

Managerial Personality and Performance: A Semi-idiographic Approach

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Understanding the relationship between personality and behavior requires accounting for a broad set of traits within each person and the demands of a specific role or situation. To address these requirements, we assessed the relevance or ordering of traits within an individual (an idiographic approach) and compared these orderings across individuals occupying similar organizational situations (a nomothetic approach). We illustrate the utility of this semi-idiographic approach with a longitudinal study of Masters of Business Administration (MBA) students. The MBAs whose personalities were more similar to a template of the successful young manager received more job offers upon graduating and, subsequently, earned higher salaries, were more likely to be working full-time, and had changed jobs less often than did those who fit the managerial template less well. © 1999 Academic Press

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A long tradition of research in psychology and organizational behavior has attempted to link personal characteristics, particularly personality, to job success. For example, McClelland and Boyatzis (1982) obtained personality assessments of a sample of AT&T managers on characteristics including

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need for power and activity inhibition and found that these predicted promotion patterns 16 years later. Although numerous studies reported that specific personality traits related to performance at work (see Bass, 1985 for a comprehensive review), there was a general sense that the relations between personality and job performance were inconclusive. During the 1970s and 1980s skepticism about the use of personality to predict performance at work grew. This stemmed, in part, from a lack of comparability in the personality dimensions studied, the variety of jobs incumbents held, and the multiplicity of methods used. In addition, as Hogan and Ones (1997) note, a number of influential books and articles raised provocative questions about the consistency of personality across situations, the validity of personality measures, and the amount of variance in behavior in organizations that could be explained by personality (e.g., Guion & Gottier, 1965; Mischel, 1968). All of these factors made it difficult to develop coherent theory and generalizable findings that could clarify the effects of personality on managerial behavior and led researchers to raise fundamental questions about the extent to which individual differences influence performance in organizations (e.g., Davis-Blake & Pfeffer, 1989).

In the past decade, there has been a resurgence of attempts to understand the relation between personality and job performance. Two key developments contributed to this resurgence. First, there has been a widespread acceptance of the big Five factor model (John, 1990; McCrae & Costa, 1987) which argues that five broad dimensions—neuroticism, extroversion, openness, conscientiousness, and agreeableness—can characterize a wide range of lexical-based trait descriptors of personality. The acceptance of a broad framework allows for the possibility of comparing studies that rely on very different models of personality and may offer the potential of testing broader theory than in the past. Second, refinements in statistical techniques have allowed for meta-analyses that combine independent studies and investigate overall patterns of links between personality and work performance.

In particular, two meta-analyses published in 1991 investigated the relations between Big Five personality dimensions and various aspects of job performance (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991). Both papers reviewed the extant literature and classified the specific personality measures used in the different studies into one or more of the Big Five factors. The results of the two meta-analyses were similar. Across different occupational groups and measures of job performance, the Big Five markers, particularly conscientiousness, were related to performance. A third meta-analysis (Ones, Viswevaran, & Schmidt, 1993) investigated the ability of so-called “integrity” tests to predict dishonesty and other dysfunctional work behaviors. One of the results of this analysis was that personality-based integrity tests were related to job performance and organizationally disruptive behaviors. Since these personality-based integrity tests are strongly related

to the Big Five markers of conscientiousness, agreeableness, and neuroticism, this meta-analysis also provides strong support for the link between broad personality measures and job performance (Hogan & Ones, 1997).

The results of these analysis have both strengthened industrial psychologists' interest in using personality measures to predict performance at work and have stimulated research that explains why specific individual differences relate to job performance (e.g., Barrick, Mount, & Strauss, 1993; Caldwell & Burger, 1997). Although it is increasingly clear that personality is related to a number of behaviors at work, we argue that addressing three issues can help develop a more complete theory of the relationship between personality and career success.

First, the number of personality dimensions assessed should be broad enough to permit a complete assessment of an individual's psychological make-up. Both personality and organizational performance are multifaceted, making the practice of assessing a single dimension inappropriate (Hogan, Hogan, & Roberts, 1996, p. 470). Even such inclusive measures as the Big Five markers may obscure very real, important relations between more fine-grained aspects of personality and specific work outcomes. For example, Block (1995) argues that the Big Five dimensions may mask potentially important differences among individuals. Rather than being a unitary dimension, agreeableness, for example, consists of six facets including trust, altruism, compliance, straightforwardness, modesty, and tender-mindedness. It is not hard to imagine that these separate facets might be related to performance in organizational settings in very different, and potentially inconsistent, ways. Among sales managers, for example, being straightforward may enhance performance while being altruistic may diminish performance. Thus, a full understanding of the role of personality in explaining a range of work behaviors will benefit from an extensive, rather than limited, description of personality.

Second, and closely related, nomothetic research that relies on between-person comparisons of personality overlooks important idiographic, or within-person, comparisons that may also determine behavior. Many studies focus on one or a few measures of traits and do not identify the extent to which a particular trait is important in a person's make-up. This means that the approach of measuring one or a small number of personality dimensions and comparing a person's scores to a population norm, though valuable in assessing the general relationship between single traits and work performance, is unlikely to capture the complexity of that person's response to a situation. To illustrate the effects of this problem, consider a variation of an example provided by Pelham (1993). Imagine that a person named Ann is asked by a researcher to rate herself on sociability and creativity. Assume that the rating is done on 9-point scales that have a normative mean of 5. Ann gives herself a rating of 6 on sociability and 4 on creativity. Further, assume that she is asked to rate the importance of each of these abilities to

her overall self-esteem and that she rates sociability as very important and creativity as unimportant. The interpretation so far is of a woman who strongly values her perceived sociability and is not particularly concerned about her creativity.

Now, assume that Ann is part of a nomothetic study of self-esteem and that, for the sample being studied, the mean rating on sociability is 7 and the mean rating on creativity is 3. What is the interpretation of her scores now? Based on a nomothetic logic she is below average on sociability, something she feels is very important to her self-concept, and above average on creativity, something she does not care about. This represents a very different interpretation of her self-esteem than that provided by an idiographic analysis. Nomothetic approaches to assessment can miss the idiographic or unique intrapersonal ordering of traits that may be critical to determining behavior because, as Markus (1977) showed, only traits that are part of one's self-concept will influence how one processes information and predict future behavior.

This idiographic orientation is relevant in organizations because selection and socialization processes tend to increase the homogeneity among members' personalities (Schneider, 1987). For example, individuals who display high levels of neuroticism, in a normative sense, are not likely to be hired, or, if hired, are not likely to stay with the organization (Staw, Bell, & Clausen, 1986). When research is conducted using managers and professional employees who undergo substantial occupational socialization, or employees with long tenure who have been well-socialized, and when differential attrition exists, normative differences will be attenuated, masking associations between personality and outcomes (e.g., Harrison & Carroll, 1991). This means that differences may not be evident because of restrictions in observed ranges of measured constructs; that is, individuals are attracted, selected, socialized, and dismissed based on a given aspect of their personality.

The third issue that needs to be addressed when linking personality and behavior is that assessed traits may be highly relevant in some roles or jobs but unimportant or not demanded in others. For this reason, the influence of personality needs to be examined within the situation in which behavior or outcomes are assessed. Personality represents, in part, a predisposition to behave in certain ways and should, therefore, be related to performance when these predispositions result in appropriate behavior as demanded by the situation (e.g., Wright & Mischel, 1987). For instance, a mild obsession with details may lead people to be successful as accountants, a profession that often demands careful attention to detail. But, an obsession with details may be less effective for entrepreneurs whose success may, instead, depend on their ability to anticipate and consider broad trends and scenarios and avoid getting mired in small details. Thus, to fully understand how personality contributes to performance, we need to focus on the dimensions that are most

conducive to the behaviors demanded in a particular job. Support for this general argument comes from one of the meta-analyses described earlier. Tett et al. (1991) argued that the personality and job performance were more strongly related when the personality measures assessed were based on a job analysis than when they were not. Specifying the nature of the job and its requirements can clarify the link between personality and work outcomes.

In this study we adopt a semi-idiographic approach to assessing managerial personality that simultaneously addresses these three issues. We examine the personality–performance link for the overall role of a manager, accounting for the relevance, breadth, and contextual factors that influence the link between personality and effectiveness in organizations. We begin by introducing a semi-idiographic approach that includes aspects of both normative and idiographic methods and combines a fine-grained understanding of how traits are arrayed within individuals with a way of comparing across individuals. Finally, we examine the demands of the manager's role and whether MBAs whose personalities are more similar to a template of a successful young manager perform better over time.

A SEMI-IDIOGRAPHIC APPROACH TO PERSONALITY ASSESSMENT

Henry Murray once wrote that “every man is in certain respects like all other men, like some other men, and like no other men” (Kluckhohn, Murray, & Schneider, 1953). The last two clauses of this statement represent different ways of using an idiographic approach to understand the person. When Murray states that an individual is like no other, he is stating an extreme idiographic position. This extreme position holds that since each person is unique, his or her personality can only be understood in the context of his or her personal history and attempts to use predefined personality dimensions or comparisons between people will only yield superficial results (Lamiell, 1981; Silverstein, 1988).¹ The second clause, that individuals are like some other individuals, suggests that there are predictable relationships between personality variables and behavior, but that these relationships may vary across subsets of people or situations. It is this more moderate statement of the idiographic philosophy that guides the research reported here and is consistent with our definition of a semi-idiographic approach.

