Personality and Work Behaviour

Ivan Robertson and Militza Callinan

SHL/UMIST Research Centre in Work and Organisational Psychology, Manchester School of Management, UK

Interest in the role of personality in organizational behaviour has increased over recent years. To a large extent this is due to the emergence of the "Big Five" as a valid and reasonably generalizable taxonomy for personality structure. As far as individual work performance is concerned, several meta-analytic studies have explored the criterion-related validity of personality and shown that personality variables are associated with overall job proficiency. These developments are evaluated in the light of a broader theoretical framework and recent empirical results. Overall job proficiency is divided into two components: task performance and contextual performance. Studies on individual and group performance, and leader effectiveness, are presented to show that personality factors are more closely related to contextual performance. Research linking personality with job and work attitudes (e.g. job satisfaction) is also reviewed. The achievements and limitations of research so far are highlighted and suggestions for a new research agenda are put forward.

INTRODUCTION

This article looks at the role that personality plays in work behaviour. Although psychologists have identified a variety of different approaches to personality, only one approach, trait factor-analytic theory, has had a significant impact on the field of industrial and organizational psychology. This approach takes traits derived by factor analysis as the fundamental building blocks of personality. A personality trait provides a person with a predisposition to behave in a certain way. Collections of personality traits are organized in a structured hierarchy. For example, in the model developed by Eysenck (Eysenck & Eysenck, 1985), specific behaviours are linked through habits to underlying fundamental differences in personality type, such as extraversion or neuroticism.

At some stages in the history of personality psychology there has been a bewildering number of different personality traits and theories all using trait-based terminology and ideas contributing to a general diversity of approach and lack of coherence.

For many years the best known approaches within trait factor-analytic theory were those of Cattell (Cattell & Kline, 1977) and Eysenck. Cattell developed the 16 personality factor (16PF) questionnaire and identified 16 key personality dimensions, which he felt, with some empirical justification, accounted for the variance in individual differences between people. Eysenck operated at a more fundamental level and identified initially two (extraversion and neuroticism) and later three or four underlying personality factors.

More recently a significant degree of convergence has taken place within trait factor-analytic psychology and five key traits, known as the "big five", have been identified as the major factors underlying human individual differences in personality. In shorthand terms, the big five are described as conscientiousness, neuroticism, extraversion, agreeableness, and openness. Substantial evidence exists that the big five structure is consistent across various national groups. For example, MacCrae and Costa (1997) reported results comparing six diverse samples (German, Portuguese, Hebrew, Chinese, Korean, and Japanese) showing substantial similarity in big five structure with a large American sample. This and other evidence suggests very strongly that the big five structure is a useful general framework although, as MacCrae and Costa themselves acknowledge, this may be limited to modern, literate, industrialized cultures—like the seven mentioned in their study.

It should also be noted that there are competing frameworks—such as the "big three" (neuroticism, extraversion, and psychoticism)—and the more pragmatic "big nine" (Hough, 1992).

The emergence of the big five provides both a clear conceptual framework, based on a great deal of underlying research, and a correspondingly clear measurement framework. This has coincided with a resurgence of interest within industrial/organizational psychology on the role that personality might play at work.

Trait factor-analytic theory clearly implies that personality characteristics are the root causes of behaviour. Furthermore it implies that there is stability in personality characteristics across time and that once early adulthood is reached there is relatively little change in personality. Consistency across situations is also expected. In other words, a person's personality profile will provide predictions about his or her behaviour across a variety of different situations.

Even though it is clear that trait factor-analytic theorists view personality traits as key determinants of behaviour, it is important to stress that they recognize that underlying traits are *not* the only influence on behaviour. The situations that people are in also play a role. For example, a person who is high on extraversion (no pun intended!) will behave in a different way at a party compared with how he or she would behave at a cinema. Even people who are extremely conscientious will occasionally miss deadlines because other things arise, which mean that they simply do not have the time to put the work in to deliver on time. In other words, how we behave is a function of consistent individual differences in our personality, but it is also a function of the situations in which we find

ourselves. For most of the time the most important features of the situations are other people. In other words, we are influenced by our own personality characteristics and we are influenced by situations—mostly composed of other people.

Of course, situations that arise do not arise by chance. For the most part, we have some degree of choice about where we go, what we do, and with whom we interact. Our behaviour has some impact on the situation we are in.

Continuing this line of argument leads to a position where three key sets of variables, behaviour, personal qualities, and situations, interact in a mutually reciprocating way. This is the concept of reciprocal determinism developed by Bandura (1986), which provides a clear indication of the proper context to use for thinking about the influence of personality variables.

PERSONALITY AND WORK

What role might personality play in working life and in the behaviour of individuals at work? In considering the role of personality in working life, attention can be focused at the level of individual behaviour, the dyadic interaction between two people, and on people's contributions to teams, groups, or larger work units. The latter more macro issues are increasingly important in the work place.

