

A 50-Year Longitudinal Study of Defense Use among Inner City Men: A Validation of the DSM-IV Defense Axis

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The patterns of use of defense mechanisms by 306 inner-city men were rated from interviews at age 47 and these ratings were analyzed by cluster analysis. Five clusters resulted. The correlates of cluster membership were examined using data from the 50-year longitudinal study of these men. One cluster exhibited the greatest use of mature defenses; the men in this cluster functioned best on all psychosocial and health variables. Two clusters of men used primarily neurotic defenses; these men functioned at an intermediate level on all outcomes. The men in two clusters primarily used immature defenses. The men in one of these clusters used primarily action defenses, whereas the men in the other cluster were the greatest users of projection and fantasy. In general, the men in both these clusters functioned worse than those in the other three. However, the users of action defenses exhibited greater sociopathy, alcohol problems, and marital instability. The findings provide general support for the DSM-IV hierarchy for nonpsychotic defenses, with mature defenses at the top, neurotic defenses in the middle, and action defenses toward the bottom. In particular, the study supports the DSM-IV distinction of action defenses from other immature defenses.

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The concept of defense mechanisms is among the few ideas originating in psychoanalytic thinking that have penetrated mainstream psychology (Cooper, 1992) and psychiatry (American Psychiatric Association, 1994). Defenses are conceptualized in psychoanalytic theory as largely unconscious modes of adjustment to internal and external stress and conflict (Freud, 1936, 1946). The popularity and importance of the concept of defenses can be seen from the fact that there have been four recent anthologies reporting theoretical and empirical studies of defenses (Conte and Plutchik, 1995; Hentschel et al., 1993; Singer, 1990; Vaillant, 1992), as well as a recent comprehensive account of research methods for evaluating defenses (Cramer, 1991). In addition, a Defense Functioning Scale has been included in the DSM-IV (American Psychiatric Association, 1994). This inclusion represents an acknowledgment that the concept of defense often serves as an important tool for treatment planning and for the elucidation of individual differences, especially in the arena of psychosocial functioning.

A number of measures of defenses have been developed (Conte and Plutchik, 1995; Cramer, 1991; Hentschel et al., 1993), using self-report inventories, tachistoscopic manipulations, and clinical ratings. These various measures have been related to a wide variety of other psychological phenomena, including psychiatric diagnosis (*e.g.*, Bond et al., 1994; Perry and Kardos, 1995; Soldz et al., 1995; Vaillant and Drake, 1985), personality traits (Soldz et al., 1995), mental health (Vaillant, 1975, 1993; Vaillant and Vaillant, 1990), physical health (Vaillant and Vaillant, 1990), and other life outcomes (Vaillant, 1993; Vaillant and Milofsky, 1980).

There has been considerable controversy regarding the number and best categorization of defenses (Vaillant, 1992). One early categorization was that of Vaillant (1971, 1977, 1992, 1993). Vaillant's scheme divides defenses into four hierarchical levels: psychotic (delusional projection, denial [psychotic], distortion); immature (projection, schizoid fantasy, hypochondriasis, passive-aggression, acting out, dissociation/neurotic denial); neurotic (repression, displacement, reaction formation, intellectualization); and mature (altruism, humor, suppression, anticipation, sublimation). Vaillant's defense hierarchy has been the subject of considerable empirical research (Vaillant, 1992; Skodol and Perry, 1993). Overall maturity of defenses, essentially the balance of mature to immature defenses (Vaillant and Drake, 1985), has been shown to be related to overall mental health (Vaillant, 1975,

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1993), Eriksonian developmental level (Vaillant and Milofsky, 1980), and successful aging (Vaillant and Vaillant, 1990). In addition, Vaillant's individual defenses have been demonstrated to manifest predictable relations to personality pathology (Vaillant, 1994) and to social mobility (Snarey and Vaillant, 1985).

