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by Patricia Van Voorhis

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PSYCHOLOGICAL DETERMINANTS OF THE PRISON EXPERIENCE

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This article applies the technology of psychological classification to explore the effects of personality characteristics on prison adjustments and experiences. Bivariate and multivariate analysis assess the comparative effects of four personality types (committed criminal, neurotic, situational, and character disordered) on official disciplinary infractions, staff ratings of interpersonal behaviors, and self-reports of stress, aggressive behaviors, nonviolent infractions, and victimizations. The effects of other predictors, including age, race, marital status, employment status, prior prison time, prior prison revocations, and sentence length are also considered. Results indicate that inmates who were diagnosed as character disordered and those who had extensive prior prison experiences were more likely than others to have been cited for prison infractions. Young, White inmates and those who had never been revoked during prior sentences were more likely to report victimizing experiences. Inmates most likely to score high on the stress measure were White and neurotic anxious, whereas character-disordered inmates scored atypically low. Finally, older, White, situational inmates were viewed most favorably as staff rated the quality of their interpersonal relationships with other inmates.

Over 30 years ago, in his extensive review of the criminological literature, George Vold (1958) observed that personality and other psychological characteristics contribute very little to our understanding of the etiology of crime. Most studies, according to Vold, had found that the personality and psychological characteristics of offender populations were similar to those observed in nonoffender populations; simply put, psychological attributes did not sufficiently differentiate offenders from non-offenders.

For the next four decades, other reviews offered similarly terse and narrow assertions (e.g., Schuessler & Cressey, 1950; Tennenbaum, 1977). Indeed,

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much of the scholarly work throughout the century has minimized and ideologically discounted the contributions of psychology and other individual factors (Andrews & Bonta, in press; Andrews & Wormith, 1989; Hirschi & Hindelang, 1977; Jeffery, 1979, 1993). According to these scholars, the discipline has been dominated by a sociological and to a lesser extent a political focus. Research has focused on understanding aggregate crime rates, assessing the impact of structural inequality and overstating the ineffectiveness of clinical interventions with individuals. The result, according to Andrews and Bonta (in press) has been destruction of knowledge pertaining to the impact of psychological factors on offending behaviors.

The most surprising omission concerns the discipline's failure to address a secondary point that should have been obvious even from the early findings that Vold and others examined: Most early studies of crime and personality *had* shown evidence of important personality and psychological differences among criminals. But scholars were directed away from psychological inquiry at a point in time where the more objective conclusion would have suggested an important addition to the criminological knowledge base. Indeed the implication of the differences-among-criminals research is that most criminological findings and theories are differentially applicable (Warren & Hindelang, 1979). In naive contrast to this point, most inquiries focused on offender populations as a whole and minimized the possibility that most observations would be applicable to some rather than to all criminals. The clearest shortcoming occurs in our failure to understand who "some offenders" are.

This concern can easily be extended to the prison adjustment literature. Here, a vast body of literature addresses such concerns as the "pains of imprisonment" (Sykes, 1958), the "roles" observed to describe the inmate culture (Sykes, 1958), interaction and adjustment patterns (e.g., Flanagan, 1980; Richards, 1978), inmate needs and niches (Toch, 1977), stress and coping patterns (e.g., Hokanson, Megargee, O'Hagan, & Perry, 1976; Toch & Adams, 1989; Zamble & Porporino, 1988), prisonization, and prison victimizations (e.g., Bowker, 1980; Lockwood, 1980). Although many scholars note that their observations characterize some inmates and not others, few have endeavored to differentiate prison adaptations and effects according to psychological criteria. Indeed, the consideration of psychological factors typically occurs as a focus on criterion measures (albeit important ones) of the effects of imprisonment. Much less attention is shown to the importance of psychological factors as predictors of prison behaviors in efforts that would facilitate the identification of those most likely to experience prison adversities.

The intent of the present study is to explore the effects of personality characteristics on prison adjustments and experiences. The study applies the technology of psychological classification to this inquiry. Data for this research were obtained from a recent prison classification study funded by the National Institute of Justice (#85-IJ-CX-0063) and contain official, self-report, and staff evaluation measures of prison behaviors and adjustment patterns as well as independent measures of personality, demographic, and criminal background measures. The study explores through multiple regression (ordinary least squares [OLS]) analysis the extent to which personality factors contribute to the explanation of such prison outcomes as disciplinary infractions, victimizations, interpersonal relationships, and stress. This multivariate assessment also affords the opportunity to compare the independent effects of personality to more traditional predictors, such as age, race, prior record, and prior correctional infractions.

CORRECTIONAL CLASSIFICATION AND INMATE PERSONALITY TYPES

Correctional classification is rapidly becoming an enthusiastically endorsed correctional practice. Increasingly, correctional agencies are adopting classification systems that divide correctional populations into subgroups of similar types of clients in ways that facilitate custody, supervision, and/or treatment.

The strategies and criteria of classification are varied and depend on the needs of a given agency. At present, the most common type of system in use classifies probation, parole, or institutional populations according to risk or the actuarial likelihood of their committing any of a number of misdeeds while under supervision (e.g., see Baird, Heinz, & Bemus, 1979; Gottfredson, Wilkins, & Hoffman, 1978; Kane & Saylor, 1983; National Institute of Corrections [NIC], 1982). Less commonly employed systems classify correctional clients according to psychological characteristics.

PSYCHOLOGICAL CLASSIFICATION SYSTEMS

In contrast to the risk assessment systems, most of the psychological classification systems were designed for juvenile correctional agencies as a tool for counseling and treatment (for foundations see Harvey, Hunt, & Schroder, 1961; Jenkins & Hewitt, 1944; Quay & Parson, 1972; Warren and the staff of the Community Treatment Project, 1966). More recently, psycho-

logical classification systems and the personality types they identify have been found to be applicable to adult male inmates (e.g., see Megargee & Bohn, 1979; Quay, 1983, 1984; Van Voorhis, in press).

The various systems differ according to the assessment procedures used, the number of types identified, the type of population targeted, and the ease with which the systems can be used (e.g., see Andrews, 1982; Harvey et al., 1961; Jesness & Wedge, 1983; Kohlberg, Colby, Gibbs, Speicher-Dubin, & Candee, 1978; Megargee & Bohn, 1979; Quay, 1983, 1984; Warren et al., 1966). However, most of the systems result in an offender typology that classifies offender clients according to personality or cognitive developmental traits or both.

The classification study that furnished the data used in this article assessed inmates on the following five classification systems: (a) Megargee's Minnesota Multiphasic Personality Inventory (MMPI)-based Criminal Classification System (Megargee & Bohn, 1979); (b) Interpersonal Maturity Level (I-level) (Sullivan, Grant, & Grant, 1957; Warren et al., 1966); (c) Quay's Adult Internal Management System (AIMS) (Quay, 1983, 1984); (d) the Jesness Inventory Classification System (Jesness & Wedge, 1983); (e) Conceptual Level (CL) (Hunt, Butler, Noy, & Rosser, 1978). A description of each system is presented in the appendix.¹

It is important to note that the personality constructs of these systems refer to personality types common to *criminal and delinquent* populations. Moreover, there are similar types across the systems (Warren, 1971). All systems, for example, describe an asocial, committed-criminal type, who evidences an internalized antisocial value system, is comfortable with the criminal label, and who associates with other criminals. Similarly, all of the systems identify a neurotic personality type whose criminal behavior represents a dysfunctional adaptation to anxiety.