One of the key issues that is addressed in this article is people's performance and/or effectiveness at work. When considering the extent to which personality might influence work performance, several types of variables are relevant. Clearly, there are performance-related variables, such as productivity or overall job proficiency, but there are also variables to do with job and work attitudes, such as commitment to the organization or commitment to a career, job satisfaction, stress, and general life satisfaction and adjustment. Here again it seems probable that personality may have some role to play in determining many of these variables.

A final area where personality might be expected to have some significant impact concerns the choices that people make about the sort of work they do. This area will not be dealt with in this article. Historically, much of the work within industrial/organizational psychology on vocational and organizational choice has focused on attitudes rather than personality, although it does seem likely that personality has a significant role to play in occupational choice.

RESEARCH EVIDENCE

As far as performance is concerned, there is a long history of work on the extent to which personality is related to work performance.

The individual difference variable that has received most research attention is of course intelligence, otherwise known as general mental ability or "g". There is a strong and impressive line of research showing quite clearly that general mental ability is related to performance across a range of occupational areas. In general

terms, as far as performance is concerned, higher levels of general mental ability will produce correspondingly higher levels of performance (see Ree, Earle, & Teachout, 1994).

For personality such a straightforward relationship appears to be less likely. First, of course, personality is not a unified concept as is general mental ability. Personality covers a diverse set of traits, each of which will be expected to influence different aspects of behaviour.

Personality and Work Performance

The resurgence of interest in personality at work began in the early 1980s. Since then a very wide range of individual studies have been conducted to reveal links between personality and work performance. Illustrative examples of the diversity of jobs covered are: a study of impatience and irritability in astronauts (Rose, Fogg, Helmreich, & McFadden, 1994); self monitoring and rigidity in sales personnel (Verbeke, 1994); and dimensions of the California Psychological Inventory in anaesthetists (Gough, Bradley, & McDonald, 1991).

These studies concentrate on criteria relating to work performance. Studies have also shown links between personality and other criterion variables such as training proficiency (e.g. Driskell, Hogan, Salas, & Hoskin, 1994) and turnover (Barrick & Mount, 1996).

In one of the earliest articles to review all of the available research on personality and work performance, Schmitt, Gooding, Noe, and Kirsch (1984) investigated the overall validity to be derived from a mixed set of personality variables. Schmitt and his colleagues produced a validity coefficient of 0.149 for personality in general. They identified all of the studies that focused on links between personality and work performance, took all of the coefficients from these studies, and, using the techniques of meta-analysis developed by Schmidt and Hunter (Hunter & Schmidt, 1990; Hunter, Schmidt, & Jackson, 1982), produced a single overall criterion-related validity coefficient for personality.

More recent studies have focused on the big five framework, and, instead of looking for a single validity coefficient, have sought to establish the validity for each of the big five personality factors separately. Key work here has been produced by Barrick and Mount (1991; Table 1). In their meta-analysis Barrick and Mount (1991) found that conscientiousness was linked to performance across all job types. They also found links between extraversion and performance in sales and managerial jobs.

Another important study was conducted by Tett and others (Tett, Jackson, & Rothstein, 1991). Their study showed that much better results were obtained when the personality variables were used—not simply in a "shot gun" exploratory way—but based on clear hypotheses and job analyses. Confirmatory studies, designed to test specific hypotheses, produced better results than less focused, exploratory research as can be seen in Table 2. It is apparent, from the

TABLE 1
Results from the Barrick and Mount (1991) Meta-analysis of the
Criterion-related Validity of Personality

Personality Factor	Uncorrected Validity	Corrected Validity
Conscientiousness	0.13	0.22
Extraversion (Sales/Managers)	0.10	0.17
Neuroticism	0.05	0.08
Agreeableness	0.03	0.05

TABLE 2
Results from the Tett et al. (1991)
Meta-analysis of the Criterion-related Validity of Personality

Type of Study	Uncorrected Validity	Corrected Validity
All	0.16	0.24
Exploratory	0.08	0.12
Confirmatory	0.20	0.29
Confirmatory and job analysis	0.25	0.38

results of Tett et al. (1991), that it is important to think clearly, in advance about the relationships to be expected. Using personality in an unfocused and exploratory way for personnel selection decisions is unjustified. Raymark, Schmit, and Guion (1997) have recently developed a job analysis procedure to be used for making hypotheses about personality predictors of job performance.

Although both of these studies were conducted in North America—using mostly North American data—a recent study by Salgado (1997) has presented similar findings using a completely different set of studies for the European Community.