Howard and Myers (1990) provide an example of a semi-idiographic approach by determining the relationship between situational factors and the amount of time individuals spent exercising. They developed a standard list of situational factors that could influence people's daily duration of exercise (e.g., amount of other obligations) and had people rate the extent to which

¹ A similar argument has been applied to studies of organizational culture (e.g., Schein, 1983).

each was present in their lives. Participants also reported the amount and type of exercise they did on a daily basis. So far, this study is a standard nomothetic study. The idiographic component was captured when they asked each respondent to identify three factors that influenced his or her daily level of exercise and to rate the presence of those factors. Their results indicated that idiographic factors, generated uniquely by each respondent, accounted for about twice the variance in daily physical exercise when compared to the nomothetic predictors. This study illustrates how situational factors influence people's level of exercise and also how the exact manifestation of that relationship depends on idiographic, or within-person, factors.

Thus, while nomothetic approaches provide useful insights into the relations between personality and behavior, these insights can be enhanced by attending to the configuration and salience of personality variables within the individual. And, as we discuss below, a complete understanding of how personality influences behavior requires an interactional perspective that takes into account the person and the demands of the situation in which behavior is enacted. Examining the unique configuration of an individual's personality and the demands of the situation requires a semi-idiographic approach; that is, an approach that is person centered yet allows for a comparative assessment of how a person's personality configuration fits a given circumstance.

Zuckerman and his colleagues, for example, showed that the relevance of a trait for an individual's self-concept (an idiographic assessment) was an important determinant of the link between personality traits and predicted behavior (a nomothetic assessment) (Zuckerman et al., 1988). A number of studies of behavior in organizations have implicitly adopted a semi-idiographic approach. For instance, the finding that extroverts tend to be more successful in sales positions than introverts (Barrick & Mount, 1991) or that personality characteristics are most related to performance in jobs with high autonomy (Barrick & Mount, 1993) are really conditional statements about the particular characteristics favored in the context of a particular job. This approach is an important step but may still be limited in terms of fully understanding the manager's role as it relies on specification of a few individual characteristics that are only broadly relevant in the situation, such as being emotional versus being calm, and a very broad description of the situation.

USING A SEMI-IDIAGRAPHIC APPROACH IN ORGANIZATIONAL SETTINGS: MANAGERIAL PERSONALITY AND PERFORMANCE

The discussion above emphasized the importance of including a large number of traits and assessing their unique configuration within a person if an accurate understanding of the relationships between personality and behavior is to be made. One additional criterion is crucial: clarifying the situational demands placed on people. Empirical research has supported the importance of the context in determining the relationship between personality

and behavior. For example, people with cooperative personalities behaved cooperatively in collectivistic contexts but behaved individualistically when the context rewarded individualism (Chatman & Barsade, 1995), and extroverted people were significantly more talkative than introverted people when the norms and expectations in the situation were more ambiguous (Monson, Hesley, & Chernick, 1982). Wright and Mischel have outlined a competency–demand hypothesis in which dispositions represent probable if–then relations between situations and behavior. Using this logic, the dimension of, for example, aggressiveness is an implicit subjunctive statement about what a person would be likely to do under specific conditions, such as being frustrated or aversively stimulated, rather than what he or she will necessarily do on average (Wright & Mischel, 1987, p. 1161).

One ubiquitous set of expectations in organizations comprises the role of a manager (e.g., Mintzberg, 1973). But, despite the prevalence of the managerial position, few researchers have systematically investigated the interaction between personal traits and contextual demands in predicting managerial success (see Howard & Bray, 1988 for an exception). The managerial job is complex and research has lacked coherence in describing it. Previous research offered lists of essential traits or behaviors (e.g., Bass, 1985; Carroll & Gillen, 1987; Jonas, Fry, & Srivasta, 1989) and relatively coarse-grained taxonomies of the components of the managerial role (e.g., Mintzberg, 1973; Tornow & Pinto, 1976; Baher, 1992). And, because results obtained have differed sufficiently from study to study, it has been difficult to determine the set of traits and the relative priority of specific traits that best predict managerial success (Howard, 1986).

Managerial Personality

While we lack direct evidence, indirect evidence suggests that there is some consensus about characteristics that contribute to effective management (e.g., Lord, Foti, & De Vader, 1984; Phillips & Lord, 1981). For example, recruiters develop model personality types and use these to identify and select candidates who have personalities that are similar to successful incumbents (e.g., Jackson, Peacock, & Holden, 1982; Rothstein & Jackson, 1980). The agreement among these experts about the traits associated with managerial success implies the existence of strong situational demands that favor individuals with traits that fit these demands.

But we lack an approach that provides both the breadth and common language with which to simultaneously describe manager-relevant personal characteristics and the situations that such managers are likely to face and one that also allows these characteristics to be uniquely ordered according to their relevance for particular individuals. While conventional approaches to personality measurement do not permit semi-idiographic assessment, the template-matching approach (Bem & Funder, 1978; Funder & Colvin, 1991)

or the profile comparison approach (Caldwell & O'Reilly, 1990; O'Reilly, Chatman & Caldwell, 1991)—both of which are based on the Q-sort methodology (Block, 1978; Stephenson, 1980)—do. Bem and Funder (1978) proposed that a template-matching approach that provides descriptions of contexts in the same language system used to characterize individuals may solve this problem. Individuals whose personality most closely fits the template describing the situation or role are those most likely to behave in the predicted manner (e.g., be successful).

As a semi-idiographic method, the Q-sort methodology offers a way to capture a person's uniquely configured personality and also permits comparisons between people. Thus, it offers a more complete picture of individuals than do typical single-dimension scales by including a variety of items that raters can still manageably order. It also permits a clinical portrait of individuals to be drawn by depicting the extent to which each trait relates to other traits. This clinical perspective emerges without the disadvantages of purely idiographic approaches which prevent comparisons among people.

Of course, using a semi-idiographic technique does not automatically guarantee a better prediction than can be made by an exclusive reliance on nomothetic techniques. The ipsative nature of data collected with semi-idiographic methods sometimes limits the use of some analytical techniques and requires the use of some techniques, such as difference scores, that have been criticized (e.g., Edwards, 1995). But, an important advantage of the Q-sort method is that it can be tailored to the context and related to within-person variations in personality traits. For example, Bem and Funder (1978) used the template-matching approach to determine which of three different theories (cognitive dissonance, self-verification, or self-presentation) best explained attitude change among subjects in the forced-compliance paradigm.² They constructed templates that represented the personality of "ideal attitude-changer" as predicted by each of the three theories and assessed the personalities of subjects who participated in a forced-choice experiment. Results indicated that fit to the self-presentation template accounted for more variation in attitude change than did fit to the other templates.

Previous research has sometimes tried to identify the context by restricting the study or sample to a particular setting, for example Chatman (1991) focused on the same job in eight of the largest public accounting firms. Similarly, Caldwell and O'Reilly (1990) were able to predict job success more effectively when comparing individuals' competencies to the knowledge, skills, and abilities required by specific jobs. They first used a structured task

² The forced compliance effect refers to the phenomenon in which a person is induced to advocate a position she does not believe, and will, under certain circumstances, subsequently change her own attitude to align it more closely with the advocated position (Funder, 1982, p. 101).

analysis process to identify the full set of competencies (typically between 50 and 80) required to perform a job. Written descriptions of each competency were then developed and individuals who had knowledge of the job sorted the competencies into a specified distribution containing nine categories based on how important each competency was to successful performance. A similar process, but a different set of raters, was used to rate job incumbents. Individuals who were familiar with a job incumbent sorted the same set of competency statements in terms of how characteristic each was of the focal individual. This produced a semi-idiographic profile of the competencies of each job incumbent. Caldwell and O'Reilly (1990) showed that the higher the correlation between the profile of individual's competencies and the profile of the job demands, the higher the individual's performance.

We followed this general logic in the present study and created an "ideal young manager's personality" template. Each potential manager's personality was assessed on the same dimensions and compared to the template, with greater similarity between the two representing greater congruence or fit with the managerial personality. This conception of fit provides a direct measure of congruence, with personality and situational demands combined into a single construct (and measure). This contrasts with many interactional approaches that incorporate person and situation characteristics statistically (e.g., Joyce, Slocum, & Von Glinow, 1982).

Previous research has demonstrated that those whose knowledge, skills, and abilities correspond more closely to the requisite demands of their job will perform more effectively (e.g., Caldwell & O'Reilly, 1990) and those whose values fit with an organization's culture will perform more effectively, be more satisfied and committed, and will remain with the organization longer than will those with lower value fit (Chatman, 1991). Using the same logic for managers, our main prediction in this study is that people whose personality fits more closely to the ideal young manager template should be more successful in their first few years of work after earning their MBA degree; that is, the more closely individuals match the profile (template) of the ideal young manager, the more successful they are likely to be in their early career.

A practical aim of this study is to understand why some people become more successful managers than do others. This study may also provide increased theoretical insight about the personal attributes demanded by the managerial role as well as offer further confirmation for the interaction between personality and situation in determining managerial performance.

