversity are denied, are not, in the long run, adaptive (Suls & Fletcher, 1985). Thus, in working with patients for whom continuing compliance with a therapeutic regimen is necessary, it is highly beneficial to know something about the patient's defenses—especially those that may interfere with treatment (Fulde, Junge, & Ahrens, 1995). This allows psychologists to alert the treating clinician, when indicated, that the patient's customary way of dealing with stress may interfere with their following treatment advice.

Further, premature termination or avoidance of therapy may be significantly influenced by defense mechanisms related to attachment style. Research with college students shows that those with a dismissing attachment style use defensive operations to exclude or significantly distort attachment-related information when they are interviewed (Dozier & Kobak, 1992). In addition to downplaying the importance of relationships, these individuals report extremely positive relationships with their parents and minimize the importance of childhood experiences. As Dozier and Kobak (1992) have pointed out, such individuals are likely to show considerable resistance to insight-oriented psychotherapy. For the clinician, it is important not only to recognize that this self-report may be defensive but also to understand what it is defending—namely, that through these distortions the patient has found a way to maintain an attachment to his or her parents—and that this is a source of resistance to therapy. Thus, the decision of how or whether to address defense mechanisms in therapy should take into consideration whether the defense is adaptive or not. "By thoughtlessly challenging irritating, but partly adaptive, immature defenses, a clinician can evoke enormous anxiety and depression in a patient and rupture the [therapeutic] alliance" (Vaillant, 1994, p. 49).

Assessment of Coping Strategies and Outcomes

Clinicians are often called on to assess the patient's level of functioning. Importantly, both coping strategies and defense mechanisms have been found to make independent contributions to the prediction of adjustment (American Psychiatric Association, 1994, Axis V: Global Assessment Functioning; Erikson, Feldman, & Steiner, 1997). However, relying solely on self-report measures for this purpose is questionable, for it ignores the possibility that either intentionally or unintentionally, the self-report is biased. Current studies demonstrate that some individuals will consistently provide more favorable self-reports than are justified either by independent ratings or by concurrent physiological measures (Colvin, Block, & Funder, 1995; Davidson, 1996; Hughes, Uhlmann, & Pennebaker, 1994; Ryff & Keyes, 1995; Shedler, Mayman, & Manis, 1993; Weinberger, Schwartz, & Davidson, 1979). Funder and Colvin (1988) showed that the self-report items having the *least* agreement with ratings of independent observers were those that dealt specifically with defense operations. In fact, Turvey and Salovey (1993–1994) demonstrated, through factor analysis, that a variety of self-report personality questionnaires measure but a single trait: defensiveness.

As with self-report questionnaires, the clinician who accepts at face value the patient's life history report may seriously overestimate the level of current adaptive functioning because of underreported problems. Defenses may also be implicated in the overreporting of symptoms (Schwebel & Suls, 1999; Steptoe & Vogele, 1992; Weinstein, Averill, Opton, & Lazarus, 1968). Thus, in assessing patient functioning, it is critical to recognize that the patients' descriptions of how they cope and their descriptions of their outcome status are both going to be influenced by defenses. Unless the role of defense mechanisms is taken into account, erroneous and potentially harmful conclusions regarding the efficacy of different coping strategies may be reached.

Anticipating the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition

Beginning with the *Diagnostic and Statistical Manual of Mental Disorders,* third edition (American Psychiatric Association, 1980), defense mechanisms were to be included as one of the several diagnostic axes, but this plan was abandoned "because defense mechanism implied unconscious etiology" (Vaillant, 1984, p. 544). A glossary of defense mechanisms was included in the *Diagnostic and Statistical Manual of Mental Disorders,* third edition, revised (American Psychiatric Association, 1987); in the *Diagnostic and Statistical Manual of Mental Disorders,* fourth edition (*DSM–IV*; American Psychiatric Associa-

tion, 1994), a "Defense Functioning Scale" is presented for use as an optional axis of diagnosis (see Table 2). Progress with the use of the *DSM–IV* defense scale in clinical trials has been reported by Perry and Hoglend (1998), showing, for example, that defense ratings constitute a factor, or axis, that is independent from *DSM–IV* Axes I, II, and V (see also Perry et al., 1998; Skodol & Perry, 1993; Soldz & Vaillant, 1998).

Defenses and Symptoms

It is useful to think of defenses as ordered on a continuum, differing in degree of maturity. In adulthood, defenses may be hierarchically arranged, with the most adaptive ranked at the top of the hierarchy, and the less adaptive, most immature defenses at the bottom (see Table 2). In childhood, the defenses are arranged on a developmental continuum, with immature defenses appearing before those that are more mature.

When defenses are independently assessed from narrative material, the use of immature defenses is found to be related to high symptom scores on the Global Severity Index (GSI; Hibbard & Porcerelli, 1998; Perry & Hoglend, 1998). Further, these independently rated measures of defense are demonstrated by factor analysis to constitute a dimension independent from symptom report (Perry & Hoglend, 1998), a justification for including defenses as an additional *DSM* axis. Further, defense scores based on clinicians' ratings have been found to predict adequacy of interpersonal and global functioning, with immature defenses being a negative indicator (Cramer, Blatt, & Ford, 1988; Perry & Cooper, 1992; Vaillant & Vaillant, 1992). However, research on the relation between self-report defense measures (e.g., the DSQ) and psychiatric symptoms is less consistent. Further, responses to the DSQ and the GSI have been shown, through factor analysis, to be nonindependent, constituting two ends of a single factor (Perry & Hoglend, 1998).