Note that in all of these meta-analytic studies, where the validity coefficients have been corrected for unreliability and range restriction, it is important to distinguish between corrected and uncorrected coefficients. When the size of the uncorrected correlations between personality and work performance are considered, it is clear that things have changed very little since Ghiselli produced his work in the early 1970s (Ghiselli, 1973). Even with meta-analytic corrections, upper limits for the validity of personality variables against overall work performance variables are in the range of 0.25 to 0.4.

Of course there is one fundamental factor that limits the potential validity of personality characteristics: The situation will always have a role to play in determining behaviour. At work, relevant situational variables concern job design, supervision, work colleagues, reward structures, and so on. It would be impossible to predict behaviour from knowledge of personality alone.

The other major limitation on the validity of personality coefficients is much less fundamental. Most of the studies referred to previously have taken a relatively small number of personality constructs, for example, the big five framework, and examined correlations between these personality variables and a single measure of *overall* job performance. In many ways this approach to exploring the role of personality in work performance mirrors attempts that have been made, quite successfully of course, to explore and establish the validity of general mental ability. But personality, as noted earlier, is very different from general mental ability. For many jobs, higher and higher scores on the certain personality construct may not be better for job performance.

It is clearly possible to perform jobs well in a variety of different ways. People with different personality profiles are likely to do jobs rather differently, but perhaps, depending on the job, with the same overall level of effectiveness. On this basis it seems likely that to try to link a small number of personality constructs with overall performance across all jobs is likely to be an over simplification. This over-simplification is likely to cause an error, known to statisticians as type one error. This involves concluding, wrongly, that a particular personality construct is linked to performance in *all* jobs, when this may not be the case. An example here concerns the personality construct, from the big five, of conscientiousness. Several studies have shown links between conscientiousness and measures of overall work performance, and it is rapidly becoming an orthodox view that conscientiousness is linked to work performance in more or less all jobs. This view is put forward particularly strongly in the North American literature (Mount & Barrick, 1995).

There is good reason to be cautious about this view. Consider some work looking at the relationships between conscientiousness and performance for managers (Robertson, Baron, Gibbons, MacIver, & Nyfield, 1997). The starting point for this study was a conceptual analysis of the behaviour linked with conscientiousness and a view that this was not—especially in comparison with other factors—likely to be linked with successful *managerial* performance. The study investigated links between conscientiousness and overall work performance for a large sample of British managers and, as hypothesized, no relationship was found. Also the results showed a negative relationship between conscientiousness and promotability ratings.

In other words, promotability for managers may be associated with low, rather than high conscientiousness. This, initially counterintuitive, finding probably derives from the fact that promotability and overall performance are rather different constructs, in managerial work. In this study the correlation between these two variables was only 0.45. The investigators were able to explore the issues further because, in addition to data on overall work performance, they had collected data on the specific competencies of the managers in the sample. The pattern of correlations between overall performance, promotability, and the competencies revealed the differences between the two criteria. The largest

correlations between any of the competencies and overall job performance (OJP) were between OJP and the competencies, organized and quality driven. These defining competencies for overall job performance and the competencies correlating most strongly with promotability were not the same—as Table 3 shows. Competencies were linked to overall performance and promotability in different ways. The competencies correlated with promotability (articulate, persuasive, innovative, and flexible) do not embody the kinds of behaviours strongly linked to conscientiousness.

As far as the specific competencies predicted by personality are concerned, the distinction between contextual and task performance may be important. This distinction was first proposed by Borman and Motowidlo (1993). Task performance is prescribed by the job and includes behaviour that is directly relevant to the technical core of the job. Contextual performance involves behaviours that do not relate to the technical core of the job directly, rather they support the broader social and organizational environment in which the behaviours relevant to the technical core are conducted. Contextual performance includes things such as volunteering to carry out activities that are not formally part of the job, and helping and co-operating with others. Motowidlo and Van Scotter (1994) have provided evidence that task and contextual performance both

TABLE 3
Correlations between Performance, Promotability, Conscientiousness, and Specific Job Competencies (Robertson et al., 1997)

	Performance	*Promotability*	*Conscientiousness*
Commercial	0.37	0.32	−0.05ns
Expert	0.44(+)	0.28	0.07ns
Analytical	0.46	0.41	0.07ns
Innovative	0.40	0.49(+)	−0.16
Strategic	0.46	0.48	−0.05ns
Organized	0.50(+)	0.39	0.25
Decisive	0.41	0.52(+)	−0.11*
Articulate	0.28	0.43(+)	−0.18
Literate	0.23	0.27	−0.04ns
Supportive	0.26	0.23	−0.01ns
Persuasive	0.41	0.50(+)	−0.18
Co-ordinating	0.41	0.44	−0.05ns
Quality-driven	0.52(+)	0.39	0.12
Flexible	0.26	0.36(+)	−0.13
Resilient	0.29	0.29	−0.03ns
Motivated	0.33	0.62(+)	−0.12*

All correlation coefficients are statistically significant: $P < .01$, 2-tail; except those marked *: $P < .05$, 2-tail; or ns: not statistically significant. (+) indicates that the correlations of the relevant competencies with performance and promotability are statistically significantly different.

contribute independently to overall performance; furthermore, their results show that personality variables are more highly correlated with contextual performance than with task performance.