METHOD

Constructing the Ideal Manager Profile

The template we developed of the personality of the successful young manager used a large array of characteristics and prioritized these characteristics in terms of their relevance or importance to the managerial position. We then compared the MBA's actual personality

profiles, assessed while they were students, with the template to predict their career success 3½ or 4½ years later. Thus, our approach explicitly addressed the issues of breadth and relevance of traits and examined persons within the context of the managerial position in order to make subsequent predictions about their career success.

The California Adult Q-Set. The Q-sort method may be an ideal instrument to develop a comprehensive and systematic set of expectations or competencies demanded for successful incumbency in the managerial position. One well-known version is the California Q-Set (CAQ), which was developed by Block (1978) to generate comprehensive general personality descriptions. Using over 50 clinicians, Block iteratively developed and refined a 100-item set of statements that raters could use to characterize individuals. These descriptors are not based on a single theory or used for the assessment of a particular personality attribute. Rather, they represent a comprehensive set of psychodynamic descriptors. Sets of items can be used to capture an impressively wide range of dispositions. This comprehensiveness is critical for conducting valid assessments of person-situation fit since the omission of relevant characteristics could constrain the relative comparability of included items. Additionally, a large number of unique profiles can be constructed, representing the relative salience and configuration of variables within individuals (or roles) rather than the relative standing of individuals across variables. The 100 items can be arrayed in thousands of ways, providing well-differentiated personality descriptions.

These 100 items are typically sorted by raters into nine categories in terms of the importance or salience with which each item characterizes a focal individual. This person-centered approach differs from the more common nomothetic approach in which a trait is rated based on how the individual compares to other individuals—without regard to either the relevance of the trait for the person or the situation. The use of this semi-idiographic approach permits the development of a personality profile that is unique to the individual and not based on a comparative ranking. It also permits the ratings of multiple experts to be aggregated to form more reliable and accurate composite profiles. These ratings may also be compared to ideal profiles or templates that represent a particular situation (e.g., the forced choice paradigm; Bem & Funder, 1978), role (e.g., job incumbent; Caldwell & O'Reilly, 1990), or behavioral pattern (e.g., paranoids, borderlines, or child-rearing practices; Block, Block, & Morrison, 1981). The correlation of the individual's profile with the ideal template is the "score" indicating the person's fit.

In order to develop a profile of the personality characteristics of successful young managers, we asked 60 raters to sort the 100-item California Adult Q-sort in terms of how characteristic each item was of successful managers in the first 5 years of their careers. Individual raters were presented with the item deck and instructions to: "think about your own experience and observations, and identify those personal characteristics that are important in determining success during the first five years of a person's career as a manager. Sort the 100 items into nine categories ranging from most characteristic to most uncharacteristic of a successful manager."

Raters. The 60 raters were fully employed professionals in a prominent Midwestern or West Coast part-time Masters of Business Administration (MBA) program. Their average age was 30.24 (SD = 6.53) and approximately two-thirds were male. Over 90% of the raters were employed full-time, representing a wide range of managerial jobs and industries. Approximately 60% had supervisory responsibilities. The raters averaged 7.51 (SD = 4.16) years of work experience. None of the individuals who created the ideal profile were part of the main study. Subjects in the main study (described below) were drawn from a third, completely distinct university.

Ideal Manager Profile. We developed the ideal manager profile by averaging the 60 raters' sorts of the 100 items in the California Adult Q-Set. Overall, there was consistency among the 60 raters in how they ordered the items (intraclass correlation coefficient [Bartko, 1966] = .57; Spearman-Brown coefficient = .99). As Cortina (1993) notes, the magnitude of a reliability coefficient is affected by the number of items; hence, the coefficient reported here

is interpreted as evidence of agreement among raters, not of evidence of the underlying constructs.

The top two categories consisted of 13 items rated as most characteristic of successful managers: (1) Is productive, gets things done; (2) Is able to see to the heart of important problems, does not get caught up in irrelevant details; (3) Has high aspiration of level for self, is ambitious, sets high personal goals; (4) Is dependable and responsible; (5) Behaves ethically, has a personal value system and is faithful to it; (6) Behaves in an assertive fashion, not afraid to express opinions, speaks up to get what s/he wants; (7) Is verbally fluent, can express ideas well in words; (8) Appears straightforward, forthright, candid in dealing with others; (9) Appears to have a high degree of intellectual capacity; (10) Is socially perceptive of a wide range of interpersonal cues; (11) Has insight into own needs, motives, and behaviors; (12) Tends to arouse liking and acceptance in people; and (13) Has social poise and presence. As a set, these items appear to characterize a person who is conscientious and who has high aspirations, an ability to set priorities, and an ability to act on these.

The thirteen items rated as most uncharacteristic of successful managers were: (100) Feels cheated and victimized by life, self-pitying; (99) Is self-defeating, acts in ways that frustrate, hurt, or undermine chances to get what s/he wants; (98) Is subtly negativistic, tends to undermine, obstruct, or sabotage other people; (97) Tends to blame others for own mistakes, failures, and shortcomings; (96) Is guileful, deceitful, manipulative, opportunistic, takes advantage of others; (95) Has a brittle ego defense system, has a small reserve of integration, would be disorganized or maladaptive under stress or trauma; (94) Has doubts about own adequacy as a person, appears to have feelings of inadequacy, either consciously or unconsciously; (93) Has hostility toward others; (92) Is generally fearful; is vulnerable to real or imagined threat; (91) Handles anxiety and conflicts by, in effect, refusing to recognize their presence; repressive or dissociative tendencies; (90) Genuinely submissive; accepts domination comfortably; (89) Is thin-skinned; (88) Feels a lack of meaning in life. The complete 100-item profile is displayed in Table 1. This profile represents a general description of the personality attributes of the "ideal" young manager. As such, it is generally consistent with other general prototypes of leader attributes (e.g. Lord, Foti, & De Vader, 1984).

Calculating Fit with the Ideal Manager Template

Overview. Data for the main study were collected during two time periods. Personality data were collected when respondents were in the first year of a 2-year, top-20 MBA program. Then, 3½ or 4½ years later (depending on which of the 2 years they initially participated in the study), a variety of career success indicators were collected with a "follow-up" survey. The first data collection was based on a 2.5-day personality and management assessment center. Of the original 93 participants, 83 (89%) were successfully contacted for the follow-up.

Subjects. Participants for the study were recruited from first-year classes in a highly regarded West Coast MBA program. The average age of the participants at the time personality was assessed was 27.12 (SD = 3.19). White and Asian students constituted 94% of the sample and 45.8% were female. The age and racial make-up of the sample were similar to that of the MBA program; however, the sample contained a slightly higher proportion of women than did the population of the program, which averaged approximately 36% women. There were no significant differences on any demographic and personality variables between participants we successfully contacted 3 to 4 years later and those who we were unable to contact for the follow-up.

Measures

Managerial personality fit. The assessment of managerial personality fit involved several steps. Personality data for each individual were collected during a 2½-day (Friday evening through Sunday afternoon) management assessment center. Participants were assessed in

TABLE 1
Ideal Manager Profile

Item No.	Item	Mean score (9 = most characteristic)
26.	Is productive, gets things done.	8.17
83.	Able to see to the heart of important problems.	8.05
71.	Has high aspiration of level for self.	7.91
2.	Is dependable and responsible.	7.86
70.	Behaves ethically.	7.78
52.	Behaves in an assertive fashion.	7.67
98.	Is verbally fluent; can express ideas well in words.	7.64
77.	Appears straightforward, forthright.	7.52
8.	Appears to have a high degree of intellectual capacity.	7.22
64.	Is socially perceptive of interpersonal cues.	7.07
60.	Has insight into own needs, motives, behavior.	7.02
28.	Tends to arouse liking and acceptance in people.	6.91
92.	Has social poise and presence.	6.88
29.	Is turned to or sought for advice and reassurance.	6.88
56.	Responds to and appreciates humor.	6.78
51.	Genuinely values intellectual and cognitive matters.	6.74
33.	Is calm, relaxed in manner.	6.67
17.	Behaves in a sympathetic and considerate manner.	6.60
54.	Is sociable, gregarious; emphasizes being with others.	6.50
32.	Seems to be aware of the impression s/he makes.	6.48
35.	Has warmth; compassionate.	6.45
15.	Is skilled in social techniques of imaginative play.	6.35
24.	Prides self on being rational, logical, objective.	6.33
3.	Has a wide range of interests.	6.24
84.	Is cheerful, happy.	6.22
88.	Is personally charming.	6.21
57.	Is an interesting, colorful person.	6.19
74.	Feels satisfied with self.	6.19
18.	Initiates humor; makes spontaneous funny remarks.	6.14
39.	Thinks and associates to ideas in unusual ways.	6.10
44.	Evaluates the motives of others.	6.09
96.	Values own independence and autonomy.	6.03
75.	Has a clear-cut personality.	5.95
5.	Is giving, generous toward others.	5.95
95.	Gives advice; concerns self with other people's business.	5.88
91.	Is power oriented; values power in self and others.	5.78
11.	Is protective of those close to him/her.	5.76
16.	Is introspective; thinks about self.	5.69
20.	Has a rapid personal tempo; is fast-paced.	5.67
43.	Is facially and/or gesturally expressive.	5.52
85.	Tends to communicate through actions, deeds.	5.50
81.	Is physically attractive.	5.47
21.	Arouses nurturant feelings in others.	5.29
89.	Compares self to others.	5.28
6.	Is fastidious; meticulous.	5.28
4.	Is a talkative person.	5.28