Related to Vaillant's defense hierarchy are other hierarchies that differ largely in details. Among the alternative categorizations the most prominent is the DSM-IV Defense Functioning Scale (American Psychiatric Association, 1994), which was derived from the Defense Mechanism Rating Scales (Perry and Kardos, 1995). In addition to Vaillant's defenses, this defense classification includes a number of object relational defenses (*e.g.*, splitting and projective identification) originally identified by Klein (1975) and popularized by Kernberg (1975). DSM-IV also subdivides Vaillant's immature defenses by postulating that fantasy and (neurotic) denial are less problematic than are action defenses (acting out, passive aggression, help-rejecting complaining [similar to Vaillant's hypochondriasis] and apathetic withdrawal; see also, Bond, 1992).

The current study uses data from the Core City sample of the Study of Adult Development (Vaillant, 1995) to examine the DSM-IV discrimination of action defenses from other immature defenses. The Core City sample provides a unique opportunity for the study of defenses in that several hundred men from an urban inner city sample have been followed from junior high school until retirement. At approximately age 47, these men were extensively interviewed about their lives, their problems and successes, and their means of coping with life difficulties. These interviews provided the basis for rating the defenses used by these men in dealing with the stresses of life. The longitudinal character of this data permits the examination of a wide range of correlates of defense use.

The current study differs from previous examinations of the role of defenses in this sample (Vaillant, 1992, 1993, 1994) in that we adopted a person-centered (Block, 1971) or typological (Chein, 1943) approach for examining the patterns of defense use by specific individuals, rather than a variable-centered approach. Because the use of defense hierarchies is ultimately to classify individuals in terms of their defense use, it makes sense to base one's analytic strategy on individual patterns of defenses. After all, like elements, defenses usually occur in nature as compounds.

Specifically, we used cluster analysis to derive subgroups of individuals who are relatively homogeneous in terms of their patterns of defense use.

We then examined correlates of these clusters. Among areas of functioning examined were mental health, physical health, social and occupational functioning, substance use and abuse, and sociopathy. A further distinguishing feature of the present study is that we try to control the degree to which the relation between defense use and psychosocial functioning could be attributed to alcohol abuse and its attendant problems.

Methods

Participants

The participants for this study came from the Core City sample of the Study of Adult Development. The 456 males in the Core City sample (mean date of birth, 1929 \pm 2 SD) were first studied from early adolescence to age 31 as the nondelinquent control group for Glueck and Glueck's (1950) longitudinal study of juvenile delinquency. They were selected from high-crime, inner-city Boston neighborhoods. Ninety percent of these men were from working or lower class families and 61% of their parents were foreign born. The mean IQ of these men was 95 \pm 2. Forty-eight percent of them graduated from high school and 7% from college. Their mean income in 1977 was \$16,350 \pm \$700.

Ninety percent of the original subjects were reinterviewed at ages 25 and 31. Three hundred sixty-six of these men were reinterviewed at age 47 \pm 1 using a 2-hour semistructured interview. Data were elicited on overall adjustment, social and vocational functioning, alcohol abuse, and the men's ways of coping with stress. The 90 of the original 456 men who were lost from the study at that point included 32 who had died and 58 who had either withdrawn or were unavailable for interview. Of these 366 men, 306 had age 47 interviews complete enough to permit the rating of defenses.

The resulting 306 men were all Caucasian, with European origins. Within those limits, however, they represented a broad mix of ethnic backgrounds, including 24% British, 24% Italian, and 19% Irish. Although these men had been chosen as controls for a study of delinquency in adolescence, the sample exhibited only a modest bias toward good behavior as 17% eventually spent at least some time in jail.

Measures

Measures used in this study fall into three classes: ratings of defenses from interviews conducted when the men were approximately age 47, various psychosocial outcomes rated from these interviews and other data available on subjects including interviews

at age 31, and biennial questionnaires. It is important to understand that the defense ratings were performed by groups of raters who were completely blind to the other ratings.