Dispositional variables have been implicated as predictors of the highly related form of non-task specific work performance that has been termed organizational citizenship behaviour (OCB). The two major dimensions of OCB are altruism and compliance. Concepts such as sportsmanship, courtesy, and civic virtue are also included by some researchers (Konovsky & Organ, 1996). Contextual performance and OCB are described by Organ and Paine (in press) as that which "sustains or enhances the collective character of the organization, because it reinforces the linkages between and among individual participants". Overall organizational effectiveness can be enhanced by the level of OCB in the workplace. For instance, a study of work groups at a paper mill by Podsakoff, Ahearne, and Mackenzie (1997) claimed that one-quarter of the variance in the quantity, and one-fifth of that in the quality of performance could be attributed to OCB components, such as helping behaviour and sportsmanship. At the individual level, employees who engage in these types of behaviours more frequently are judged to be more promotable and receive more favourable appraisals (Organ and Paine, in press).

Attitudinal variables such as job satisfaction, perceived fairness, and affective commitment are related to these citizenship behaviours. There is also convincing evidence (discussed later) that personality factors account for significant variance in work attitudes, such as job satisfaction. One possible hypothesis, outlined by Konovsky and Organ (1996), is that the same personality traits that predict work attitudes may also predict OCB. If this is the case, the reported relationship between work attitudes and OCB may be spurious, accounted for by the common influence of the dispositions that are related to both sets of variables.

A meta-analysis containing 55 studies concerned with attitudinal and dispositional correlates of OCB, conducted by Organ and Ryan (1995), reported that the big five trait of conscientiousness was specifically related to one aspect of OCB, impersonal, or generalized compliance. As well as being the main predictor of generalized compliance, conscientiousness also accounted for unique variance in three dimensions of OCB, compliance, altruism, and civic virtue, in the research by Konovsky and Organ (1996). These authors concluded that they did not have evidence to support the hypothesized spurious relationship between attitudes and OCB. The personality trait conscientiousness, and attitudes regarding fairness and satisfaction, each had independent effects on aspects of OCB.

A point that recurs in the literature, though, is the possible masking of the predictiveness of dispositional factors by the researchers' use of global measures such as those of big five personality traits, (eg. Organ and Paine, in press). The work by Hough (1992) provides evidence that the global construct of conscientiousness may obscure personality traits that are relevant for prediction

of contextual behaviours, traits such as dependability and achievement, by subsuming them within the same measure. Hough (1992) argues that a nine-factor taxonomy was necessary to differentially predict a range of performance criteria, which included factors such as amount of effort expended and teamwork. The fact that conscientiousness accounted for small but unique amounts of variance in three dimensions of OCB in the study by Konovsky and Organ (1996) supports this argument. Some aspects of the global, heterogenous measure of conscientiousness may have been responsible for the predictive variance, whereas other aspects were unrelated to the relevant OCB dimension.

Personality and Group Performance

Most of the research concerned with group or team working has focused on the internal processes of group activity. Much less has been done in regard to the composition of groups and the possible interactive effects of individuals' characteristics. In a recent review of the area, West (1997) concluded that understanding of the relationship between group composition and group performance is limited and this is particularly true of the potential effects of individuals' personalities. There is every reason to suspect, though, that people's personalities will have an impact when working with others.

The level of personality diversity within a work group was found by Eigel and Kuhnert (1996) to impact on the social interaction processes of communication, openness, and trust within managerial teams, but not on productivity itself Quality of interaction is thought to enhance team effectiveness. An interactive relationship is suggested by the study's authors whereby diversity is an asset when it is well managed and members are still able to communicate effectively. This study, however, looked only at the degree of personality diversity between group members. The nature of the individual personalities existing within each group was not considered. An analogy can be drawn with the preceding points about personality and individual performance. The formation and investigation of specific hypotheses about the potential outcomes of the interaction, in this case the interaction of different personalities within a particular work group, may provide greater predictive potential.