TABLE 1 *Continued*

Item No.	Item	Mean score (9 = most characteristic)
90.	Is concerned with philosophical problems.	5.22
66.	Enjoys aesthetic impressions; is aesthetically sensitive.	5.21
65.	Characteristically pushes and tries to stretch rules.	5.14
31.	Regards self as physically attractive.	5.07
93.	(a) Behaves in a masculine style or manner (for men).	
	(b) Behaves in a feminine style or manner (for women).	4.98
80.	Interested in members of the opposite sex.	4.95
100.	Does not vary roles; relates to everyone in the same way.	4.95
58.	Appears to enjoy sensuous experiences.	4.88
59.	Is concerned about own body.	4.86
7.	Favors conservative values in a variety of areas.	4.83
1.	Is critical, skeptical, not easily impressed.	4.72
41.	Is moralistic.	4.66
97.	Is an unemotional person; is emotionally bland.	4.43
63.	Judges self and others in conventional terms.	4.35
48.	Keeps people at a distance; avoids close relationships.	4.28
46.	Tends to fantasize, daydream.	4.14
67.	Is self-indulgent; tends to "spoil" himself or herself.	4.10
76.	Tends to project own feelings and motivations onto others.	4.09
62.	Tends to be rebellious and nonconforming.	3.98
19.	Seeks reassurance from others.	3.98
25.	Overcontrols needs and impulses.	3.93
99.	Is self-dramatizing; histrionic.	3.91
47.	Has a readiness to feel guilty.	3.83
9.	Is uncomfortable with uncertainty and complexity.	3.79
61.	Likes others to be dependent on him/her.	3.78
69.	Is quick to feel imposed upon.	3.76
73.	Tends to see sexual overtones in many situations.	3.69
82.	Has fluctuating moods; moods go up and down.	3.67
53.	Unable to delay gratification.	3.66
79.	Tends to ruminate and have preoccupying thoughts.	3.64
68.	Is basically anxious.	3.62
94.	Expresses hostility, angry feelings directly.	3.57
87.	Tends to interpret clear-cut situations in complicated ways.	3.48
50.	Is unpredictable and changeable in attitudes and behavior.	3.47
10.	Anxiety and stress find outlet in bodily symptoms.	3.43
12.	Tends to be self-defensive.	3.36
49.	Is basically distrustful of people in general.	3.33
42.	Reluctant to commit self to any definite course of action.	3.33
30.	Gives up in the face of adversity.	3.24
27.	Is condescending toward others; acts superior to others.	3.19
34.	Is irritable; overreacts to minor frustrations.	3.12
22.	Feels a lack of meaning in life.	3.12
13.	Is thin-skinned.	3.09
14.	Genuinely submissive; accepts domination comfortably.	3.07
86.	Repressive or dissociative tendencies.	2.90
40.	Is generally fearful.	2.88

TABLE 1 *Continued*

Item No.	Item	Mean score (9 = most characteristic)
38.	Has hostility toward others.	2.83
72.	Has doubts about own adequacy as a person.	2.76
45.	Has a brittle ego defense system.	2.62
37.	Is guileful, deceitful, manipulative, opportunistic.	2.57
23.	Tends to blame others for own mistakes.	2.53
36.	Is subtly negativistic.	2.41
55.	Is self-defeating.	2.22
78.	Feels cheated and victimized by life; self-pitying.	2.19

groups of 12 and each group spent a weekend interacting with an approximately equal number of trained assessors (Ph.D.'s in personality or social psychology). This extensive contact included a variety of situations such as structured exercises (e.g., leaderless group problems), in-depth interviews, meals, and other unstructured social interactions. Five assessors were designated to observe each participant over the entire 2½-day period. At the conclusion of the assessment, the observers independently rated each participant using the California Adult Q-Sort (Block, 1978). Thus, each participant was rated by five independent raters after 2½ days of observation. These results were statistically aggregated to form a single observers' personality profile (median reliability coefficient among the five raters for the set of participants' profiles was .79).

For each individual, the observers' aggregate personality profile was then correlated with the ideal manager profile described above. The correlation between the individual's personality profile and the ideal template was then used as the measure of managerial personality fit. Correlations ranged from $r = -.09$ to $r = .90$ with a mean correlation for the sample of $r = .63$ and a standard deviation of .22.

Our general hypothesis was that this correlation between individuals' personality profiles and the ideal template would be related to a number of outcomes. Assuming this hypothesis was supported, a secondary question was whether the relation between fit and the outcomes would be predictive across the entire range of fit scores or most relevant at particular levels of fit. Thus, we also examined the possibility of nonlinear effects of fit as an exploratory dimension of this study.

Career success. Previous research calls attention to the multidimensional nature of career success (e.g., Forbes & Piercy, 1991). For instance, early career success may be signaled as early as the initial interview process or through salary attainment or the rate of promotion (e.g., Dreher, Dougherty, & Whitely, 1985). To capture some of this multidimensionality, five outcomes were used as indicators of early success: selection interview success, current salary, salary increment or raises, number of jobs held during the period, and full-time employment status. Each is explained below.

(1) *Selection ratio.* Respondents reported the total number of interviews they completed and the total number of job offers they received during their initial job search while completing the MBA program. To insure accurate recall, these questions were included on a brief questionnaire distributed during the Spring following their graduation (rather than in the later follow-up survey). The selection ration ($x = .25$, $SD = .24$) was calculated as the number of offers ($x = 2.27$, $SD = 1.40$) divided by the number of initial interviews.

(2) *Current salary.* As part of the follow-up data collection, respondents were asked to report compensation for all jobs they had held since graduation from the MBA program.

Current salary was the amount respondents reported earning at the time at which they completed the follow-up survey ($x = \$64,770$, $SD = \$29,506$). As is typical in compensation research, the log of the current salary was used in order to prevent skewed results due to extreme values (e.g., Jensen & Murphy, 1990).

(3) *Salary increment.* Using the compensation data reported in the follow-up survey, the salary increment was computed by dividing the current salary by the salary received for the first position after graduation. This represents the total increase in salary over the time employed since graduation ($x = 1.37$ and $SD = .40$, or an average 37% increase).

(4) *Number of jobs.* To assess employment stability, respondents were asked to list all jobs held since graduation. The number of separate jobs held was aggregated for each respondent. These included lateral moves, promotions, and moves across firms ($x = 2.66$, $SD = 1.16$).

(5) *Work status.* As a final measure of career success, participants indicated whether they were fully employed, employed part-time, laid off, or unemployed. A dummy variable was constructed in which 0 represented "fully employed" and 1 represented "other." The full follow-up sample ($N = 83$) was included in the discriminant analysis of work status at time 2, while only those working full-time at time 2 ($N = 68$) were included in the regression analyses.

Control variables. A number of control variables were included in the analyses to rule out alternative explanations of variations in career success. Previous research has suggested that general cognitive ability may account for job performance (e.g., Ree & Earles, 1992; O'Reilly & Chatman, 1994). Therefore, a measure of general cognitive ability, indexed by total scores on the Graduate Management Aptitude Test (GMAT, $x = 626.48$, $SD = 65.03$) was included as a control. Sex (female = 1, male = 2), ethnicity (White and Asian = 0; other = 1), and age at time 1, in years, were also included in all analyses.

Although the initial data were collected at the same time in the respondent's MBA program, this was done using two cohorts (first participating class follow-up $N = 41$, the class graduating a year later follow-up $N = 42$). This meant that participants from the second cohort had been working for a year less than the earlier cohort at the time of the follow-up data collection. Therefore, a dummy variable for degree date (0 = earlier, 1 = later) was used as a control in all analyses to account for variations in outcomes such as number of jobs or compensation that could result from a longer time in the work force.

Other job-related control variables, such as years of previous work experience and grade-point average, were highly correlated with this set of controls, but were dropped from subsequent analyses because they did not change the results shown in Table 2.

RESULTS

The correlations among variables are shown in Table 2, and a few patterns are worth noting. First, there are only modest correlations among the dependent variables, suggesting that career success outcomes are multifaceted, not unidimensional, and that multiple indicators may be required to fully understand career success. Second, strong associations between managerial personality fit and the set of early career success outcomes exist. The only significant bivariate correlation is between fit and selection ratio ($r = .26$, $p < .05$), suggesting that subjects whose personality template was more highly correlated with the ideal managerial profile were more successful in the interviewing process. While not directly hypothesized, an interesting pattern emerges between the template fit and two demographic variables. Women and minorities had significant negative correlations ($r = .22$ and $r = -.31$,

TABLE 2
Correlations among Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Personality – fit											
2. GMAT	.29*										
3. Sex	-.22*	-.02									
4. Degree date	.10	-.03	-.02								
5. Age	-.03	.13	-.15	.02							
6. Ethnicity	-.31*	-.33*	.12	-.12	-.12						
7. Selection ratio	.26*	-.07	-.10	-.06	.07	-.13					
8. Log final salary	.13	-.15	-.01	-.14	-.17	.11	.10				
9. Salary increment	.11	-.17	.08	-.16	-.08	-.05	.20	.35*			
10. Number of jobs	-.09	-.21	-.05	-.25*	-.04	.15	.29*	.44*	.08		
11. Current work status	.07	-.05	-.21*	-.02	.03	-.02	-.11	-.18	-.11	-.09	
12. Organization fit	-.05	-.01	.12	.05	.03	.17	.08	.03	.05	.05	.02

* $p < .05$.