Recognizing these commonalities, the larger classification study conducted an extensive series of tests of the construct validity of the personality types identified by each system. Results generally contributed to the technology of psychological classification, which previous to this research had devoted insufficient attention to this important psychometric issue. But for this study, the construct validity tests are important for another reason—reducing the personality types to those that were most common and most clearly identified in the institutions studied. To this end, a total of 30 personality types (across systems) converged or were reduced into four types that were most common in the sample of maximum security inmates studied in this article.² The four types are as follows:³

1. The *committed criminal* type evidences a criminal life-style and value system that supports frequent violations of law and exploitation of others. These individuals are comfortable with the criminal label, and many have extensive prior records.
2. *Neurotic anxious* inmates experience long-term difficulties with low self-esteem and anxiety. They are not comfortable with the criminal label and often express guilt over their behavior. Their criminal behavior has a private meaning, often as a vehicle for acting out anxiety.
3. *Situational* inmates have become involved in criminal behavior as a response to a current crisis or emotional change that is recent in origin. Often they do not have extensive records or prior prison experience. Their criminal behavior engenders psychological discomfort and guilt. But the effect of this discomfort is not as pervasive as it is for the neurotic inmates.
4. *Character-disordered* inmates represent a correlation between the I-Level neurotic acting-out inmates and the Megargee MMPI types known as *Able* (4, 9 profile). This group evidences some of the traits reminiscent of the "secondary psychopath," acting-out, highly defended individuals whose offenses have a private meaning. On the surface this offender might appear to be somewhat charming, but impulsive and manipulative behavior become apparent. He also may show tendencies to deny either his behavior or its importance but this takes on a defended quality.

In the present study, no single classification system or typology is used in the analysis.⁴ Instead, a single measure of each type was selected. Thus the comparison of different classification systems offered a choice of measures for each of the constructs listed above and an opportunity to select a combination of measures/types that had shown favorable construct and predictive validity.

To date, offender classification research has been largely concerned with the technical development of assessments and typologies that endeavor to facilitate management and treatment of correctional clients (see, MacKenzie, 1989; Megargee & Bohn, 1979; Van Voorhis, in press). In studying the applicability of the systems to specific correctional settings, researchers have established predictive validity through tests of the relationships between the systems and measures of institutional adjustment (see Megargee & Bohn, 1979; Quay, 1983, 1984; Van Voorhis, in press). More attention, however, has been given to the psychometric issues pertinent to the systems than to how the tests might have contributed to the scholarly base of the prison adjustment literature. Thus the present study moves from this applied perspective to a more scholarly view of the contributions of personality to our understanding of prison adjustment.

PRISON ADJUSTMENT

Notwithstanding its lack of any clear psychological focus, the prison adjustment and prisonization literature is extensive. But the major portion of this research examines demographic and criminal record correlates of disciplinary infractions and other adjustment problems.

An overview of this literature finds age to be one of the most stable correlates of disciplinary infractions. Across most studies, younger inmates are significantly more likely to be cited for disciplinary infractions than are older inmates (e.g., Flanagan, 1983; Myers & Levy, 1978; Petersilia & Honig, 1980; Toch & Adams, 1989). Additional correlates of disciplinary infractions include (a) unemployment prior to arrest (Flanagan, 1983; Toch & Adams, 1989) and (b) marital status (Flanagan, 1983; Myers & Levy, 1978; Toch & Adams, 1989). Other possible predictors, such as race, conviction offense, and prior record have produced equivocal results.

Contrary to popular image, those who violate prison rules are not necessarily the most hardened, streetwise, and experienced criminals. As Sykes (1958) suggested in his early qualitative study of prison life, the notion of "doing your own time" and avoiding trouble is strongly adhered to among more experienced inmates. The experienced, then, may be more likely to avoid citation, incur stress, or encounter the experiences that make for "hard time." Other empirical studies confirm the importance of prison experience on prison adjustment (Brown & Spevacek, 1971; Clemmer, 1958). When experience is obtained by virtue of being a long-term prison inmate (personality type unknown), there is additional reason to believe that experience facilitates adjustment. Longitudinal studies of the adjustment of long-term inmates produce somewhat inconsistent findings, with Toch and Adams (1989) showing declining rates of infractions over the course of the prison sentence, Flanagan (1980) finding rather low rates throughout the course of the term, and Zamble (1992) showing more favorable adjustments over time on several nondisciplinary indicators.

Experience also emerges as a crucial factor relating to prison victimization. Indeed, most studies on the subject find the inexperienced inmate, particularly the young, to be especially vulnerable to attacks and threats from other inmates (see Bowker, 1980; Lockwood, 1980; Toch, 1975).

In contrast to these demographic and criminal predictors, the importance of psychological factors, although far from overlooked, is often approached from a descriptive mode in an endeavor to understand whether and to what extent inmates experience stress and other emotional problems. The research explores such issues as how these states might vary over the course of the

prison term (e.g., see Bukstel & Kilmann, 1980; Toch & Adams, 1989; Zamble, 1992; Zamble & Porporino, 1988) the needs, niches, and coping patterns of prison inmates (Toch, 1977); and motivations contributing to difficulties among disturbed inmates (Toch & Adams, 1989).

Studies of psychological factors as predictors of emotional adjustment or disciplinary infractions represent a distinct realm of the prison adjustment literature. One group of studies, occurring mostly within the discipline of psychology, employs subscales of personality inventories such as the MMPI and other clinical inventories to differentiate adjustment (Myers & Levy, 1978). The MMPI scales appear to be the most frequently studied in this regard. A review of this rather massive body of research, however, reaches the conclusion that the MMPI scales have produced mostly inconsistent and inconclusive results (see Gearing, 1979). One apparent disagreement with Gearing's conclusions, however, regards the scales used to measure psychopathic tendencies, such as the Socialization (So) scale of the California Personality Inventory and Psychopathic Deviate (Pd) scale of the MMPI. Across many studies these scales show rather remarkable consistency in differentiating offenders from nonoffenders or recidivists from nonrecidivists (Andrews & Bonta, in press).

Another group of psychological studies emerges from the classification literature. Indirectly, these studies present a more straightforward and heuristic view of the role of psychology on prison adjustment than can be gleaned from the multitude of tests of separate psychological scales (see Megargee & Bohn, 1979; Quay, 1983, 1984; Van Voorhis, 1991, in press). As noted earlier, this research has focused on the technology of classification rather than on the use of the classification measures to understand adjustment. Moreover, it consists almost exclusively of explorations of the relationships between the types portrayed in the typology and measures of institutional adjustment. Multivariate analyses are seldom undertaken.

The personality typologies generally designate aggressive, neurotic, immature, and manipulative inmates as the types most likely to incur difficulties (see Jesness, 1988; Quay, 1983, 1984; Megargee & Bohn, 1979; Warren et al., 1966). Subsequent research, however, has found this to be an oversimplification. In both the earlier research with these data and the research conducted by the originators of the classification systems, differentiations of poor adjusters from good adjusters vary by institutional setting and by criterion measures.⁵ Moreover, it is the *nature* of the adjustment difficulty that varies by personality type rather than whether or not one experiences difficulties. Few have an easy time of it. One group might act out in disruptive ways, whereas another experiences inordinate amounts of stress, and still another incurs victimization experiences.

METHODOLOGY

The larger classification study was conducted at the Federal Penitentiary and the Federal Prison Camp at Terre Haute, Indiana between September 1986 and July 1988. The analyses that follow, however, use only the penitentiary data set.⁶ This facility is designated Level 4/5 on the Federal Bureau of Prisons (FBOP) security continuum; it also could be termed a low-maximum-security facility.