The nature of individuals' contributions is the subject of the theory of team roles originally developed by Belbin and more recently outlined by Dulewicz (1995). A team role is defined as "a pattern of behaviour characteristic of the way in which one team member interacts with another so as to facilitate the progress of the team as a whole" (cited in Dulewicz, 1995, p. 82). Eight such roles were identified. Central to the theory is the view that people are predisposed by their personality and abilities to adopt one or more of these roles in teams, and conversely are limited by those characteristics from fulfilling others. The team role composition of the group, particularly the balance of the roles adopted by members, is hypothesized to influence subsequent group performance. The

contribution of individuals to the team in this approach is consistent with the distinction already discussed between task and contextual performance. One of Belbin's principles for building effective teams is that each member performs both a functional (task) role and a team (contextual) role.

There is some contention amongst researchers about how the team roles should be identified. In fact, the purpose of Dulewicz's (1995) article was successfully to demonstrate the validity of the use of two particular personality measures for this purpose. This difficulty in identifying team roles, and the difficulty of defining group effectiveness, may be responsible for the lack of studies on the hypothesized link between team role balance and team performance, in actual work settings. A more recent attempt was made by Senior (1997), with a sample of teams from different organizations, which did offer some support for Belbin's hypothesis. Despite the lack of extensive research evidence, team role theory is well used amongst practitioners, presumably because they feel that personality is an important variable. More attention by researchers to this area could help to facilitate informed practice.

Some research by Thoms, Moore, and Scott (1996) relates to the subject of people's preference for adopting particular roles when working with others. The big five dimensions of neuroticism, extraversion and conscientiousness accounted for significant variance in manufacturing employees' self efficacy for working in self-managed work groups. There is little or no work that addresses the relationships between individual personality characteristics and job design. Some possible mechanisms by which job design factors such as greater autonomy have their effect on performance are outlined by Parker and Wall (1997). A motivational explanation, that autonomy encourages extra effort, is often implicitly assumed. More recent explanatory approaches concern the opportunity that autonomy provides for increasing performance-related job knowledge, and for the development of broader and more proactive role orientations amongst employees. Role orientations are people's understanding of their job roles, such as whether they feel included in wider team and customer goals and whether or not they feel they should actively engage in finding and solving problems. As with the other types of contextual performance discussed, dispositional factors may partly explain individuals' job role orientations. Including individual difference variables, such as personality traits, in models of the mechanisms by which job design factors affect performance may increase the predictiveness of the models.

Personality and Leadership

The effect of the personalities of those who lead and manage groups is the subject of another field of enquiry. Issues of leadership are fashionable, and the research field rich and complex, according to Guest (1997) who reviewed the area. One approach he highlighted draws a distinction between leadership and

management. The identification of the competencies that distinguish effective managers stems from this approach. The presumption is that the performance of managers is a function of their individual characteristics. This trait theory is in contrast to the more widespread use of situational theories of leadership (see Guest, 1997).

The usefulness of personality measures for assessing leadership potential has so far been obscured, according to Hogan, Curphy, and Hogan (1994), but the big five model now allows the integration of past research. Evidence is presented that leadership effectiveness is consistently related to high surgency (extraversion), high emotional stability (or low neuroticism), high conscientiousness, and high agreeableness. The existence of a relationship between leaders' personalities and the performance of their teams also has some support. For example, Chidester, Helmreich, Gregorich, and Geis (1991) demonstrated a significant correlation between the personality of the captain and the performance of the flight crew in a commercial airline. The crews of agreeable and emotionally stable captains made the fewest errors.

At a more macro level, associations have been found between the personalities of chief executive officers and the structure of their organizations (Miller & Droge, 1986). The need for achievement (a dimension of conscientiousness) of the CEOs of the smaller and younger firms sampled was found to predict the degree of centralization, formalization, and integration in their companies. High scorers were more likely to centralize power and use instruments of formalization such as policies, procedures, and financial, performance, and quality controls. They also used more integrative liaison methods such as commitees and task forces. Miller and Droge (1986) argue that their findings are consistent with the need that high achievers have to directly monitor and control performance. The structure of the high achievers' companies allowed them to gather the necessary information to monitor and exert direct control over performance.

The conclusions drawn by Hogan et al. (1994) that the key to effective leadership is the ability to build a team—an ability predictably related to personality—fits with the finding that personality is more predictive of contextual rather than task performance. Research looking at why leaders fail, or derailment research as it is called, indicates that some managers fail despite technical competence (Hogan et al., 1994). The use of personality assessment in the selection of leaders and managers can be seen to have the potential to reduce these failures.

Personality and Job and Work Attitudes

To what extent is personality involved in determining job and work attitudes? Attitudes such as job satisfaction and organizational commitment are important since they are frequently seen as antecedents of employee turnover. A study by Jenkins (1993) looked to a dispositional factor, self monitoring, in an attempt to

explain more of the variance in turnover intentions. Self monitoring is the regulation of expressive behaviour and self presentation. An interesting pattern of relationships was uncovered. It was found that organizational commitment was a better predictor of intention to leave for low self monitors. For high self monitors, job satisfaction was the better predictor.