TABLE 3
Hierarchical Regression Results

Independent variables	Selection ratio 1	Log final salary 2	Salary increase 3	Number of jobs 4
1. GMAT	-0.14 ^a	-0.12	-0.22**	-0.19*
2. Sex	-0.07	-0.04	0.08	-0.07
3. Degree Date	-0.09	-0.13	-0.18*	-0.24**
4. Age	0.06	-0.15*	-0.05	-0.02
5. Ethnicity	-0.17	0.04	-0.16*	0.07
Change in R^2	0.05	0.07	0.08	0.11
Change in F	0.61	1.03	1.33	1.84*
6. Personality fit	0.31**	0.22**	0.21*	-0.01
Change in R^2	0.07	0.04	0.03	0.01
Change in F	4.89**	3.15**	2.67*	0.01
7. Personality fit ²	0.13	-0.66*	0.06	-0.68*
Change in R^2	0.01	0.03	0.01	0.03
Change in F	0.80	2.08	0.89	2.22
Overall F ratio	1.15	1.52*	1.34	1.64*
Overall R^2	.13	.14	.12	.15

^a Entries represent standardized coefficient.

* $p < .05$.

** $p < .01$.

$p < .05$), indicating that they fit the managerial ideal less well; a possible portent of future difficulties in fitting the ideal managerial profile. Also shown in Table 2 are several significant correlations among the control and outcome variables. For instance, subjects who graduated in the earlier cohort have had more jobs ($r = -.25$, $p < .05$) while women are less likely to be employed full-time at the time of the follow-up data collection ($r = -.21$, $p < .05$). The total number of jobs held is positively and significantly correlated with the log of the final salary ($r = .44$, $p < .05$), suggesting that changing jobs may lead to higher salaries either through promotion or changing employers or reflecting the fact that members of the earlier cohort have been in the labor market longer.

Table 3 presents the results of hierarchical regression analyses examining the relationships of personality fit and a set of early career success outcomes. To explore these, we investigate both linear and nonlinear effects of fit after controlling for a set of variables that previous research has shown to be related to career success. Models 1 through 4 in Table 3 examine the effects of personality fit on outcomes representative of early career success. Model 5 examines the effect of managerial personality fit on employment status at the time of the second data collection. Given the dichotomous nature of this variable, discriminant analysis was used.

As expected, a number of the control variables are related to career outcomes. For instance, graduates from the earlier cohort have received greater salary increments, and older students, who are likely to have more work experience, are earning more money. Although not shown in Table 3, other analyses show that minorities report lower levels of organizational fit at time 2 and women are less likely to be fully employed. Higher GMAT scores are associated with fewer job changes and lower than average salary increases. Consistent with previous research, the explanatory power of these control variables is quite modest.

Model 1 shows the results for managerial personality fit on success in the interview process, assessed as the number of job offers divided by the number of interviews, or the selection ratio. Fit with the managerial template has a positive association with the selection ratio, indicating that those subjects, who, in their first year of the MBA program, were rated by observers to be more like the managerial profile, received proportionately more job offers 1 year later. This suggests that interviewers are more likely to offer jobs to candidates who fit the ideal manager profile.

Models 2 and 3 show the relationships between personality fit and salary attainment 3½ or 4½ years after graduation. Fit is significantly and positively related to both the log of salary and the salary increment, assessed as the final salary attained less the starting salary. Being more like the managerial template is significantly associated with financial benefits 3½ or 4½ years after graduation. The beta coefficient for the log of final salary (.21) suggests that a one standard deviation improvement in fit is associated with a 21% increase in compensation, worth about \$14,250 when evaluated at the sample mean of \$64,770. Interestingly, there is also a negative nonlinear effect of fit on final salary, indicating that this effect diminishes at very high levels of fit.

Other indications of the effects of fit are visible in the measures of employment stability, assessed as the number of job changes and whether the person is still fully employed at time 2. While model 4 shows no direct effect of personality fit on the number of job changes, there is a significant nonlinear effect. Very high levels of fit are associated with fewer job changes. This is consistent with the notion that when individuals fit the job better they are less likely to move, either because they are successful or because they have more positive views of the job. A discriminant analysis of the subjects' work status showed a similar nonlinear effect. In this sense, fit may also be associated with the person being a more valued employee; hence, being more likely to remain employed. Although not reported in Table 3, respondents with higher levels of managerial personality fit also reported a higher probability estimate that they would achieve senior executive rank in the firm, and they reported higher levels of organization fit at time 2. Again, it is interesting

that the pattern of employment and affective reactions are related to an assessment of personality fit as measured years earlier.

Overall, these results support both the stability of individual characteristics, measured here with the CAQ, and the importance of the fit between an individual's personality and the managerial personality template, as described by independent managers.

ADDITIONAL ANALYSES

The results show that the fit of individuals' personality profiles to a general template are related to a number of measures of managerial success. But, these analyses leave unanswered the question of whether there are particular personality attributes that are related to early career success. We conducted three additional analyses, one examining the specific items relating to career success, a second showing portraits of more and less successful subjects, and the third analysis comparing the results of our managerial personality fit variable with personality scores that did not include assessments of fit. These three analyses were undertaken to gain a better understanding of the aspects of personality that are related to performance and of the importance of specifying situational or role demands.

Understanding the Specific Aspects of Fit That Predict Managerial Success

Previous research using the CAQ has relied on the top 13 and bottom 13 items (representing the number of items assigned to the top two and bottom two categories) to interpret and develop an understanding of the nature of an overall fit score (e.g., Block, 1978). Therefore, we completed another set of analyses using individual ratings only for the 26 items comprising the most characteristic and most uncharacteristic descriptors of the ideal young manager.

We began by recomputing the regressions shown in Table 3 substituting the ratings on the separate items for the fit score. Individuals are more likely to be successful in the job search process (selection ratio) if they are socially skilled [insight into own motives (No. 60), more likely to arouse liking (No. 28), socially perceptive (No. 64), see to the heart of problems (No. 83)] and honest [forthright (No. 77), ethical (No. 70), dependable (No. 2)]. People who are rated as more negative and angry [thin-skinned (No. 13), hostile (No. 38), negativistic (No. 36), self-defeating (No. 55), blame others (No. 23)] are significantly less successful in getting job offers. This fine-grained analysis illuminates the global finding that higher levels of fit with the managerial template are associated with success in the job search process. Not surprisingly, there seems to be a premium placed by recruiters on social and interpersonal insight and a penalty for those who are negativistic and hostile.

Results for the two salary variables are somewhat consistent. Controlling for a set of other variables that could explain salary increases over the 3½-to-4½-year period (e.g., experience, type of job), individuals who were rated as more poised (No. 92), socially perceptive (No. 64), and as having the ability to arouse liking in others (No. 28) received significantly larger increases. Those who were seen as unable to handle pressure [thin-skinned (No. 13), brittle ego defense system (No. 45)] and self-doubting (No. 72) or self-defeating (No. 55) received relatively lower salary increases over this period. Again, fit between the individual as rated by trained personality assessors and the managerial template as rated by a large set of observers is explained by a consideration of the individual personality items within the profile. While the control variables index more objective indicators of ability and performance (e.g., cognitive ability and human capital) people with a particular personality get larger raises than those with a different personality. The picture is weaker for final salary. Higher overall earnings are marginally associated with being sought out by others (No. 29) and negatively associated with being thin-skinned (No. 13), fearful (No. 40), and self-defeating (No. 55). Thus, the portrait is similar to that of salary increases but not as strong.

The number of jobs the individual held was also related to specific items. Individuals who were rated as having relatively lower aspirations (No. 71), lower verbal fluency (No. 98), and less insight into problems (No. 83) held more jobs. In addition, individuals who were relatively more submissive (No. 14), repressed (No. 86), and viewed as having higher feelings of victimization (No. 78) also reported holding more jobs. These results suggest that personality may influence the number of jobs a person holds in very different ways, for example, a large number of jobs may be associated with neurotic characteristics.

Finally, we conducted separate principal components analyses for the two sets of CAQ items to identify the underlying factor structure. Four factors emerged from the analysis of the highest 13 items. The first factor, which we labeled *conscientious/honest*, was defined by three items: dependable (No. 2), ethical (No. 70), and straightforward (No. 77). The descriptors sees to the heart of problems (No. 83), verbally fluent (No. 98), and has insight into own needs (No. 60) strongly load on the second factor that we labeled *insightful*. The third factor, *resourceful*, was defined by the items productive (No. 26), ambitious (No. 71), and assertive (No. 52). The final factor, which we called *sociable*, contained the items socially perceptive (No. 64), arouses liking in others (No. 28), and has social poise (No. 92).