Defense Ratings. The 15 nonpsychotic level defenses were rated by two raters who were blinded to other ratings for the subjects. The raters were given a 20- to 30-page summary of the 2-hour semi-structured interviews, focused on health, work functioning, and difficulties in relationships, that were conducted when the men were approximately 47. Raters were instructed to note every instance of each of the 15 defenses in a given protocol. For each interview, use of from three to seven defenses was noted in from 10 to 30 identified instances of defensive behaviors. Each rater scored each defense on a three-point scale: 0, defense absent; 1, defense noted one to two times; 2, defense used three or more times or it was the most frequently used defense. The ratings for the two raters were then summed, forming a five-point scale, from 0 to 4. More details on the rating procedure are available in Vaillant et al. (1986). Vaillant et al. (1986) reported strong convergent validity between the individual defense ratings and items purporting to measure the same defenses from the self-report Defense Style Questionnaire administered 7 years later (Bond et al., 1983). Vaillant (1994) also demonstrated the predictable relations of these defense ratings with independently obtained personality disorder diagnoses.

Social Class. Social class was calculated using the Hollingshead and Redlich (1958) three-factor index combining their Residential, Occupational, and Educational Scales to yield a score that is converted to five levels: class I = upper middle class, II = middle class, III = lower middle class, IV = working class, and V = lower class. Social class was assessed for the participants' fathers (childhood social class), and the participants themselves at approximately age 47.

Problem Drinking Scale. This scale is a 16-item cataloging of the broad range of problems associated with alcohol use (Vaillant, 1980, 1995). The summary score equals the number of positive items; scores range from 0 to 16. This scale was rated using all available information up to and including the age 47 interviews.

Health Sickness Rating Scale (HSRS). The HSRS is a global measure of mental health, essentially the same as DSM-IV axis V, that yields scores from 0 (total institutional dependency) to 100 (exhibition of multiple measures of positive mental health) (Luborsky, 1962). It was rated from the age 31 and 47 interviews.

Sociopathy. This scale was based on Robins' (1966) 19 criteria for diagnosing sociopathic personality. A score of 5 or more yields a diagnosis of sociopathic personality. This scale was rated from the age 31 and 47 interviews.

Marital Status. This variable was assessed at age 47 using the scale 1 = married once, still married or widowed; 2 = divorced once; 3 = single, never married; 4 = divorced two or more times.

Divorce Considered. For those 218 men still married to their first wife at age 47, this variable assessed quality of marriage in terms of whether divorce was ever considered, using the three point scale: 1 = never considered, 2 = casually considered, 3 = seriously considered.

Time Unemployed. At age 47, the percent of time each man had been unemployed during the last 10 years was assessed.

Job Satisfaction. Each man's job satisfaction was assessed at age 47, using a three-point scale: 1 = expresses real satisfaction; 2 = likes job, but with reservations; 3 = dislikes job.

Health at 60. At age 60, the health of 266 of these 306 men could be objectively evaluated. Their health at 60 was based on recent physical exams using a scale assessing irreversible changes in health: 1 = current health still excellent, 2 = minor health problems, 3 = chronic illness without disability, 4 = chronic illness with disability, 5 = deceased.

Lifetime Cigarette Use. This variable assessed lifetime use of cigarettes in terms of pack years (one pack per day for one year), coded by the following scale: 1 ≤ 1; 2 = 1 to 10; 3 = 10 to 25; 4 = 25 to 40; 5 = 40 to 50, 6 = 50+ pack years. This variable was based on all data available at age 60.

Data Analysis Strategy

We used cluster analysis to identify relatively homogeneous subgroups of participants in terms of their defense use. The scores for the 15 defenses were submitted to SAS PROC FASTCLUS (SAS Institute, Inc., 1989), which is an implementation of a "nearest neighbor" sorting algorithm (Anderberg, 1973) for iterative partitioning clustering based on Euclidean distances, in which the number of clusters is specified in advance. Iterative partitioning algorithms are especially appropriate for data sets with more than 100 observations. To test the meaningfulness of our cluster solution we attempted to replicate it using a different clustering method, Ward's method, one of the best hierarchical clustering algorithms (Lorr, 1983), and compared the resultant solution to that from PROC FASTCLUS using Cohen's Kappa.