Failure to include self monitoring as a moderator would have led to attenuated correlations between commitment and satisfaction, and turnover intentions in this study. It may then have been concluded that these attitudes were not good predictors of the outcome in question. Instead, the authors provided evidence that commitment and satisfaction were good predictors of intention to leave, but that their predictiveness depends on the particular individual's level of self monitoring. This is a good example of the potential utility of considering personality factors in explanatory models of important work outcomes.

There is clear evidence from several studies (e.g. Cropanzano, James, & Konovsky, 1993) that personality characteristics are associated with job satisfaction. Extraversion is associated with higher levels of satisfaction and neuroticism is associated with lower job satisfaction. In their own right these results, linking personality with job satisfaction, are important in that they require psychologists to rethink the status and determinants of job satisfaction. If personality predicts job satisfaction then the potential to influence satisfaction through job and work design is limited, at least to some finite degree. We are also required to revise our conceptual model of job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976). Clearly this definition is incomplete if job satisfaction is partly determined by stable dispositional factors such as extraversion or neuroticism.

Further research from behaviour genetics may cause us to revise our conceptual models even more radically, with recent work reaching a point when investigators talk realistically of identifying specific genes for specific personality variables (see Bouchard, 1997b). Much of the current interest amongst work and organizational psychologists in the issues involved here was stimulated a few years ago by a study conducted at the University of Minnesota (Arvey, Bouchard, Segal, & Abraham, 1989). This study focused on a set of identical twins who were well into adulthood. The remarkable finding was that the job satisfaction reported by these twins was still closely correlated, despite the fact that they had been brought up in different environments. In other words, the investigators found a strong genetic component in people's reports of their satisfaction with their work. At first sight, this finding seems remarkable. Surely it can't be the case that job satisfaction is inherited.

An understanding of the role that personality plays here may provide the key to understanding the results. Although job satisfaction is most unlikely to be inherited, there is a significant amount of work that demonstrates that certain personality variables do have a genetic component. The key to understanding the

job satisfaction results may lie in the role of personality variables, such as negative affectivity—the disposition to experience negative emotional states (Watson & Clark, 1984). A person who is high on negative affectivity tends to experience the world in a negative rather than positive way, and will report, compared with someone who is less high on negative affect, that the same situation is less pleasant, more disagreeable, and generally less satisfying.

Bouchard (1997a) has recently reviewed the research on genetic influences on a variety of work-related variables, including personality and job and work attitudes. He reports heritability coefficients (which indicate the proportion of variance due to genetic factors) of about 0.40 for the big five factors—in other words about 40% of the variance in personality is due to genetic factors. Here then is a possible explanation of the remarkable results obtained by Arvey and his colleagues. The identical twins are similar to the extent that they have inherited similar personality characteristics and these, in turn, influence their reported job satisfaction levels. This interpretation of these results gives personality a central role in the causal and conceptual model.

The possible relevance of personality variables other than negative and positive affectivity was investigated in a longitudinal study by Spector and O'Connell (1994). Locus of control and the Type A behaviour pattern, in addition to negative affectivity, were found to be predictive of subsequent job stressors and strains in their sample. The results showed that there was a complex pattern of links between the variables. The development of clear hypotheses about the likely effect of specific personality variables on particular well-being outcomes may be advisable in future research, as has been suggested already for the study of personality and performance.

A MODEL FOR PERSONALITY AND WORK PERFORMANCE

A model that will help in understanding personality and work performance more effectively is given in Fig. l. In this model, overall performance in any job is dependent on the extent to which the job holder displays, or fails to display, a range of competencies. In this model, competencies are defined in the broadest sense and encompass constructs responsible for all behaviour that occurs in the workplace. Overall performance can usefully be seen as comprising two components. These are task performance and contextual performance and each requires the display of a set of associated competencies. Those required for effective task performance are not the same as those required for effectiveness in the behaviours that surround the actual task and which also contribute to overall success. The most successful individuals in a particular job will display the necessary competencies for both components.