SAMPLE SELECTION

A total of 179 penitentiary inmates participated in the study. The sample pool consisted of inmates who had recently been sentenced or revoked from probation. Inmates were selected for participation within one month of their admission to the penitentiary. Transferring inmates or inmates who had already served a portion of their sentence were ineligible to participate in the study.⁷ In addition to controlling for the amount of time served, selection criteria also excluded non-English-speaking inmates, inmates who could not read, and where possible, inmates who were expecting release or transfer within 4 months of their admission. In addition to the above considerations, inmates were not included in the sample for their (a) refusal to participate, (b) repeated failure to respond to "call outs," (c) being unavailable (e.g., out on writ, in lock-up) during the first month of their sentence, and (d) not being contacted by the research staff.⁸ The response rate, the ratio of inmates asked to participate over those who actually participated, was 76%.

DATA COLLECTION

At prison admission, project staff members collected both classification/diagnostic information and social, demographic, and criminal record data. Participants were tracked for 6 months to obtain follow-up data consisting of official reports of disciplinary infractions, staff assessments of prison adjustment and work performance, and self-report surveys of prison experiences. Data collection procedures varied greatly across the various data sources. Inmates participated in one interview, two testing sessions, and at a minimum of 4 months later, a session to complete a follow-up survey.

It was not always possible to obtain a complete set of intake and follow-up data for all of the inmates interviewed.⁹ Data availability for each instrument is as follows: (a) I-level interview ($n = 177$, 99%), (b) Quay AIMS ($n = 150$, 84%), (c) Megargee MMPI ($n = 164$, 91%), (d) Jesness I-Level ($n = 153$,

85%), (e) Megargee Work Adjustment and Prison Adjustment ($n = 177, 99\%$), (f) institutional disciplinary records ($n = 167, 93\%$), and (g) follow-up surveys ($n = 111, 62\%$).¹⁰

MEASUREMENT OF RESEARCH VARIABLES

Social, demographic, and criminal history variables. In-depth presentence investigations are routinely prepared in federal courts and were available for all but two of the participants. From this source, data pertaining to age at prison admission, race, marital status, employment, number of prior prison months served, evidence of a prior probation or parole revocation, and length of the current sentence were used in the following analyses. Although we could have used additional measures, readers will recognize that age, prior time, and prior revocations are often contained in risk assessment prison classification systems and can thus be viewed as more traditional predictors of prison adjustment (see Kane & Saylor, 1983; NIC, 1982). In addition, marital status and employment stability are frequently noted in the prison literature as correlates of prison adjustment. Race was also selected, because it was related to both the classification and some of the criterion variables.

Personality (classification) variables. As noted earlier, this study focuses on personality types found, in the course of our construct validity tests, to be most common within this maximum-security prison setting: (a) committed criminal, (b) character disorder, (c) neurotic, and (d) situational. Given that four of the classification systems studied provided types corresponding to each of the personality constructs listed above, there were several options for measuring these constructs. The chosen method simply selects a combination of types from among the options afforded by the classification types. Generally, however, a type was selected over a similar type on another system because it was a better measure, as shown by more optimal predictive validity and because it identified a sufficient number of inmates to be incorporated into a multiple regression analysis.¹¹ The selection of types apart from their classification typologies required transformation of the classification types into dummy variables, with each type representing one variable.

The *committed criminal* type (described above) is represented by the cultural conformist type of the Jesness Inventory Classification System (Jesness & Wedge, 1983). This system is portrayed as an actuarial method of assessing I-level. I-level classifications are obtained through a paper-and-pencil test, the Jesness Inventory (Jesness, 1983), which contains 155 true-false items that yield scores on 11 personality-attitudinal scales and 9 I-level subtype (personality) scales. The I-level subtype scales form the basis of the

classification system (Jesness & Wedge, 1983). Tests were scored by Consulting Psychologists Press in Palo Alto, California.

The *neurotic* variable consisted of the inmates classified as neurotic anxious on the I-level interview system (Warren et al., 1966). The rating/measurement of the I-level system is a clinical process in which raters compare interview material to prototypical descriptions of each type and then select the most appropriate diagnoses. Questions are open-ended and the interview process is flexible to encourage maximum input from the subject. As with other clinical assessments (e.g., Meehl, 1954) practitioners and researchers have expressed concern for problems with the interrater reliability of I-level. In the present study, raters obtained an interrater reliability rate of 51%. This figure, although low, is within ranges observed in other studies (Harris, 1988).¹²

The *character-disordered* personality construct is measured by a collapsing of two types on the Megargee MMPI-based Offender Classification System, Able and Delta. These measures were obtained from the widely used 566-item MMPI Inventory. On the Megargee classification system, MMPI profiles for Able and Delta both evidence atypically high scores on the Pd scale. The profile for Able shows elevations on Scales 4 and 9, and the profile for Delta shows a "spike 4" pattern. In addition, a collapsed measure of the two types correlated with the neurotic acting-out types of the I-level system ($\phi = .21, p \leq .01$). This finding adds defended neurotic characteristics to those commonly associated with the Able and Delta types. MMPI test results were sent to the Criminal Justice Assessment Services at Florida State University, a scoring center established by the system's originator, Edwin Megargee.

The *situational* type is represented by the same type on the Quay Behavioral Classification System for Adult Offenders (BCSAO). Use of this assessment process required completion of two behavioral checklists, the 63-item Correctional Adjustment Checklist (CAC) by penitentiary staff and the 50-item Checklist for the Analysis of Life History (CALH) by the research staff.

For purposes of conducting a reliability assessment, a second set of Quay BCSAO assessments, consisting of both the CAC and the CALH, were obtained on a random selection of 38 inmate subjects. The reliability sample consisted of 18 penitentiary inmates and 20 camp inmates. Interrater agreement for this sample was 50% and the interrater reliability coefficient (Cramer's V) was .41 ($p \leq .10$).

Table 1 shows the distributions of inmates across the classification and diagnostic types that represent the focus of this research. There is some overlap in the measures, because it was possible, in some cases, to be classified as one type on one system and another on one of the other systems,

TABLE 1: Frequency and Percentage Distribution of Classification Types

<i>Typology</i>	<i>N</i>	<i>Percentage^a</i>
Jesness Inventory I-level		
I2-Aa	5	3
I2- <i>Ap</i>	3	2
I3-Cfm	20	13
I3-Mp	32	21
I3-Cfc	43	24 ^b
I4- <i>Se</i>	21	14
I4-Na	19	12
I4-Nx	7	5
I4-Ci	3	2
	<u>153</u>	<u>100</u>
I-level (interview method)		
I4-Na	38	22
I4-Nx	30	17 ^c
I4- <i>Se</i>	16	9
I4-Ci	17	10
I4-N	2	1
I5-Na	18	10
I5-Nx	23	13 ^c
I5- <i>Se</i>	11	6
I5-Ci	21	12
I5-N	1	1
	<u>177</u>	<u>100</u>
Quay AIMS		
Asocial aggressive	21	14
Immature dependent	10	7
Neurotic anxious	23	15
Manipulator	42	28
Situational	54	36 ^d
	<u>150</u>	<u>100</u>
Megargee MMPI-Based System		
Able	32	20 ^e
Baker	6	4
Charlie	13	8
Delta	23	13 ^e
Easy	11	7
Foxtrot	11	7
George	14	8
How	23	14
Item	27	16
Jupiter	5	2
	<u>164</u>	<u>100</u>

a. Percentages may not sum to 100 because of rounding.

b. Committed criminal measure.

c. Neurotic measure.

d. Situational measure.

e. Character disorder measure.

NOTE: See appendix for descriptions of classification types.

but the correlation matrix (Table 3) shows no strong relationships between the selected measures.