TABLE 1
Cluster Means on Defenses

Defense	Cluster 1 (N = 55)	Cluster 2 (N = 22)	Cluster 3 (N = 126)	Cluster 4 (N = 57)	Cluster 5 (N = 46)
Projection	.82	2.77	.48	1.81	.35
Fantasy	.89	1.36	.37	1.30	.09
Hypochondriasis	.60	.73	.31	1.46	.07
Passive-aggression	1.42	1.27	1.13	2.68	.35
Acting out	.71	.73	.62	1.32	.28
Dissociation	2.13	1.77	1.32	3.05	1.11
Displacement	3.02	3.09	2.02	1.79	2.39
Repression	1.67	1.45	1.76	1.25	1.11
Isolation	2.98	2.86	2.17	1.84	2.57
Reaction formation	2.25	2.05	.81	1.09	.91
Humor	.58	.18	.34	.02	1.09
Altruism	1.45	.09	.56	.42	2.24
Sublimation	.53	.78	.50	.11	1.59
Suppression	2.80	1.14	1.53	.54	2.91
Anticipation	.55	.50	.45	.19	1.48

Bolded cells are the maximum for that row.

We related the resultant clusters to the other variables described above. In general, we used analysis of variance (ANOVA) to compare the clusters to the other variables, with post hoc pairwise multiple comparisons of means to identify clusters that are significantly different. Because of the unequal sizes of our clusters, we used Tukey's highly significant difference (Klockars and Sax, 1986) as our multiple comparison procedure, despite its relative conservatism when compared with alternatives (Klockars and Sax, 1986). Although many of the variables are at an ordinal level, we chose to use parametric statistics for several reasons: 1) The resultant *F*-tests are fairly robust to violations of assumptions. 2) We wished to be able to enter alcohol problems as a covariate into an additional set of variables. 3) We repeated most of the analyses with nonparametric statistics treating the "outcomes" as ordinal (*i.e.*, Kruskal-Wallis tests), with virtually identical results. In general, our data analytic strategy was in accord with the philosophy of de Leeuw (1994), who argued that, rather than search for the correct analysis, we should approach analysis pragmatically, as a tool to provide information about our data, and that replication with different approaches can elucidate where the findings are sensitive to analytic technique (*cf.*, Cook, 1985). Most of our findings were extremely robust and insensitive to changes in analytic procedure.

Results

Cluster Analysis

We examined the PROC FASTCLUS clustering of defenses for between 2 and 10 clusters. The five-cluster solution appeared superior on the basis of a

local maximum on the cubic clustering criterion, one of the best statistical indicators of the number of clusters to be found in a data set (Sarle, 1983).² We compared the PROC FASTCLUS five-cluster solution with the five-cluster solution from Ward's method by matching each PROC FASTCLUS cluster with the Ward's cluster with which it had the greatest percentage overlap. The resultant Kappa was .91, with a standard error of .03 (Bishop et al., 1975). Thus, the agreement between the two procedures was excellent.

Table 1 contains the means of the five clusters on the defenses. One of the resultant clusters, cluster 5, predominantly used mature defenses. Two of them, clusters 1 and 3, were the highest users of neurotic defenses, and two clusters, clusters 2 and 4, were the greatest users of immature defenses. A more detailed description of each cluster follows.

Cluster 1. Cluster 1 consisted of men who were high users of almost all the defenses. They were the highest users of the obsessive defenses of isolation and reaction formation, and were the second highest users of the other neurotic defenses. They were also the second highest users of several mature and immature defenses.