The particular set of competencies needed will change from job to job. In some jobs, for example, interpersonal skills predominate whereas in others
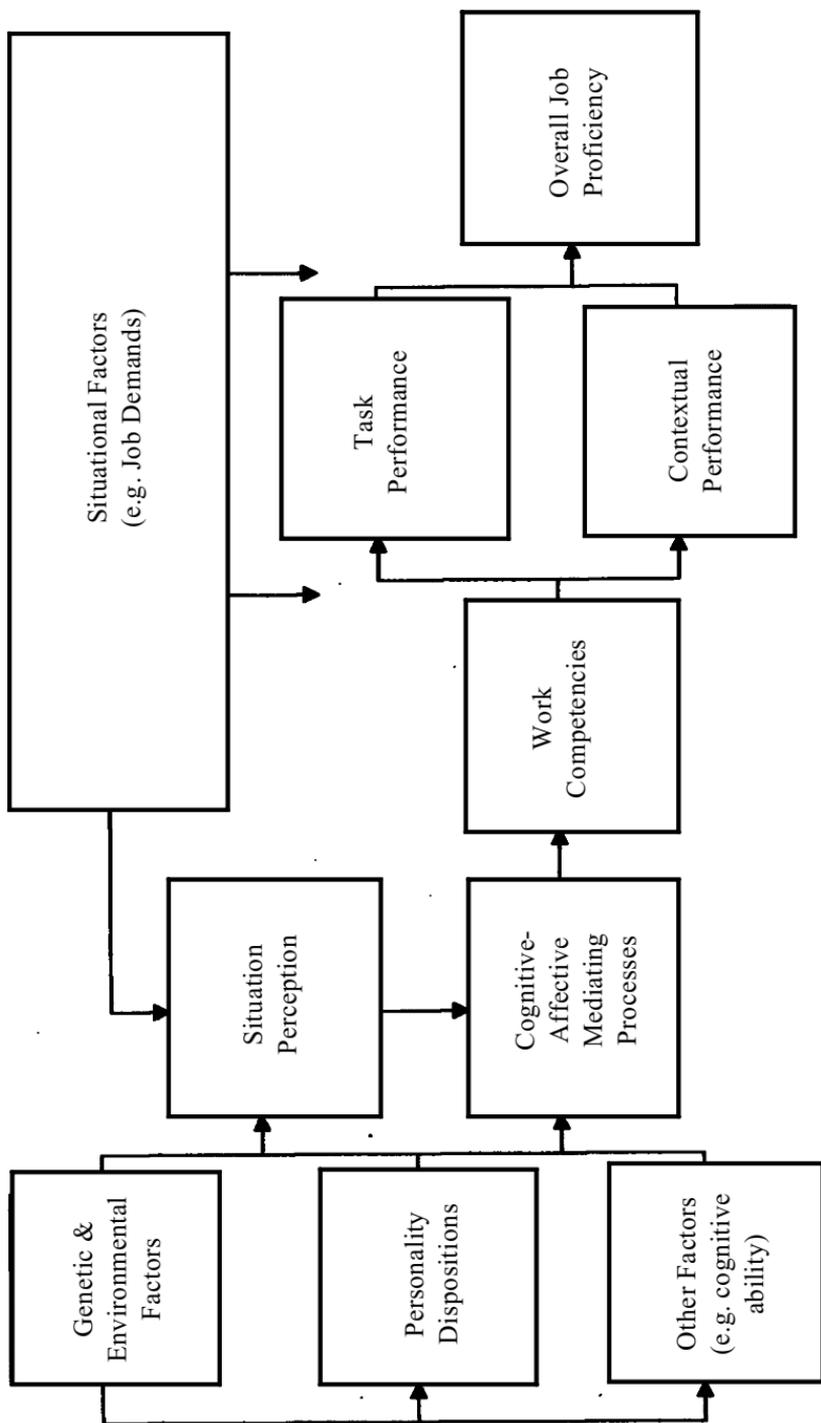
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FIG. 1. Personality and work performance.

analytical skills are much more important. In technical terms, the relationships between competencies and overall job performance are moderated by the demands of the particular job in question. To emphasize a point raised earlier, the situation is an important determinant of behaviour. In this model the situation is represented by the demands of the job. In other words, each particular job, or family of jobs, represents a different kind of situation and requires different competencies, put together in different blends, for individuals to be effective.

To add further complexity to the model, there is likely to be more than one set of competencies that will lead to effective performance in a particular situation. As already noted, there may be more than one way to produce a favourable outcome. So, there will not be a definitive set of competencies for a particular job, but rather a number of possible combinations of competencies that will lead to success. The set of effective competency combinations will differ for each job to the degree that the jobs have different requirements.

Individual competencies are determined, at least to some extent, by underlying personality characteristics. Drawing on the insights of work by Mischel and Shoda (1995), in the information-processing tradition, provides an explanation of how personality variables can be linked to behaviour through cognitive and affective mediating processes.

Displaying a job competency can be seen as producing a characteristic set of responses to a particular work situation. The stability of personality, according to Mischel and Shoda (1995) is the result of the relatively stable organization and associations between mental representations, which they term cognitive-affective units. These are encodings or constructs, expectancies and beliefs, affects, goals and values, and competencies and self-regulatory plans. Work attitudes, such as job satisfaction and organizational commitment are represented at this point in the model. The stable organization of these cognitive-affective units leads individuals to select particular psychological features of situations for attention, and to think and feel about those features, in a characteristic way. These psychological mediating processes then determine the behavioural possibilities that are considered in response. A person will behave similarly in two situations to the extent that he or she perceives those situations to be the same. Thus, both the perception of the situation and the emergent behaviours are strongly influenced by the actor's personality dispositions.