Follow-up variables. Follow-up measures of officially recorded disciplinary infractions and victimizations were obtained through an examination of the inmate's central file 6 months following prison admission. The inmate's disciplinary log, disciplinary reports, and records of protective and administrative custody were noted.¹³ This analysis uses one measure of disciplinary infractions, the number of disciplinary infractions over the entire follow-up period divided by the number of months at risk (or of follow-up) multiplied by 100. Other measures, however, were used in the larger study.

Follow-up surveys were administered to inmates at least 4 months following intake or prior to release if an inmate was serving less than 4 months. Because the survey was not implemented until 9 months after the beginning of the project, and we endeavored to obtain data on as many cases as possible, the follow-up time frame was often longer than 4 months. In the penitentiary, for example, time intervening between intake and the administration of the survey ranged from 3 to 36 months ($\bar{X} = 7.2$ months, median = 6.0 months).¹⁴

The nature of the survey items used varied according to the nature of the index. Indexes measuring victimization, aggression, and nonviolent disciplinary infractions, for example, asked respondents to indicate the number of times they had experienced a given event or engaged in a particular behavior. The options were (a) never, (b) once, (c) a few times (2-8 times), and (d) many times (more than 8).

A measure of stress was obtained by the Center for Epidemiological Studies Depression (CESD) Scale (Radloff, 1977). To complete this scale, inmates were asked whether they had experienced any of 20 problems during the past four weeks (e.g., crying spells, trouble sleeping, loss of appetite). The index is a measure of a generalized, pervasive form of psychological distress.

Individual survey items were subjected to a reduction strategy that involved a two-step process of, first, selecting items on the basis of face validity and then conducting an item analysis that further refined the scale and maximized internal consistency. Indexes for this portion of the analysis are shown in Table 2. The reader will note that the distributions were somewhat skewed for the victimization and the disciplinary data. But although the majority of inmates reported that they were not engaged in these behaviors or experiences, there were enough to permit further analysis. Moreover, the indexes evidenced much better variability than did the single items. Even so, a second analysis of the data was conducted using logged transformations of the index scores to assess whether distribution problems might have affected

TABLE 2: Survey Follow-Up Scales

Scale	Range of Scores	Mean	Standardized Alpha	N
Victimization scales				
Victimization	1.0-3.5	1.3	.75	111
Stress				
CESD Scale	5-85	36.9	.78	111
Self-report disciplinary				
Self-report aggression	1.0-2.7	1.2	.71	110
Nonviolent	1.0-3.5	1.3	.58	110

the outcome statistics. Analysis of the transformed data, however, did not change the results (shown later in Table 4) to any substantial degree.

The Megargee Prison Adjustment Instrument (Megargee, 1972) was administered at three points, during the 4th, 5th, and 6th months following prison admission. This required a staff member who knew the inmate well enough to rate him on items such as (a) relations with other men, (b) relations with authorities and staff, (c) verbal and physical aggressiveness, (d) emotional control under stress, (e) cooperativeness, (f) need for supervision, (g) response to supervision, and (h) maturity. The ratings consisted of 5-point scales ranging from a *very negative* rating to a rating of *excellent*. This analysis uses only two of these measures, one rating the quality of inmates' relationships with other inmates ($\bar{X} = 3.09$) and another rating the quality of their relationships with authority figures ($\bar{X} = 3.24$). Scores for each item represent the average scores for the three ratings.

SAMPLE CHARACTERISTICS

The study participants ranged in age from 19 to 63 ($\bar{X} = 33$, median = 32). Of the inmates, 50% were White, 41% were Black, and the remaining were Hispanic, American Indian, or Asian. Most subjects (59%) were unmarried at the time of their admission. At the time of their arrest 70% of the participants were unemployed. Twenty percent reported having no occupation, and an additional 16% of the sample were noted to have had criminal occupations. Approximately half of the sample (53%) had completed high school, but evidence of school failure appeared in the records of 66% of the sample. Only 40 (23%) served in the military, and 27 (67%) of these inmates were cited for problems while in the service.

Not surprisingly, 97% of the sample had a prior adult or juvenile arrest, and 72% of the participants had served at least one prior prison sentence. Of

those serving prior terms, 79% had served at least 2 years. A substantial proportion of these inmates had failed on prior sentences. The sample evidences 28 (20%) prior prison escapes, 49 (45%) prior probation revocations, and 41 (43%) prior parole revocations.

The inmates were convicted of a broad array of federal offenses, including (a) drug-related offenses (26%), (b) violent offenses (16%), (c) fraud (5%), (d) theft (1%), (e) charges of illegal operations (5%), (f) bank crimes (27%), (g) postal crimes (2%), and (h) firearms and weapons charges (18%). Of the offenders, 49% used weapons in commission of their offenses.

FINDINGS

BIVARIATE ANALYSIS

The analysis begins with a discussion of the bivariate relationships shown in Table 3. The results show numerous significant relationships that begin to present a picture of the important factors affecting criminal careers and prison adjustment. Personality measures differentiated prison inmates according to demographic factors, criminal background measures, and prison adjustment measures. Inmates classified as committed criminals, for example, are significantly younger ($r = -.25, p \leq .01$) and more likely to have been unemployed prior to their arrest. Their prison adjustment appears to be favorable. Neurotic inmates are most distinguished by atypically high stress scores ($r = .24, p \leq .01$) but by no substantial correlations on other demographic or criminal record variables.

The picture for situational inmates is more complex. Significant correlations (e.g., race [$\phi = -.24, p \leq .01$], marital status [$\phi = -.15, p \leq .10$], prior prison experience [$r = -.20, p \leq .01$], aggression [$r = -.14, p \leq .05$], self-report victimizations [$r = .21, p \leq .05$], stress [$r = .14, p \leq .10$], and staff assessments of the quality of their relationships with other inmates [$r = .19, p \leq .05$] and with authority [$r = .14, p \leq .10$]) portray this group of inmates as White, married, having little prison experience, unlikely to report aggressive behaviors while in prison, and having a tendency toward difficulties with stress. At the same time, staff observe them forming good interpersonal relationships.

In contrast, character-disordered inmates show some difficulties with both the present and their past correctional sentences. They have more prison experience ($r = .14, p \leq .05$) and are significantly more likely than other inmates to have been revoked during a prior disposition ($\phi = .17, p \leq .05$). During their current prison stay, they have been cited more frequently than

TABLE 3: Correlation Matrix of Personality, Demographic, Criminal Record, and Prison Experience Measures

	Personality				Demographic			
	Committed Criminal	Neurotic Anxious	Situational	Character Disorder	Race	Age	Marital Status	Employed
Personality								
Committed criminal	1.00	-.15**	-.10	-.14**	.08	-.25***	.04	-.18**
Neurotic anxious		1.00	.02	-.03	-.03	-.07	-.08	-.03
Situational			1.00	-.05	-.24***	-.07	-.15**	-.02
Character disorder				1.00	-.05	-.07	-.02	-.05
Demographic								
Race ^a					1.00	-.12*	.19***	-.18**
Age at intake ^b						1.00	.03	.19**
Marital status ^b							1.00	-.07
Employment ^c								1.00
Criminal record								
Prior revocations ^d								
Prior time ^e								
Sentence length								
Prison experiences								
Disciplinary ^f								
SR aggression ^g								
SR victimizations ^h								
SR infractions ⁱ								
Stress (CESD Scale) ^j								
Relations (inmates) ^k								
Relations (staff) ^k								

a. White = 0; Non-White = 1.

b. Marital status at arrest; not married = 1.

c. Employment status at arrest; employed full time = 1.

d. Prior revocation on record = 1; no prior revocation on record = 0.

e. Number of months served during prior prison terms.

f. Official disciplinary infraction = rate per month x 100.

g. Scale includes use of verbal threats, insults, and attacks on others. High indicates aggressive. $\alpha = .71$.

h. Scale includes inmates receiving physical and sexual threats as well as a few who reported being attacked by other inmates. High scores are indicative of such victimizations. $\alpha = .75$.

i. Scale includes nonviolent interactions such as gambling, use of illegal substances, and citations for missing work. High scores indicate nonviolent infractions. $\alpha = .58$.

j. Center for Epidemiologic Studies Depression Scale. High scores indicate high stress. $\alpha = .78$.

k. Staff ratings. High scores indicate favorable relationships.