Cluster 2. Cluster 2 consisted of men who were the greatest users of projection, fantasy, and displacement but were also relatively likely to use the developmentally more mature "relative" of fantasy and displacement, sublimation. Thus, as with cluster 1, these men were observed to use a wide variety of defenses, but, unlike cluster 1, they were much more likely to use the immature defenses, especially projection and fantasy, common to cluster A personality disorders (Vaillant, 1994) and, to a lesser extent, hypochondriasis and acting out.

Cluster 3. Cluster 3 consisted of men who were the most likely to use only one defense, repression. Even their use of this defense was not great (a mean of 1.76 on a 1 to 4 scale). Although not being among the top users of isolation and displacement, they were relatively likely to use these two neurotic level defenses. If the men in cluster 1 were noted to use the most defenses, the men in cluster 3 used the fewest.

Cluster 4. Cluster 4 consisted of men who were the least likely to use mature defenses and the most likely to use the four immature defenses of hypochondriasis (help-rejecting complaining), passive-aggression, acting out, and dissociation. (The first

² Higher values of the Cubic Clustering Criterion were found for two and three clusters, though that for five clusters was greater than that for four clusters and all succeeding number of clusters.

three are in the action level of DSM-IV and the last three are associated with cluster B personality disorders (Vaillant, 1994)). If cluster 2 men were characterized by turning away from the object (fantasy and displacement), cluster 4 men, by far the highest users of acting out, turned against the object. That they were also the highest users of hypochondriasis and passive-aggression suggests that they also covertly attack the object by turning against the self. Their lack of use of displacement, humor, and isolation suggests that they have difficulty redirecting and attenuating affect.

Cluster 5. Cluster 5 men were most likely to use all of the mature defenses, the least likely to use all the immature defenses and the least likely to use repression. This choice of defenses suggests that they excelled in containing and yet adaptively expressing affect.

Implications of Cluster Membership for Psychosocial Functioning

Table 2 examines the relation of these clusters to a broad range of psychosocial and health variables. The predominant users of neurotic defenses split into two subgroups (clusters 1 and 3), one using a wide range of defenses and one using few defenses. The distinctions between these two clusters do not follow any of the proposed hierarchical models of defenses (American Psychiatric Association, 1994; Perry and Kardos, 1995; Vaillant, 1992). However, as predicted by all three hierarchical models, the men in these two clusters functioned between cluster 5 and clusters 2 and 4 on most psychosocial variables.

The users of immature defenses are similarly split into two subgroups (clusters 2 and 4). As predicted by the fact that cluster 4 men use more of the action defenses (acting out, passive aggression, hypochondriasis), they experienced the worst global mental health (HSRS) and the most life problems involving impulsive behavior, *e.g.*, sociopathy, unemployment, and alcohol problems. The cumulative effect of these life problems can be seen in these men's lower social class at age 47 despite the lack of between-cluster differences in the childhood social class of these men.

Cluster 2 men were the highest users of projection and fantasy, defenses that are characterized as disavowal (American Psychiatric Association, 1994; Perry and Kardos, 1995) or major image distorting defenses in the DSM-IV system (American Psychiatric Association, 1994). Not surprisingly, these men exhibited fewer antisocial responses to stressful situations than the cluster 4 men; they appear to have been more likely to deal with stress and conflict

through withdrawing into an internal life, rather than by acting in the world.

Both marital variables, marital status and divorce considered were strongly related to cluster membership. Clusters 2 and 4 had worse marital status scores than did the other three clusters. Among those men who were still married to their first wife, cluster 4 members, consistent with their higher use of action defenses, were more likely to have considered divorce than were the others.

Cluster 4 men had greater lifetime cigarette use and worse health at 60 than men from clusters 3 and 5. Alcohol abuse can directly impair psychosocial functioning and facilitate the use of immature defenses (Vaillant, 1995). Because cluster 4 men exhibited the worst psychosocial and health functioning and exhibited the most alcohol-related problems, we controlled for the effect of alcohol abuse by repeating the examination of cluster differences with the Problem Drinking Scale entered as a covariate. These results are contained in the last column of Table 2. Only for lifetime cigarette use and health at 60 did controlling for alcohol abuse change cluster differences.