Two factors defined the 13 most uncharacteristic items. The first factor, *insecure*, was defined by eight items including: feels victimized, cheated by life (No. 78); self defeating (No. 55); brittle ego defense system (No. 45); has doubts about own adequacy (No. 72); generally fearful (No. 40); handles

anxiety with denial (No. 86); thin-skinned (No. 13); and feels a lack of meaning in life (No. 22). The remaining five items all load on a factor we label as *negative toward others*.

This analysis further illuminates how matching particular aspects of the ideal personality template relates to early career performance. For example, final salary is negatively related to the insecure factor. Salary increases are associated with being more sociable and less insecure. Although items related to the other dependent variables load less consistently on a single factor these results appear interpretable.

PORTRAIT REPORTS

The results reported thus far show that the fit of a person's personality to an idealized profile is related to a wide range of work related dependent variables. These findings support the contention that nomothetic differences between people in terms of fit to a situation predict an individuals' responses in that situation. However, semi-idiographic methods, such as profile comparisons, also allow for the development of a more fine-grained understanding of the pattern of traits possessed by individuals who both fit the job profile and are successful in the role or situation. Combining a clinical portrait, one that describes the relative importance of traits within the comprehensive structure of personality, with nomothetic results provides a richer and more comprehensive understanding of how personality might influence behavior than can nomothetic or idiographic techniques alone.

To create a clinical portrait and thereby develop a more detailed understanding of how specific items of the ideal successful young manager influenced career success, we dichotomized scores on each respondents fit with the ideal profile and the dependent variables and constructed separate two-by-two tables for each dependent variable. Each table divided the sample into four groups. Group 1, or true-positives, contains those individuals who had high fit scores and were high on the dependent variable; that is, those individuals were predicted to perform well and did. Group 2 contains those individuals with high fit scores who performed below the median. These individuals could be termed false-positives in that they were predicted to perform well but did not. Group 3, or true-negatives, contains individuals who, because of their relatively low fit scores, were predicted to perform poorly and did. The final group (Group 4), false-negatives, contains individuals with low fit scores who performed well.

We divided the sample this way in order to compare the relative importance of the traits to one another within each group. Since our intent is to develop a more clinical understanding of how specific traits contribute to fit and performance, we compared differences between true-positives (Group 1) and true-negatives (Group 3). This is the most direct comparison, as it allowed us to identify the relative importance of specific traits in contributing

to fit. Although we used statistical techniques to identify differences between the two groups, our intent was to identify patterns of traits that contribute to broad measures of success. Therefore, we report results of the most important and least important traits for selection ratio, salary, and the individual's current work status. Together, these three dependent variables represent a wide range of work outcomes that are influenced by managerial personality fit.

Selection Ratio

We first compared differences between individuals who were predicted to receive many job offers and did and those who were predicted to and actually received fewer offers. These two groups differed significantly on 31 of the 100 CAQ items. Table 4 identifies the significant differences between the true-positive and true-negative groups on the 13 items rated most characteristic and the 13 items rated least characteristic of the ideal manager.

As Table 4 shows, the true-positive group scored higher than the true-negative group on 9 of the 13 highest rated traits. Two of the highest rated traits were related to success in getting job offers but not to the other dependent variables. These two items, the ability to see to the heart of problems and the appearance of intellectual capacity, are likely to be particularly salient during job interviews. A similar pattern existed among the lowest rated items from the ideal manager profile. Two traits that are particularly apparent during interviews, a tendency to blame others and the handling of anxiety by repression, differentiated the two groups on job offers but not on the other dependent variables. Many of the remaining items upon which the groups differed described aspects of self-presentation such as a tendency to arouse liking, a calm and relaxed manner, warmth, anxiousness, irritability, and self-defensiveness.

Salary

Somewhat similar results to those previously described for selection success were found for an analysis of fit and the log of the salary received.³ Overall, there were significant differences between the two groups on 40 of the 100 CAQ traits including seven of the 13 most characteristic items from the ideal profile and 9 of the least characteristic items. First, there was no difference between the groups in terms of high aspirations, assertiveness, ability to express oneself verbally, and apparent intellectual capacity, all items rated highly in the ideal profile and broadly descriptive of MBAs. Differences were evident, however, on the highly rated traits of productive, dependable, ethical, straightforward, and social poise. The true-positive group was significantly lower than the true-negative group on a number of

³ Salary increment and the log of respondents' salary showed identical findings in this analysis. Therefore, we present the log of salary in Table 4.

TABLE 4

Significant Differences between True-Positive and True-Negative Groups on the Top 13 and Bottom 13 Traits of the Ideal Manager

	Selection ratio	Salary (log)	Work status
Top 13 items			
1. Is productive, gets things done. ^a	x	x	
2. Is able to see to the heart of important problems; does not get caught up in irrelevant details	x		
3. Has high aspiration of level for self; is ambitious; sets high personal goals.			
4. Is dependable and responsible.	x	x	x
5. Behaves ethically; has a personal value system and is faithful to it.		x	x
6. Behaves in an assertive fashion; not afraid to express opinions; speaks up to get what s/he wants.			
7. Is verbally fluent; can express ideas well in words.			
8. Appears straightforward, forthright, candid in dealing with others.	x	x	x
9. Appears to have a high degree of intellectual capacity.	x		
10. Is socially perceptive of a wide range of interpersonal cues.	x	x	x
11. Has insight into own needs, motives, and behaviors.	x		x
12. Tends to arouse liking and acceptance in people.	x	x	x
13. Has social poise and presence.	x	x	x
Bottom 13 items			
100. Feels cheated and victimized by life; self-pitying.	x	x	x
99. Is self-defeating; acts in ways that frustrate, hurt or undermine chances to get what s/he wants.		x	x
98. Is subtly negativistic; tends to undermine, obstruct, or sabotage other people.	x	x	x
97. Tends to blame others for own mistakes, failures, and shortcomings.	x		
96. Is guileful, deceitful, manipulative, opportunistic; takes advantage of others.	x		x
95. Has brittle ego defense system; has a small reserve of integration would be disorganized or maladaptive under stress or trauma.	x	x	x
94. Has doubts about own adequacy as a person; appears to have feelings of inadequacy, either consciously or unconsciously.			x
93. Has hostility toward others.	x	x	x
92. Is generally fearful; is vulnerable to real or imagined threat.		x	x
91. Handles anxiety and conflicts by, in effect, refusing to recognize their presence; repressive or dissociative tendencies.			x
90. Genuinely submissive; accepts domination comfortably.			
89. Is thin-skinned.	x	x	
88. Feels a lack of meaning in life.	x	x	x

^a An "x" indicates a significant difference ($p < .05$) between the true-positive and true-negative groups. For the top 13 items, in all cases the true-positive group has a higher score than the true-negative group. For the bottom 13 items, in all cases the true-positive group had a lower score than the true-negative group.

maladaptive traits including feeling cheated by life, self-defeating, negativism, guilefulness, hostility, fearfulness, and having a brittle ego defense system. Many of the other items differentiating these two groups fell into two broad categories: A number of items represented traits generally related to social skills such as a tendency to arouse liking, sociability, and warmth. Another set of traits related to self-awareness, including characteristics such as awareness of the impression one makes, insight into one's motives, and social perception.

Work Status

Individuals who were predicted to continue to work full-time and did differed from those with low fit scores who did not continue to work on 31 on the CAQ traits. As shown in Table 4, the two groups differed on seven of the top 13 items and 9 of the lowest rated items. Six of the 7 highly rated items overlapped with those differentiating the two groups on level of salary increase. One of the low rated traits, doubts about one's own adequacy, differentiated the true-positive and false-positive groups on work status but not the other dependent variables and appears consistent with a change in job status. The remaining items that differentiated the two groups covered a wide range of traits. Many of these traits relate to having clear sense of direction (e.g., feels a lack of meaning in life; has insight into own needs, motives, and behavior; has a clear cut personality) or to a positive, friendly manner (e.g., social poise and presence; personal charm; cheerful; warmth; and a tendency to arouse liking).

In sum, comparing individuals who were predicted to do well and did with those who were predicted to do less well and did relatively poorly provides additional insight into how overall managerial personality fit influences performance. By looking at three dependent variables, one related to effectiveness in interviewing, one related to a broad index of performance, and one to continuation of full-time employment, we are able to draw conclusions across a wide range of work outcomes. As Table 4 shows, some traits that are very characteristic of the ideal manager were related to all three outcome variables including dependability, straightforwardness, social perception, and an ability to arouse liking in others. Other highly rated traits were related to only one or two aspects of performance. The same pattern existed for the traits that were uncharacteristic of an ideal manager. Feeling cheated, negativistic, hostile, or purposeless and having a brittle defense system differentiated between the groups on all three variables. The other very uncharacteristic items were related to one or two of the dependent variables. In addition, each of the dependent variables had some set of unique traits associated with it. What these results suggest is that while overall fit is associated with a wide variety of work outcomes, some traits are directly related to particular kinds of success. For example, possessing some traits may lead

to the ability to get more job offers. A different set of traits may contribute to success within the organization. Although not reported here, other analyses comparing true- and false-positives and- negatives showed similar patterns.