* $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$.

other inmates for disciplinary infractions ($r = .13, p \leq .05$) and self-report significantly more violations of prison rules ($r = .13, p \leq .05$). They are significantly less likely than other inmates to report stress-related disturbances ($r = -.18, p \leq .05$).

Criminal Record			Prison Outcomes						
Prior Revo.	Prior Time	Sentence Length	Infractions (official)	Aggression (self-report)	Victimization (self-report)	Infractions (self-report)	Stress (CESD)	Relations (inmates)	Relations (staff)
.04	.02	.01	-.01	.11	.08	.03	.03	-.10	-.05
.11*	.04	-.01	-.03	-.02	-.01	.07	.24***	.03	.07
-.10	-.20***	-.05	.04	-.14**	.21**	-.10	.14*	.19**	.14*
.17**	.14**	-.15**	.13**	.03	-.06	.13*	-.18**	-.07	-.03
.11*	.13*	.01	.11*	-.04	-.21**	-.13*	-.14*	-.15**	-.04
.17**	.32***	.06	-.10*	-.13**	-.08	-.09	-.01	.18**	.16**
.12*	.20***	-.08	.04	.05	-.10*	.16**	.09	-.07	-.05
-.04	-.05	-.04	-.10*	.01	-.06	-.09	-.01	.01	-.12*
1.00	.32***	-.14**	.04	-.03	-.22**	-.07	-.01	.09	.06
	1.00	-.02	.12**	-.07	-.15*	.01	.05	.02	.08
		1.00	.11*	-.06	-.05	.01	-.01	.09	.00
			1.00	.18*	.03	.30**	.01	-.20***	-.17**
				1.00	.24***	.43***	.16*	-.10	-.13*
					1.00	.19**	.32***	-.06	-.12
						1.00	.24***	-.12	-.13*
							1.00	-.03	-.03
								1.00	.77***
									1.00

Table 3 also reveals findings similar to those observed in previous prison research. In this study, frequently observed predictors, such as age, employment status, and marital status are related to prison outcomes. Younger inmates were significantly more likely to be cited for disciplinary infractions ($r = -.10, p \leq .10$) and to report aggressive behaviors toward others ($r = -.13, p \leq .05$), whereas older inmates were rated by staff as having better interpersonal relationships. Formerly unemployed inmates were slightly more likely than others to be cited for infractions ($r = -.10, p \leq .10$) and less likely to have workable relationships with staff ($r = -.12, p \leq .10$). Married inmates were slightly more likely to be victimized ($r = -.10, p \leq .10$), and single inmates reported more nonaggressive infractions ($r = .16, p \leq .05$).

Race was found to be significantly related to most of the prison adjustment measures used in this study. Non-White inmates were significantly more likely to incur disciplinary infractions ($r = .11, p \leq .10$) and White inmates

reported more violations of prison rules ($r = .13, p \leq .10$).¹⁵ Whites were also more likely to be victimized ($r = -.21, p \leq .05$) and to report stress reactions ($r = -.14, p \leq .10$), but from the perspective of staff members, White inmates were slightly more likely than non-White inmates to form good relationships with other inmates ($r = -.15, p \leq .10$).

Prior prison experience measures, common to prison risk assessment measures were found in some cases to be related to the measures used in this study. Having escaped during a previous prison term or having been revoked during a prior probation or parole term were related to self-report victimizations, finding these inmates to be significantly less likely to report victimizations ($r = -.22, p \leq .05$). At the same time, the amount of time served on prison terms was related to prison infractions and victimizations. Experienced inmates were more likely to be cited for disciplinary infractions ($r = .12, p \leq .05$) but less likely to be victimized ($r = -.15, p \leq .10$).

The relationships among the personality measures are important to mention. As previously noted, earlier analyses of these data observed a convergence of similarly defined personality types across the typologies used in this study. Such findings were put forward as supportive of the construct validity of the personality types (Van Voorhis, in press). Another factor in support of the construct validity of the personality types concerns the divergence of dissimilar types (Campbell & Fiske, 1959). Table 3 illustrates this divergence. Across the four personality types, none of the measures was significantly related in a positive direction. The committed criminal type was negatively related to the neurotic and character-disordered types. The other findings show no relationships among the types.

Although Table 3 presents a rather rich picture of factors associated with prison adjustment, the relationships among the independent variables pose some concern for the multiple regression analyses that follow. Numerous relatively strong relationships among demographic, criminal record, and personality measures present the potential for problems with multicollinearity among variables. This is compounded by a sample size that is not ideally suited to the multiple regression tests. These concerns resulted in a decision to omit marital status, employment, and sentence length from the multivariate analysis.¹⁶

MULTIVARIATE ANALYSIS

The patterns observed in Table 3 become clearer, when interrelationships between variables are controlled for in the multivariate analysis shown in Table 4.¹⁷ Personality effects are discussed first.

TABLE 4: Regression of Personality, Demographic, and Criminal Record Variables on Prison Experience Measures (betas)

	<i>Infractions^a</i> <i>(official)</i>	<i>Aggress^b</i> <i>(self-report)</i>	<i>Victimized^c</i> <i>(self-report)</i>	<i>Infractions^d</i> <i>(self-report)</i>	<i>CESD</i> <i>(stress)^e</i>	<i>Relations^f</i> <i>(inmates)</i>	<i>Relations^f</i> <i>(staff)</i>
Committed criminal	-.06	.06	.07	.00	.00	-.05	.01
Neurotic anxious	-.09	-.01	.01	.12	.30**	.04	.08
Character disorder	.17*	-.02	.00	.15	-.19**	-.07	-.01
Situational	.03	-.24**	.07	-.19	-.01	.18*	.19*
Age at intake	-.12	-.14	-.10	-.12	-.03	.18*	.20**
Race ^g	.12	-.11	-.24**	-.19*	-.25**	-.11	-.05
Prior time ^h	.27***	-.03	nm ^j	.07	.13	.01	.06
Revoked ⁱ	.10	.03	-.21*	-.06	-.02	.12	.06
<i>R</i> ²	.15	.07	.14	.10	.20	.11	.08
<i>F</i>	2.56**	.78	1.83*	1.11	2.47**	1.73*	1.24
<i>SE</i>	10.91	.45	.49	.50	18.84	.50	.58
<i>N</i>	121	88	89	88	89	121	121

- a. Official disciplinary infraction = rate per month x 100.
 - b. Scale includes use of verbal threats, insults and attacks on others. High indicates aggressive. $\alpha = .71$.
 - c. Scale includes inmates receiving physical and sexual treats as well as a few who reported being attacked by other inmates. High scores are indicative of such victimizations. $\alpha = .75$.
 - d. High scores indicate nonviolent infractions. $\alpha = .58$.
 - e. Center for Epidemiologic Studies Depression Scale. High scores indicate high stress. $\alpha = .78$.
 - f. High scores indicate favorable relationships.
 - g. White = 0; non-White = 1.
 - h. Number of months served during prior prison terms.
 - i. Prior revocation on record = 1; no prior revocation on record = 0.
 - j. nm: Variable was not entered in this model.
- * $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$.