What do these studies tell psychologists? One clear conclusion is that persons with clinically assessed psychiatric symptoms are likely to use immature defenses, such as denial. If these individuals are then asked to self-report on their functioning, they should be expected to make use of these defenses, and their self-reports will likely be distorted in accordance with their preferred defense. The fact that clinicians and researchers continue to use these self-report measures, without accounting for the contribution of defenses to the scores obtained, is questionable in the light of overwhelming evidence demonstrating distorted self-reports.

Table 2
The Defensive Functioning Scale: Hierarchical Levels of Defense

Level	Defenses included
High adaptive	Altruism, humor, sublimation, suppression
Mental inhibitions	Displacement, dissociation, intellectualization, isolation, repression, undoing
Minor image-distorting	Devaluation, idealization, omnipotence
Disavowal	Denial, projection, rationalization
Major image-distorting	Autistic fantasy, projective identification, splitting
Action	Acting out, apathetic withdrawal, passive aggression
Defensive dysregulation	Projection (delusional), denial (psychotic), distortion (psychotic)

Note. To use this scale, the clinician should first list up to seven defenses commonly used by the patient and then determine the predominant defense level exhibited by the individual. Adapted from American Psychiatric Association (1994). Reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Copyright 1994 American Psychiatric Association.

Facilitating Differential Diagnosis

Research has consistently demonstrated that the use of immature defenses is associated with borderline personality disorder (BPD), that immature defenses differentiate between the presence of a personality disorder and no disorder, and that patients with psychoses use defenses that are less mature than those used by patients with personality disorders (Bond, Paris, & Zweig-Frank, 1994; Cooper, Perry, & Arnow, 1988; Cramer, 1999b; Devens & Erickson, 1998; Hibbard et al., 1994; Hibbard & Porcerelli, 1998). The relation of specific personality and affective disorders to specific defenses has been demonstrated by Bloch, Shear, Markowitz, Leon, and Perry (1993); Cramer (1999c); Jacobson et al. (1986); Perry (1988); Perry and Cooper (1989); Spinhoven and Kooiman (1997); and Vaillant (1994).

Demonstrating the Benefits of Psychotherapy or Other Interventions

Clinicians often cite a change in symptoms as justification for the efficacy of treatment, but it is also important to be able to explain why that symptom change occurred. If clinicians want to conclude that psychotherapy is responsible, they should be able to point to some psychological change that is responsible for or at least associated with the symptom change. Being able to demonstrate change in defense mechanism use provides this kind of information.

The relation between therapeutic benefits and defense use has been demonstrated in several clinical studies. For example, after 15 months of intensive therapy, hospitalized patients showed a significant decrease in immature defense use, and this decrease was correlated with a similar decrease in independently rated psychiatric symptoms (Cramer & Blatt, 1993). Further, among these patients, those rated as most improved showed the greatest decrease in the use of immature defenses (Cramer, 1999b). Change in

defense use has also been found to be associated with remission from depressive episodes and a decreased number of obsessive–compulsive symptoms (Akkerman, Carr, & Lewin, 1992; Albucher, Abelson, & Nesse, 1998). Hoglend and Perry (1998) found that an initial clinical assessment of defenses predicted treatment outcome with depressed patients better than did an initial assessment of *DSM–IV* Axis V global functioning. Significantly, neither a self-report defense measure (DSQ) nor self-reported symptoms (GSI) were effective predictors of outcome.

Given these findings showing the importance of defense mechanisms for understanding clinical phenomena, the implications seem clear: A systematic assessment of defense mechanisms "is central to a comprehensive personality assessment" (Millon, 1984, p. 460). "Today, no mental status or clinical formulation should be considered complete without an effort to identify the patient's dominant defense mechanism" (Vaillant, 1992, p. 3).

Are Defenses Adaptive?

There is general agreement that mature defenses such as humor, altruism, and sublimation are associated with adaptive functioning (e.g., Vaillant, 1977). The controversy over defenses and adaptation is more concerned with the role of immature defenses, such as denial. The question of whether these defenses are adaptive can only be answered by considering the context, both external and internal, in which they occur.

Because defenses differ in their relative maturity and in their developmental appropriateness, age is a primary consideration when assessing the adaptive success of a defense. Relying on the immature defense of denial is normative for a five-year-old but is developmentally out of phase in a young adult. The defense is successful for the young child because its function is not yet understood; with greater cognitive maturity, the functioning of the defense is demystified (Chandler, Paget, & Koch, 1978), and so generally it is replaced with a more complex mechanism (Cramer & Brilliant, in press). When children and adolescents use age-characteristic defenses, they protect themselves from undue psychological stress. When individuals use age-inappropriate defenses, there is often evidence of maladaptive functioning (Cramer & Block, 1998; Vaillant, 1977, 1992, 1994). However, recent research has demonstrated that for adults with low IQs (90 and below), the use of denial is associated with higher levels of Loevinger's ego functioning (Cramer, 1999a). Similarly, for some with severe psychopathology, the use of immature defenses may be critical in maintaining minimally successful adaptation (Vaillant, 1992).

A further factor in determining whether defenses are adaptive requires a consideration of time frame. In the short run, especially if few other options are available, defenses may be successful in ameliorating incapacitating anxiety and providing the highest level of adaptation possible. In the long run, especially if they should interfere with problem-focused coping, defenses are likely to hinder successful adaptation (Pennebaker, 1993; Suls & Fletcher, 1985). In sum, "defenses provide a diagnostic template for understanding distress and for guiding the clinical management of psychology's most baffling and frustrating clients" (Vaillant, 1994, p. 49).

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