Overall, these results offer a fine-grained understanding of how personality effects managerial success. That is, one benefit of the portrait analysis is that it highlights the specific traits and accompanying behaviors that differentiate between those who are more or less successful in their careers. Further, this analysis is able to identify the traits that must be relatively higher or lower compared to other traits for a person to be successful. For instance, a person must both be highly dependable and responsible and not be self-pitying or hostile toward others to get more job offers, earn a higher salary, and work full-time continuously. Thus, it is the relative combination or profile of these traits that leads to greater success in the particular role.

USING PERSONALITY SCORES WITHOUT FIT TO PREDICT MANAGERIAL SUCCESS

The central argument in this article is that semi-idiographic assessments that account for individual and situational variations can increase our understanding of the relationship between personality and performance in organizations by providing both comparative (normative) information and information about the unique (idiographic) patterning of a broad array of personality characteristics that are explicitly compared to the characteristics demanded in the role or situation. One way of testing this claim is to compare the semi-idiographic measure, consisting of the match between participants' personality profile on the CAQ and the ideal young manager template, to a standard personality measure in predicting early career success. Because of the increasing emphasis on the Big Five dimensions in personality research, we used the CAQ items to create scale scores on each of these dimensions (neuroticism, extroversion, openness, agreeableness, and conscientiousness) based on the factor analysis results reported by McCrae, Costa, and Busch (1986). The five scales were constructed by summing the items with high factor loadings (greater than .30). Overall, the reliability coefficients of the five scales were quite high, ranging from .80 for the conscientiousness scale to .95 for the agreeableness scale. These scale scores were then related to the dependent variables. Identical hierarchical regression equations to those presented in Table 3 were analyzed for each of the dependent variables, except that in the second step the fit score was replaced with the Big-Five scores. None of these equations explained significant variance in the dependent variables. In addition, none of the individual beta weights were significant and they were lower than the beta weights for the fit variable. This suggests that personality dimensions, independent of fit, were not related to subsequent work outcomes.

DISCUSSION

The results presented in this study provide support for our prediction that individuals' who were more similar to an ideal managerial personality template would be more successful during the early part of their career. Specifically, the MBA graduates whose personalities were more similar to the ideal young manager personality template were more successful in getting job offers initially, and 3½ or 4½ years out of school (4½ or 5½ years after being assessed initially) were earning higher salaries, were more likely to be working full-time, and had changed jobs and organizations less often than those who fit the managerial template less well. Taken together with the lack of significant associations between personality as assessed by the Big Five and career success reported in our additional analysis, these results underscore the importance of considering persons in relevant, ecologically valid contexts in order to understand and predict their behavior. It also supports the continued exploration of theories and methods that systematically, comprehensively, and simultaneously consider relevant personal and situational characteristics.

On the personal side, much recent research has focused on the Big Five personality dimensions as predictors of performance in particular jobs (e.g., Barrick & Mount, 1991, 1993). Although the results of these studies have been modest, they are widely cited in the organizational literature as evidence for the importance of personality. Our results suggest that this stream of research may be enriched if more explicit attention is paid to situational demands and the idiographic structure of individuals' personalities.

For instance, it may be possible to describe jobs or organizations in terms of the configuration of Big Five attributes required for successful performance. As suggested earlier, conscientiousness may be more salient in some jobs (e.g., accounting) while openness is required in others (e.g., research and development). However, since most jobs are complex, attention should be paid to the pattern or profile of these personality dimensions as they reflect job demands. To understand how personality attributes may advantage or disadvantage an incumbent requires a careful understanding of how the situational demands translate into behaviors indexed by personality attributes (e.g., Buss & Craik, 1983). This, in turn, suggests the need for a person-centered strategy that allows researchers to consider the personality profile of the person as it relates to the situation.

Our research also supports efforts to examine situations in terms of the constraints they place on individuals and the extent to which these constraints affect the relationship between personality and behavior (e.g., Zuckerman et al., 1988). In this regard, our results add support to the growing body of evidence showing that stable personality characteristics predict behavior in certain conditions (e.g., Wright & Mischel, 1987). Just as there is convincing

evidence attesting to the stability of personality over time (e.g., Conley, 1984), it is likely that situational demands may also be relatively stable. Given this, little imagination is required to envision that some situations may facilitate or inhibit the manifestations of particular behaviors depending on attributes of the individual. Such interactions may be associated with success or failure in organizational settings. This implies that predispositions to behave in particular ways should not be summarily dismissed as "just a mirage" (Davis-Blake & Pfeffer, 1989).

The use of the CAQ in this study illustrates the importance of employing a semi-idiographic approach to studying person and situation characteristics. To understand how a particular individual is likely to behave in a particular situation, assessments need to capture the array and relevance of the characteristics of both. Thus, identifying individuals who score high on a Likert-type rating scale of, for example, cooperation and then trying to predict their subsequent cooperative behaviors is incomplete and unlikely to predict cooperativeness. We must also determine whether cooperation is a salient part of a person's personality (an idiographic assessment), especially with respect to other important attributes. If cooperation is not a particularly relevant trait that characterizes the individual, knowledge of the person's score is not likely to predict his or her behavior. Similarly, if the situation hinders the expression of cooperative behaviors, it is unlikely that knowledge of a person's predispositions to behave will be of much use. It is only when both sides are known that accurate predictions are likely. The CAQ, with the large number of descriptors, permits a wide range of personality types and situational demands to be described and seems a particularly useful instrument to capture this complexity.

Although our findings generally support the hypothesis that personality-job fit is important, the amount of variance accounted for by the match between the MBA's personality and the managerial personality template is relatively modest. A variety of reasons may account for this. First, our independent and dependent measures are quite distant from each other in a variety of ways: personality was assessed 4 to 5 years earlier than the outcome variables; the personality profiles and the managerial personality template were created by multiple independent rates such that any errors in assessment accuracy or changes in the person's characteristics should diminish the strength of the findings; the methods used to collect the independent and dependent variables were quite distinct; and fit with an ideal personality template is conceptually quite distant from specific measures of career success (e.g., Staw, 1984). In addition, the sample of subjects, MBA students at a major university, was selected for their general managerial interests and aptitudes. This should restrict the range in the sample and make detection of effects more difficult. Further, although attempts were made to control for other variables that could affect career success, such as time on the job or

cognitive ability, other variables beyond those assessed here may account for relative career success (e.g., Pfeffer, 1977). Thus, the results reported here are seen as encouraging evidence for the relevance of personality in understanding managerial performance.

Despite these constraints, the magnitude of the results generated here compare favorably with past research linking personality and behavior. Researchers have often lamented the relatively low explanatory power offered by personality traits (e.g., Weiss & Adler, 1984). Since at least the 1960s, it has been claimed that correlations between scores on trait measures and behaviors rarely exceed about .2, which translates into about 4% of the variance in behavioral measures (e.g., Guion & Gottier, 1965). And even in the 1990s, using the Big Five personality dimensions to predict job performance has not substantially improved this estimate. For example, Barrick and Mount (1993) explained 4 and 2% of the variance in job performance based on conscientiousness and extraversion, respectively.

But, the predictive power of personality characteristics increases as researchers have used multiple sources and comprehensive measures of personality, such as those employed in assessment centers (e.g., Zedeck, 1986), and as situational demands are taken into account. For example, Caldwell and O'Reilly (1982) were able to explain 7% of the variance in job performance in boundary-spanning jobs from respondents' levels of self-monitoring. Based on the results in the present study, we suggest that simultaneously including a broad array of traits, assessing their relative importance within individuals, and considering the relevance of those traits for the particular situation will enable us to better understand and explain the relationship between personality and behavior. In this study, for example, we explain between 4 and 8% of the variance in career success variables with the managerial-personality fit variable and between 12 and 15% of the variance in these outcomes with our overall models.

Several additional steps may build on these findings. First, previous research has shown that fit with the specific competencies of a job, as well as the culture of the organization, are associated with performance (Caldwell & O'Reilly, 1990; Chatman, 1991). Neither of these aspects of fit was accounted for in this study. It seems likely that real success will be a function of the individual fitting the specific job, the specific organization, and having the personality required by the situation. For example, it may be that respondents who had the requisite managerial personality fit may not have been a good match for the organization and were, therefore, comparatively unsuccessful (e.g., O'Reilly et al., 1991). Future research should account for multiple fits simultaneously.

Second, the managerial personality template was developed to cover a wide range of positions held by new managers. It may be desirable to consider personality profiles focused on a narrower range of jobs. The present

profile was applied to all entry-level jobs held by graduate MBAs. Clearly, some jobs are likely to require a different configuration of personality attributes than others. For example, on the face of it, managerial jobs in a highly technical organization are likely to require a different personality profile than a job in a routine service environment. Developing more specific personality templates for different jobs in different industries is likely to increase the predictive accuracy of fit.

The traditional approach to studying persons and situations has emphasized nomothetic designs. But, much of a person's thoughts, feelings, and resulting behavior is idiographic and dependent on the situation. Therefore, useful theory building and hypothesis testing requires a semi-idiographic approach that accounts for the complexity of personality and the demands of the situation. With more fine-grained job templates and considerations of other types of fit and person-situation interactions, it seems reasonable that researchers will be able to improve the accuracy with which individuals can be successfully advised, selected, and assigned to careers, organizations, and jobs. Overall, our findings are consistent with an interpretation of personality as a stable construct and emphasize the importance of taking an interactional approach to understanding person-behavior relationships.