Patterns for committed criminals did not change over those shown in the bivariate analysis. This type failed to correlate with any of the prison outcome measures. Although this group of inmates did, by virtue of their diagnoses, orient to a criminal life-style, they did not encounter difficulties while in prison, nor did they inflict them on others.

This is in distinct contrast to findings for character-disordered inmates, which are also not substantially different from those observed in the bivariate analysis. These inmates incurred significantly more official infractions and self-reported more infractions, although the latter is not significant. Stress scores were significantly lower than those reported by others. Given the fact that the MMPI Pd scale surpasses 70 for these inmates, these results are far from surprising.

The most obvious finding for the neurotic inmates again is their atypically high score on the stress scale. They were not distinct on any other adjustment measures. Situational inmates reported fewer acts of aggression and prison infractions and were rated more favorably by staff. A weak bivariate relationship with stress disappeared after partialing out the effects of other variables.

The results, shown in Table 4, also offer an opportunity to construct modest profiles of the inmate who experiences difficulties in this type of a setting. Inmates who were diagnosed as character disordered and those who had more prior prison experience were more likely than others to have been cited for prison infractions. Beta values for age, race, and revocations were comparatively high but not significant.

White inmates and those who had not violated the terms of prior sentences were more likely to be victimized or threatened, a finding that is in keeping with other studies of prison victimizations. Somewhat similar profiles were observed for inmates who reported high levels of stress. They were most likely to be White and classified into the neurotic personality type, whereas the character-disordered types were more sheltered from such stress.

Inmates who were older and diagnosed situational were rated as having formed favorable relationships with the other inmates. Similar findings were observed for the relationships with authority figures, but the model was not significant.

CONCLUSION

The findings presented here unveil a differential picture of prison adjustment. Although the notion of differentiation is not new to the prison literature, psychology is seldom put forward as the vehicle for making important distinctions among inmates. Although these results offer support for continued research of this nature, they are presented with certain precautions. Clearly a larger sample would have facilitated the multivariate analyses. Table 4 reveals several instances where moderate beta and R^2 values were not significant but might have been with even slightly more degrees of freedom. A larger sample would also have afforded the opportunity to create composite indices of personality, if needed, and to build more elaborate multivariate models.

Some would also qualify these results by the nature of the sample, because the subjects are federal rather than state inmates. Federal inmates are assumed typically to include more professional offenders and less violent offenders than those held in state facilities. Although some of these findings might have been different in a state sample (clearer correlations with committed criminal

types, perhaps) a number of considerations should temper concerns for the specificity of the sample. Indeed, many of the subjects of the study were convicted for crimes that are also state crimes (e.g., drug-dealing and weapons charges). Moreover, their prior records were extensive, revealing varied criminal histories replete with numerous state crimes and, for the most part, absent specialization. The prison environment, specifically its architecture, rules, and structure of authority, was that of a traditional maximum-security setting. Finally, with a few exceptions, the findings are not at variance with previous research.

In fact, the research should be viewed as offering an additional rather than an alternative dimension to much of the extant research. One can hardly review the findings for situational inmates, for example, without recalling Sykes (1958) description of the "fish," or Bowker's (1980) account of the types of inmates who are most likely to be physically and psychologically victimized in prison settings. Notwithstanding their comfort with the criminal label, committed criminals stayed out of prison-related troubles adhering perhaps to a notion of "doing one's own time." Missing from the traditional view of this role, however, is the expected correlation between committed-criminal type and prior prison experience.¹⁸ Finally, character-disordered inmates incurred most of the trouble or "hard time." Their MMPI profiles reflecting characteristics of impulsivity and clear asocial tendencies often associated with psychopathic (antisocial personality disorders), these inmates portray none of the "grace under pressure" associated with the "real man." Moreover, findings for this type support assertions by Andrews and Bonta (in press) and by others (e.g., Megargee & Bohn, 1979) of the stability of the MMPI Pd scale and its counterpart, the So scale on the California Personality Inventory. With the possible exception of some of the findings for the committed criminal type, these results are also those one would expect from the type descriptions, thereby helping to validate the types themselves. There were few anomalies.

The findings also enhance, rather than dismiss, the views offered by those predictions studies (and instruments) that focus on demographic and criminal record measures. But with the advent and popularization of risk assessment, most of the attention has focused on the demographic and criminal record predictors of prison adjustment. Indeed, some assert that the emerging technology of actuarial prediction (risk assessment) is heralding a "new penology" (Feeley & Simon, 1992). As a part of the defining features of this movement, "the language of probability and risk increasingly replaces earlier discourses of clinical diagnosis and retributive judgment" and the practice of "targeting offenders as an aggregate in place of traditional techniques for individualizing or creating equity" (Feeley & Simon, 1992, p. 449). Based

on results shown above, however, a preference for demographic and criminal record factors need not be granted solely for empirical reasons, even if the purpose is for custody and control rather than for treatment. The predictive merits of personality factors are not overshadowed by demographic and criminal record variables.

But we might continue to prefer the demographic and criminal background predictors for their ease of administration and interpretation. Without denying the concern devoted to accurate measurement of traditional criminological predictors and criterion variables (see Gottfredson & Tonry, 1987), the criminological measurement enterprise pales in comparison to the psychometric accounts of endeavors to measure more elusive psychological and personality constructs. The struggle to secure reliable and valid measures occurs as well in the emerging technology of psychological classification (see Harris, 1988; Van Voorhis, in press). And results are sensitive to setting, administration, and to the subtle differences between scales and type descriptions (Van Voorhis, in press; Zager, 1988). In the larger study for example, some inconsistencies were noted among similarly defined types. Patterns, however, were discernible.

Was this perhaps what Vold and others were struggling with when they offered conclusions supporting the dismissal of psychology from criminological inquiry? If so, there is a clear distinction between a construct that is challenging to measure and one that is meaningless, and our understanding of crime and punishment may be the lesser for not recognizing it.

APPENDIX

Descriptions of the Classification Systems

1. Interpersonal Maturity (I-level)

I-level (Warren & staff of the Community Treatment Project, 1966) is a classification system and treatment model that focuses on the ways in which people view themselves and others as well as the ways in which they interact with others. The classification scheme consists of five levels that characterize individuals on a cognitive development scheme pertaining to self and interpersonal perspective. This system began with the theoretical work of Sullivan, Grant, and Grant (1957) and developed into a classification system for use with juvenile offenders in the California Youth Authority during the 1960s and 1970s (Warren, 1983; Warren et al., 1966). In addition to the five levels, the offender classification system also has personality subtypes within three of the levels.

The levels of interpersonal development range from the least mature stage of the newborn infant to an ideal stage of interpersonal maturity that is seldom reached in

APPENDIX: Continued

our culture. A description of the social frame of reference that characterizes each level shows how individual perceptions of and reactions to others and the environment change with the development of the personality. This way of making sense of one's environment, then, is relatively consistent across situations until the individual matures into the next level, where a new frame of reference is integrated with previous experiences and perspectives.

Although seven levels have been set forth in the theoretical work of Sullivan et al. (1957), only four levels have applicability to delinquent and offender populations. Harris's (1988) abbreviated description of Levels 2 (I_2), 3 (I_3), 4 (I_4), and 5 (I_5) follows. More detailed accounts are available in Marguerite Q. Warren's writings (1969, 1971, 1983).

I_2 is a stage typical of very young children. Major concerns center on differentiating persons from objects. Other persons are viewed solely as sources of gratification (e.g., as "givers" and "takers," evidencing no understanding of or ability to predict or influence the behavior of others).

I_3 youths have learned that they have power; their behaviors affect the responses they receive from others. Much of their activity centers around learning how power is structured. They tend to apply stereotyped rules and simple formulas when interacting with others.