Discussion

Cluster analysis of defense use by 306 inner-city men revealed five clusters. One cluster used primarily mature defenses whereas two clusters each used immature and neurotic defenses. Our empirically determined clusters broadly support the finer distinctions between levels of Defenses made by the DSM-IV (American Psychiatric Association, 1994) and Perry and Kardos (1995).

The use of mature defenses by cluster 5 men seemed strongly related to good functioning in a broad range of domains. Men in cluster 4, using action defenses, functioned the worst on all our psychosocial and health measures,³ and cluster 2 men, utilizing primarily theoretically more adaptive disavowal and image distorting defenses, functioned between cluster 4 men and the others.

The one distinction between clusters that is hard to interpret is that between the two clusters using primarily neurotic defenses. The cluster 1 men were high users of all neurotic defenses, and some mature ones as well. The cluster 3 men were the highest users only of repression, and their mean level of this defense was low. The analyses relating the clusters to psychosocial and health variables did not demonstrate any differences between these two clus-

³ However, both Vaillant's Neurotic and Immature defense levels were represented by two clusters each.

TABLE 2
Means of Defense Clusters on Adjustment Variables

	Cluster 1 (N = 55)	Cluster 2 (N = 22)	Cluster 3 (N = 126)	Cluster 4 (N = 57)	Cluster 5 (N = 46)	R ² (p)	Pairwise contrasts	R ² (p) after alcohol problem controlled
Maturity of defense	4.56 ± 1.87	6.95 ± 1.29	4.94 ± 1.96	8.23 ± .87	2.57 ± .98	.54 (.0001)	4>2>3,1>5	.43 (.0001)
Childhood social class	4.20 ± .65	4.18 ± .59	4.09 ± .60	4.19 ± .64	4.17 ± .57	.01 (.72)	—	.01 (.56)
Social class at 47	3.27 ± .78	3.36 ± .85	3.35 ± .76	3.96 ± .65	2.96 ± .67	.15 (.0001)	4>2,3,1,5 3>5	.08 (.0001)
Time unemployed	4.78 ± 7.54	10.27 ± 18.22	4.07 ± 7.96	16.18 ± 16.83	4.00 ± 6.61	.16 (.0001)	4>1,3,5	.08 (.0001)
Job satisfaction	1.55 ± .66	2.00 ± .62	1.59 ± .58	2.08 ± .76	1.30 ± .51	.14 (.0001)	4,2>3,1,5	.11 (.0001)
Marital status	1.36 ± .68	1.73 ± .94	1.29 ± .62	1.70 ± .93	1.13 ± .34	.08 (.0001)	2,4>3,5	.06 (.001)
Divorce considered	1.41 ± .69	.146 ± .78	1.32 ± .67	2.09 ± .86	1.13 ± .47	.16 (.0001)	4>2,1,3,5	.06 (.003)
HSRS	78.84 ± 6.81	64.05 ± 12.04	77.95 ± 6.88	61.98 ± 10.81	87.57 ± 4.70	.53 (.0001)	5>1=3>2=4	.44 (.0001)
Sociopathy	1.98 ± 1.58	1.91 ± .81	1.79 ± 1.22	4.02 ± 2.47	1.67 ± 1.49	.22 (.0001)	4>1,2,3,5	.04 (.0001)
PDS	3.55 ± 3.79	2.41 ± 2.79	2.77 ± 3.08	7.23 ± 5.37	2.41 ± 2.98	.18 (.0001)	4>1,3,5,2	—
Health at 60	2.98 ± 1.16	2.94 ± 1.35	2.82 ± 1.13	3.46 ± 1.22	2.55 ± 1.19	.05 (.005)	4>3,5	.02 (.22)
Lifetime cigarette use	47.50 ± 33.76	46.33 ± 37.77	43.24 ± 31.72	59.65 ± 35.47	35.76 ± 30.20	.05 (.01)	4>3,5	.01 (.42)

HSRS=Heath Sickness Rating Scale, PDS=Problem Drinking Scale.