REFERENCES

- Baehr, M. E. (1992). *Predicting success in higher level positions*. New York: Quorum
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, **44**, 1-26.
- Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationship between the Big Five personality dimensions and job performance. *Journal of Applied Psychology*, **78**, 111-118.
- Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, **78**, 715-722.
- Bartko, J. J. (1966). The intraclass correlation coefficient as a measure of reliability. *Psychological Reports*, **19**, 3-11.
- Bass, B. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bem, D. J., & Funder, D. C. (1978). Predicting more of the people more of the time: Assessing the personality of situations. *Psychological Review*, **85**, 485-501.
- Block, J. H. (1978). *The Q-sort method in personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologist Press.
- Block, J. H. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, **117**(2), 187-215.
- Buss, D., & Craik, K. (1983). The act frequency approach to personality. *Journal of Personality and Social Psychology*, **40**, 105-126.
- Caldwell, D. F., & Burger, J. (1997). Personality and social influence strategies in the workplace. *Personality and Social Psychology Bulletin*, **23**, 1003-1012.
- Caldwell, D. F., & O'Reilly, C. A. (1982). Boundary spanning and individual performance. *Journal of Applied Psychology*, **67**, 124-127.

- Caldwell, D. F., & O'Reilly, C. A. (1990). Measuring person–job fit using a profile comparison process. *Journal of Applied Psychology*, **75**, 648–657.
- Carroll, S. J., & Gillen, D. J. (1987). Are the classical management functions useful in describing managerial work? *Academy of Management Review*, **12**, 38–51.
- Chatman, J. A. (1991). Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly*, **36**, 459–484.
- Chatman, J. A., & Barsade, S. G. (1995). Personality, culture, and cooperation: Evidence from a business simulation. *Administrative Science Quarterly*, **40**, 423–443.
- Conley, J. J. (1984). Longitudinal consistency of adult personality: Self-reported psychological characteristics across 45 years. *Journal of Personality and Social Psychology*, **47**, 1325–1333.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, **78**, 98–104.
- Davis-Blake, A., & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects organizational research. *Academy of Management Review*, **14**, 385–400.
- Dreher, G. F., Dougherty, T. W., & Whitely, B. (1985). Generalizability of MBA degree and socioeconomic effects on business school graduates' salaries. *Journal of Applied Psychology*, **70**, 769–773.
- Edwards, J. R. (1995). Alternatives to difference scores as dependent variables in the study of congruence in organizational research. *Organizational Behavior and Human Decision Processes*, **64**, 307–324.
- Forbes, J. B. & Piercy, J. E. (1991). *Corporate mobility and paths to the top*. New York: Quorum.
- Funder, D. C. (1982). On assessing social psychological theories through the study of individual differences: Template matching and forced compliance. *Journal of Personality and Social Psychology*, **43**, 100–110.
- Funder, D. C., & Colvin, R. (1991). Explorations in behavioral consistency: Properties of persons, situations, and behaviors. *Journal of Personality and Social Psychology*, **60**, 773–794.
- Guion, R., & Gottier, R. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, **18**, 135–164.
- Harrison, J. R., & Carroll, G. R. (1991). Keeping the faith: A model of cultural transmission in formal organizations. *Administrative Science Quarterly*, **36**, 552–582.
- Hogan, R., Hogan, J., & Roberts, B. (1996). Personality measurement and employment decisions. *American Psychologist*, **51**, 469–477.
- Hogan, J., & Ones, D. S. (1997). Conscientiousness and integrity at work. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 849–870). San Diego: Academic Press.
- Howard, A. (1986). College experiences and managerial performance. *Journal of Applied Psychology*, **61**, 410–418.
- Howard, A. & Bray, D. W. (1988). *Managerial lives in transition: Advancing age and changing times*. New York: Guilford.
- Howard, G. S., & Myers, P. R. (1990). Predicting human behavior: Comparing idiographic, nomothetic, and agentic methodologies. *Journal of Counseling Psychology*, **37**, 227–233.
- Jackson, D. N., Peacock, A. C., & Holden, R. R. (1982). Professional interviewers' trait inferential structures for diverse occupational groups. *Organizational Behavior and Human Performance*, **29**, 1–20.

- Jensen, M., & Murphy, K. (1990). Performance, pay, and top management incentives. *Journal of Political Economy*, **98**, 225–264.
- John, O. P. (1990). The “Big Five” factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin, (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). New York: Guilford.
- Jonas, H. S., Fry, R. E., & Srivasta, S. (1990). The office of the CEO: Understanding the executive experience. *Academy of Management Executive*, **4**, 36–48.
- Joyce, W., Slocum, J. W., & Von Glinow, M. A. (1982). Person–situation interaction: Competing models of fit. *Journal of Occupational Behaviour*, **3**, 265–280.
- Kluckhohn, C., Murray, H. A., & Schneider, D. M. (1953). *Personality in nature, society and culture* (2nd ed.). New York: Knopf.
- Lamiell, J. T. (1981). Toward an idiothetic psychology of personality. *American Psychologist*, **36**, 276–289.
- Lord, R. G., Foti, R. J., & de Vader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, **34**, 343–378.
- Markus, H. R. (1977). Self-schemata and process information about the self. *Journal of Personality and Social Psychology*, **34**, 63–78.
- McClelland, D. C., & Boyatzis, R. E. (1982). Leadership motive pattern and long-term success in management. *Journal of Applied Psychology*, **67**, 737–743.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, **52**, 81–90.
- McCrae, R. R., & Costa, P. T., & Busch, C. M. (1986). Evaluating comprehensiveness in personality systems: The California Q-Set and the five-factor model. *Journal of Personality*, **54**, 430–446.
- Mintzberg, Henry. (1973). *The nature of managerial work*. Englewood Cliffs, NJ: Prentice-Hall.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Monson, T. C., Hesley, J. W., & Chernick, L. (1982). Specifying when personality traits can and cannot predict behavior: An alternative to abandoning the attempt to predict single-act criteria. *Journal of Personality and Social Psychology*, **43**, 385–399.
- Ones, D. S., Viswesvaran, C., & Schmidt, F. L. (1993). Comprehensive meta-analysis of integrity test validities: Findings and implications for personnel selection and theories of job performance. *Journal of Applied Psychology*, **78**, 679–703.
- O'Reilly, C. A., & Chatman, J. A. (1994). Working smarter and harder: A longitudinal study of managerial success. *Administrative Science Quarterly*, **39**, 603–627.
- O'Reilly, C. A., III, Chatman, J. A., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, **14**, 487–516.
- Pelham, B. W. (1993). On the highly positive thoughts of the highly depressed. In R. F. Baumeister (Ed.), *Plenum Series in Social/Clinical Psychology: Self-esteem: The Puzzle of low self-regard* (pp. 183–199). New York: Plenum.
- Pfeffer, J. (1977). Effects of an MBA and socioeconomic origins on business school graduates' salaries. *Journal of Applied Psychology*, **62**, 698–705.
- Phillips, J. S., & Lord, R. G. (1981). Causal attributions and perceptions of leadership. *Organizational Behavior and Human Performance*, **28**, 143–163.

- Ree, M. J., & Earles, J. A. (1992). Intelligence is the best predictor of job performance. *Current Directions in Psychological Science*, **1**, 86–89.
- Rothstein, M., & Jackson, D. N. (1980). Decision-making in the employment interview: An experimental approach. *Journal of Applied Psychology*, **65**, 271–283.
- Schein, E. H. (1983). The role of the founder in creating organizational culture. *Organizational Dynamics*, **12**(1), 13–28.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, **40**, 437–453.
- Silverstein, A. B. (1988). An Aristotelian resolution of the idiographic versus nomothetic tension. *American Psychologist*, **43**, 425–430.
- Staw, B. M. (1984). Organizational behavior: A review and reformulation of the field's outcome variables. *Annual Review of Psychology*, **35**, 627–666.
- Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, **31**, 56–77.
- Stephenson, W. (1980). Newton's fifth rule and Q-methodology. *American Psychologist*, **35**, 882–889.
- Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology*, **67**, 737–743.
- Tornow, W., & Pinto, P. (1976). The development of a managerial job taxonomy: A system for describing, classifying, and evaluating executive positions. *Journal of Applied Psychology*, **61**, 410–418.
- Weiss, H., & Adler, S. (1984). Personality and organizational behavior. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior*, (Vol. 6, pp. 1–50). Greenwich, CT: JAI Press.
- Wright, J., & Mischel, W. (1987). A conditional approach to dispositional constructs: The local predictability of social behavior. *Journal of Personality and Social Psychology*, **53**, 1159–1177.
- Zedeck, S. (1986). A process analysis of the assessment center method. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior* (Vol. 8, pp. 259–296). Greenwich, CT: JAI Press.
- Zuckerman, M., Koestner, R., DeBoy, T., Garcia, T., Maresca, B., & Sartoris, J. (1988). To predict some of the people some of the time: A reexamination of the moderator variable approach in personality theory. *Journal of Personality and Social Psychology*, **54**, 1006–1019.