I_4 youths operate from a set of internalized values. They are aware of feelings and motives in themselves and in others and the relevance of these motives and feelings to communication and relationships with others. They tend to be rigid in their application of rules and to be concerned with their own uniqueness.

I_5 individuals are considerably less rigid in their application of rules than are (persons) at Level 4; they tend to see grey areas in situations and are tolerant of viewpoints different from their own. Role conflict is a major concern of such (persons). The most distinguishing characteristic of this stage is empathy—the capacity to experience the world from the perspective of another person.

The I-level system offers a subtype diagnosis in addition to the I-level classification. The subtypes are neither theoretically derived nor developmental but rather empirically identified personality-based subtypes of the four levels described above. They might also be termed the personality-based adaptations found to be evidenced at each of these levels. Harris's (1988) descriptions are as follows:

I_2 : *Asocial passive*: Responds to unmet demand by withdrawing, whining, or complaining.

Asocial aggressive: Responds to unmet needs with open aggression.

I_3 : *Immature conformist*: Conforms to whomever has the power at the moment and sees self as less powerful than others.

Cultural conformist: Conforms exclusively to a specific group of peers.

(continued)

APPENDIX: Continued

Manipulator: Counteractive to any source of power, adult or peer. Extremely distrustful of others.

I₄ and I₅: *Neurotic acting-out*: Internally conflicted due to negative self-image. Responds to internal conflict by putting up a facade of superadequacy and maintaining a high level of activity. Attempts to keep maintaining a high level of activity. Attempts to keep others at a distance through distracting behavior or verbal attack, even though he or she may be very social.

Neurotic anxious: Also internally conflicted due to a negative self-image. Responds to internal conflict with guilt, anxiety, or depression. Tends to be introspective and frequently attempts to engage others in gaining self-understanding. Self-analysis is not genuine; it is an attempt to reduce anxiety while preserving both positive and negative parts of self-identity.

Cultural identifier: As part of his or her socialization process, certain values were internalized that permit a range of delinquent acts.

Situational-emotional reaction: Responds to a current crisis, situation, or an emotional change that is recent in origin (pp. 64-66).

2. The Jesness Inventory (I-level) System

The Jesness Inventory Classification System (Jesness & Wedge, 1983) might be described as a combination of the heuristic and the empirical methods because it has been portrayed as an actuarial method of assessing I-level. It is a paper-and-pencil test developed for use with delinquents, but more recent research has produced adult norms (Jesness, 1988). The Jesness Inventory yields scores on 11 trait scales (e.g., social maladjustment, manifest aggression) and 9 scales that correspond to the I-level subtype scales. Although the designer of this test claims to offer a more efficient and less costly method of assessing I-level (Jesness, 1988), it is not clear that the Jesness I-level subtype definitions are entirely comparable to the interview subtype definitions, especially for adults. For one reason, the Jesness I-level diagnosis does not incorporate the I₅ type. Jesness's type descriptions, shown below, identify similar but not identical traits (Jesness, 1988):

I₂—Aa (*asocial aggressive*): From deprived background; negative attitudes toward authority, family, and school; unpredictable, nonconforming, aggressive, and obtrusive behavior; delinquent orientation; and high self-reported delinquency.

I₂—Ap (*asocial passive*): From deprived home background; negative attitudes toward family and school; low verbal aptitude, nonconforming, inappropriate behavior; poor peer relations; and negative self-concept.

I₃—Cfm (*immature conformist*): Positive attitudes toward home, school, and authority; conforming behavior; often dependent (follower); positive, uncritical self-concept, and low self-reported delinquency.

I₃—Cfc (*cultural conformist*): From deprived background; low motivation, poor achievement, and negative attitudes toward school; alienated, distrustful, and

APPENDIX: Continued

hostile toward adults and authority; delinquently oriented friends; delinquent self-concept; and high self-reported delinquency.

- I₃—Mp (*manipulator*): Generally positive attitudes toward school; positive self-concept; manipulative, sometimes obtrusive behavior; and inconsistency between self-evaluations and objective measures (e.g., official versus self-reported delinquency).
- I₄—Na (*neurotic acting-out*): Above-average verbal aptitude; behavior problems in school; negative attitudes toward authority; family conflicts; self-presentation as adequate and independent, but somewhat cynical and disenchanted; often provocative, outspoken, and nonconforming; and high self-reported delinquency.
- I₄—Nx (*neurotic anxious*): Mostly positive attitudes toward school; conforming; somewhat perturbable, dependent, anxious, and insecure; nondelinquent orientation; family and interpersonal conflicts; and low official delinquency.
- I₄—Se (*situational*): Above average socioeconomic background; positive attitudes toward school and family; positive nondelinquent self-concept; confident; naive; conforming; good interpersonal relationships; and low self-reported and official delinquency.
- I₄—Ci (*cultural identifier*): High verbal aptitude; highly motivated for school; positive attitudes toward authority, school, parents, and self; confident; good interpersonal relationships; nondelinquent orientation; and low self-reported and official delinquency (pp. 80-82).

3. Megargee's MMPI-Based Typology

The Megargee MMPI-based typology (Megargee & Bohn, 1979) was developed for use with youthful and adult offenders. As the title implies, the classifications are obtained from results of the Minnesota Multiphasic Personality Inventory (MMPI) one of the most widely used psychodiagnostic instruments in the field of mental health. The classification system was developed by Edwin Megargee by separating MMPI profiles into 10 categories on the bases of profile configurations, slopes, shapes, and elevations. The scoring rules for doing this are available in a book titled *Classifying Criminal Offenders* (Megargee & Bohn, 1979). Computer scoring services are also available. Most agencies can classify roughly 67% of the profiles by computer. The remaining 33% of the cases must be classified clinically, to break tied diagnoses and assign diagnoses to profiles that the computer designates as "unclassified" (Zager, 1988).

The 10 types are described below along with a brief description of the MMPI profile associated with the type. Megargee gave each type a nondescript name (e.g., Able, Baker, Charlie, etc.) to allow an empirical process of identifying the behavioral characteristics of each type, thereby discouraging any biasing effects from precon-

(continued)

APPENDIX: Continued

ceived labels. Zager's (1988) description of each of the types, in order from least to most disturbed, follows:

Item: The MMPI profile lacks elevation with scales generally under 70. Items are described as a generally stable, well-adjusted group with minimal problems or conflicts with authorities.

Easy: The profile has low elevations with the top scale below 80 and often below 70. Scales that often are elevated are 4 and 3 and the profile slopes down to the right. Easys are described as bright, stable, with good adjustment, personal resources, and interpersonal relationships. Many are underachievers.

Baker: The profile has moderate elevations, with typical elevations on scales 4 and 2 and sloping down to the right. Bakers are described as inadequate, anxious, constricted, and dogmatic, with a tendency to abuse alcohol.

Able: The profile has moderate elevations, typically on scales 4 and 9. Ables are described as charming, impulsive, and manipulative. They are achievement-oriented and often adjust well to incarceration.

George: The profile has moderate evaluations similar to Baker but scales 1, 2, and 3 are more elevated. Georges are described as hardworking, submissive, and anxious, with learned criminal values. They often take advantage of educational and vocational programs.

Delta: The profile has moderate to high elevation on scale 4, with other scales below 70. Deltas are described as amoral, hedonistic, egocentric, manipulative, and bright. They are impulsive sensation seekers who have poor relations with peers and authorities.

Jupiter: The profile has moderate to high elevations sloping up to the right with elevations typically on scales 8, 9, and 7. Jupiters are described as overcoming deprived backgrounds to do better than expected in prison and upon release.