N=306 for all analyses, except for childhood social class, where N=304; divorce considered, where N=218; job satisfaction, where N=294; health at 60, where N=243; cigarette use, where N=271.

Pairwise contrasts tested by Tukey's highly significant difference.

ters. The most economical explanation of the difference between these two clusters has to do with the process of rating the defenses from the detailed accounts of interviews at approximately age 47. For defenses to be rated, the men had to volunteer information about the conflicts in their lives and the means they used to resolve them. The low level of use of virtually all defenses by cluster 3 men could suggest that they were more reserved in providing this material than were the men from cluster 1.

One of the advantages of the present study was that we were able to control for the confounding effects of alcohol abuse by partialling out the Problem Drinking Scale from each of the cluster-outcome relationships.⁴ Defensive style appeared to exert effects independent from alcohol abuse upon psychosocial variables but not upon health-related variables. The relationships between each of the psychosocial variables and defense cluster membership remained significant even after controlling for alcohol problems.

⁴ Similar results were obtained if we partialled out lifetime alcohol abuse/dependence instead of the PDS.

Although our clustering techniques permitted use of action level defenses to be meaningfully distinguished from use of the disavowal and major image distorting defenses, our findings do not support certain other discriminations between immature defenses suggested in the DSM-IV. However, our failure to confirm such discriminations may be due to the fact that the Vaillant defense rating system excluded a number of the DSM-IV defenses that are specifically linked to object relations, such as idealization, omnipotence, and splitting. Further research will be necessary to clarify whether these distinctions fit the proposed hierarchy.

Like all studies, this one had limitations. The major limitation is that many of the ratings were derived from the same data base, the interviews conducted with the men at age 47. Thus, some of the relationships explored could be influenced by the raters working from common data. It is important to remember that the defense ratings were made by different raters than those who made the other ratings. However, as pointed out by one reviewer, the raters "may simply be rating the same clinical phenomena using different frames of refer-

ence." Thus, some of the acting out behaviors that were found to be related to use of Action Defenses likely contributed to the acting out ratings. This reviewer is undoubtedly at least partially correct. However, the ability to meaningfully evaluate this material from perspectives with distinct theoretical presuppositions is valuable in itself. The concept of defenses has traditionally been very meaningful to clinicians as one providing a unifying personality framework that can be used to integrate diverse overt clinical behaviors. At the same time, psychodynamic concepts like defenses have frequently been accused of being unmeasurable and of lacking clear observable referents. Our findings are part of a growing body of evidence that this criticism is unjustified (Miller et al., 1993). To the extent that the concept of defenses can unify diverse phenomena in a clinically meaningful way, while being empirically measurable, it can serve as an important link between the often disparate worlds of practice and research.⁵

Conclusions

This study reexamined one of Vaillant's classic data sets of defense ratings in a group of men who have been followed longitudinally for 50 years. A cluster analysis revealed five clusters. These clusters could be organized in a hierarchical fashion, such that the men in two clusters primarily used immature defenses, those in two used neurotic defenses, and those in one used mature defenses. Unlike previous examinations of these data, the present analysis broke the group of individuals using immature defenses into two subgroups or clusters, such that one cluster largely used action defenses whereas the other tended to use the defenses of fantasy and projection. Life functioning data indicated that the users of action defenses functioned at a lower level in a number of areas, including sociopathy, alcohol problems, and marital instability. The findings provide support for the DSM-IV hierarchy of (nonpsychotic) defenses, with mature defenses at the top and action defenses toward the bottom. Additionally, the study provides evidence that Vaillant's original hierarchy should be modified to distinguish action defenses from other immature defenses. Our findings strengthen the evidence that the concept of defenses is an important one. They support the inclusion of a diagnostic axis

for defenses into the main body of future diagnostic manuals.

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