Foxtrot: The profile has high elevations with the top scale over 80 and others over 70. It slopes up to the right with scales 8, 9, and 4, the top three scales. Foxtrots are described as tough, streetwise, cynical and antisocial. They have deficits in most areas, extensive criminal histories and poor prison adjustment.

Charlie: The profile has high elevations with the highest scale above 80 and several scales above 70, typically peaking on scales 8, 6, 4, and sloping to the right. Charlies are described as hostile, misanthropic, alienated, aggressive, and antisocial. They have extensive histories of poor adjustment, criminal convictions, and mixed substance abuse.

How: The profile has very high elevations with at least three scales above a *t* score of 70, and is characterized by multiple elevations rather than individual scale elevations. Hows are described as unstable, agitated, and disturbed mental health cases. They have extensive needs and function ineffectively in major areas. (pp. 42-43)

4. Quay's Adult Inmate Management System (AIMS)

APPENDIX: Continued

This is the only one of the four systems that does not require an inmate's written or verbal response. Two objective instruments are used: One is completed by a correctional staff person who has knowledge of the inmate's behavior; and the other is completed by a staff member upon examining the inmates background reports and interviewing him. Scores on five dimensions result: asocial aggressive, immature dependent, manipulative, neurotic anxious, and situational (Quay, 1983, 1984). Research using this system has taken place primarily among adult male inmates. The characteristics of each type are as follows (descriptions are taken from items found on the behavioral checklists):

Asocial aggressive: Gets along with "hoods," uses leisure time to cause trouble, frequent use of profane language, cannot be trusted, victimizes weaker inmates, impulsive, unpredictable, seeks excitement, talks aggressively, blameless, quick-tempered, holds grudges, seeks to get even, tries to form cliques, openly defies rules and regulations, stirs up trouble among inmates, aids or abets in breaking rules, uncontrollable as a child, antisocial values supporting criminal behavior, irregular work history, tough, defiant, physically aggressive, guiltless, braggart, lack of concern for others.

Immature-dependent: Tries but cannot follow directions, socially withdrawn, takes little pleasure in anything, sluggish, drowsy, moody, brooding, seems dull and unintelligent, never seems happy, passive, easily led, daydreams, seems mentally off in space, inattentive, reluctant to participate, has few, if any friends, difficulty managing everyday problems in living, depressed.

Situational: Has expressed guilt, expresses a need to improve, supported wife and children, claims offense was motivated by family problems, single marriage, suffered financial reverses.

Manipulative: Continually tries to con staff, does not trust staff, complains of unfairness, feels unjustly confined, plays one staff member against another.

Neurotic anxious: Worried, anxious, tense, unable to relax, continually asks for help, seems afraid, easily upset, afraid of other inmates, often sad and depressed.

NOTES

1. Only some of the types identified in the appendix are incorporated into the analyses conducted for this article. All of the systems except Conceptual Level specify categories of a personality-based typology. In addition, three of the systems (Conceptual Level and the Warren and the Jesness I-level systems) separate groups on the basis of cognitive developmental characteristics. Because personality is the focus of this article, the measures of cognitive development are not described or incorporated into the analyses. In addition, the analysis selects a measure representative of one of the four types listed below. As will be explained shortly, this

study is not an assessment of a given classification typology but instead borrows measures of personality from the classification technology.

2. The construct validity analysis examined a series of bivariate convergent and divergent correlations among the types. A less successful factor analysis was compromised by a less than ideal sample size. For a full discussion of these tests see Van Voorhis (in press).

3. Most of the systems also identified manipulative and immature dependent types as well, but these failed to converge as clearly as those enumerated earlier. Instead, the manipulative measures tended to correlate with committed criminal and character-disordered measures, probably as secondary characteristics. Similarly, the immature/dependent types tended to converge with neurotic anxious measures. The failure of these types to converge with similar types on other systems may be attributable to the fact that manipulative and immature types originated in systems designed for juveniles and may be less applicable to adults.

4. An alternative would have been to conduct composite measures of each type through factor analysis adequate for the construction of an index that reflected the results of the construct validity tests. The sample, however, was not large enough to do this.

5. Institutional effects, however, are apparent in most of the prison adjustment literature.

6. The decision to omit the prison camp from further consideration renders these findings more comparable to other research conducted to date. Generally, the prison adjustment literature is confined to maximum-security or high-medium-security facilities. In addition, the prison camp inmates generally experienced fewer adjustment difficulties than did the penitentiary inmates. Moreover, their infractions were mostly limited to citations for insubordination.

7. The rationale for limiting the sample to newly admitted inmates reflects concern for empirically well-established changes in inmate psychological states across phases of the prison term (see Bukstel & Kilmann, 1980).

8. Approximately 110 inmates who might have been eligible to participate were not contacted. This occurred during months when (a) there was a staff transition resulting in no interviews or (b) the number of intakes surpassed the number of inmates who could be interviewed. The exclusion of these inmates, however, was random and therefore unlikely to bias the findings. Additional details are available elsewhere (Van Voorhis, in press).

9. Data attrition occurred for a number of reasons, including (a) the follow-up survey was not administered from the beginning of the study, (b) occasional staff reluctance to complete the Quay Correctional Adjustment Checklist (CAC) and the Megargee Work Performance and Adjustment Rating forms, and (c) unanticipated releases or transfers.

10. The greatest amount of data attrition occurs on the follow-up survey, because the follow-up survey was not built into the original design of the study. It was implemented during the 9th month of the study when research staff became concerned about the variability on the institutional disciplinary measures. By the time it was administered, some of the early subjects had been transferred, and others did not wish to comply. As a result, the rather high amounts of data attrition on this instrument warranted tests of comparison between the surveyed participants and the nonsurveyed participants to determine areas of over- or underrepresentation. Difference of proportions (chi-square) and difference of means tests (*t* test), however, reveal that the surveyed groups were not significantly different from the nonsurveyed groups on background factors of age, race, education, urban environment, employment status at arrest, prior record, psychological classification, and Wechsler Adult Intelligence Scale—Revised (WAIS-R) (Shipley, 1940).

11. This method was chosen over two alternatives, the use of a single classification typology or the creation of a composite measure. Use of a single typology would have clouded unnecessarily the task of studying personality, because some types are measured better on some systems than on others and because each typology introduces less common personality types that fail to

fall within the four types listed. In addition, creating a composite measure would have resulted in some case attrition that would then have jeopardized the multivariate analyses.

12. Across studies, interrater reliability has ranged from 67% to 86% for 1-level and from 37% to 74% for subtype (see Harris, 1983, 1988; Jesness, 1988; Palmer & Werner, 1972). Some would argue that these figures are not as bad as other clinically obtained diagnoses (see Meehl, 1954; Sawyer, 1966), but they could perhaps be improved by clearer decision rules for breaking multiple diagnoses (Harris, 1988).

13. For 12 inmates who transferred to other facilities, this required securing the disciplinary data from the receiving facility.

14. To determine whether survey indexes were biased by these variable follow-up periods, each self-report measure was correlated with the time intervening between intake and the completion of the survey. No index was found to be significantly related to the follow-up time period.

15. The comparison of race correlates across the outcome measures is difficult to interpret for a number of reasons. As with other crime data sources, non-White inmates are portrayed poorly on measures that reflect official discretion and evaluation and better on measures that tapped their own assessments of their behavior. Thus it is not possible to separate the behavior from the potential of bias in the measures.

16. This resulted in an ability to improve the significance test results without substantial changes in the magnitude of the R^2 values or beta coefficients. Overall, concern for multicollinearity, in other words, was found to be unwarranted.

17. Results of tests using logged data are not substantially different from those reported below.

18. This may be a function of the limited variation the prior prison experience variable. Most of the inmates had served prior terms.

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