Many of the studies looking at personality at work have focused on the extent to which specific single personality constructs, such as one of the big five, are related to overall work performance. Just as it may be that concentrating on single personality constucts alone is a mistake, it is also a mistake to focus on overall job performance and fail to analyse relationships between personality and specific competencies. It is also important to avoid considering overall performance as a unitary construct. This point is illustrated by the distinction between task and contextual performance and the evidence that personality factors are more closely linked to contextual performance.

A comprehensive view of personality and work performance involves breaking down overall work proficiency into the underlying competencies. Further complexity is needed to cope with the fact that competencies will not be determined one for one by single individual personality constructs, they will be determined by mixtures of interacting personality variables.

This finer grained interactive approach to personality begins to suggest, of course, that the big five may be a level of analysis that is at too high a level of generality for the purposes of understanding the complexities of human behaviour in organizations. It seems likely that links between personality and work performance will be understood best at a level of specification that is lower than the big five.

SUMMARY

It is clear that personality influences a wide range of work-related variables. Using the recent work concerning genetic influences on job and work attitudes to illustrate this, the current article supports the view that personality needs to be given a more central role in explanations of behaviour at work.

Despite the important conceptual role for personality, the effect sizes appear to be relatively small. There are two main reasons for this. First, there is the role of the situation, and in particular the interaction between the situation and individual differences in personality. The interaction between job and organization variables and personality help to determine overall levels of performance, attachment, well-being, or many of the other dependent variables mentioned earlier. So the direct effect of personality on its own will always be limited. Better understanding of the role of personality and clarification of effect sizes will come only when this complex interaction is built in to the relevant theoretical frameworks.

The second main reason concerns the current approach that is being adopted to exploring the role of personality. Here more emphasis needs to be given to facets of personality at a level of analysis below that of the big five. In addition, the mediating role of specific work competencies needs to be explored more fully. The interaction of personality traits, in predicting performance, needs to be better understood. There is a strong message here for practitioners concerning the level of analysis to be adopted. As the model presented earlier makes clear, overall job performance may be difficult to understand without a clear picture of the part played by specific competencies in determining overall performance.

Some further issues also emerge. Most of the studies exploring the validity of personality and work behaviour try to explore the linear relationship between personality variables and work performance variables. It may be much more likely that, for some personality variables, the relationship is not linear.

Although in many ways the big five has facilitated the recent research on personality at work, it may also prove to be a constraint. It is certainly worth

bearing in mind that a variety of individual difference factors, which are not captured by the big five, have been shown to be of relevance in occupational settings. These include factors such as locus of control and attributional style (e.g. Corr & Gray, 1996) or variables derived from measures unrelated to the big five, such as Furnham and Stringfield's (1993) work using Myers Briggs Type Indicator.

Although this article has focused on the role of personality in work performance and work attitudes, there is also substantial evidence that personality is helpful in predicting other important variables. Iverson and Erwin (1997), for example, have shown that personality variables predict occupational injury.

On a practical level the use of personality measures for interventions in organizations seems appropriate in a variety of areas. Personnel selection and assessment has always been a core area of practice for work and organizational psychologists and there is clearly a role for personality assessment here. When discussing the use of personality in selection decisions the (apparent) problems of faking are often raised. Certainly it is true that people will attempt to fake good in a selection setting but recent research offers support for the view that this does not diminish the predictive value of personality tests. Barrick and Mount (1996), for example, have shown that candidates did distort their scores but that the distortion did not affect the predictive validity of personality. In other words, despite the distortion the personality variables (conscientiousness and emotional stability) still predicted the criteria—in this case performance ratings and voluntary turnover. Another practical implication of this work is that since distortion does not damage validity it is not wise for practitioners to attempt to correct raw scores for response distortion. The distortion itself seems to result from a mixture of self deception and impression management. In another study Ones, Viswesvaran, and Reiss (1996) have shown that the one major component of response distortion—social desirability—is in fact related to two of the big five factors—conscientiousness and emotional stability.

Of course, from a practical point of view the most important question is the extent to which the assessment of personality variables "add value". There is little room for doubt here. This point may be illustrated with reference to two final studies. Robertson and Kinder (1993) investigated the validity of personality variables using a hypothesis-driven approach. With the aid of meta-analytic techniques Robertson and Kinder explored relationships between a variety of personality characteristics, and specific competencies. As well as establishing the validity of the personality characteristics, a key finding from this study was that the validities for the personality variables were more or less the same, even when mental ability scores were included first in the prediction equation. In other words the personality variables added new and unique information of value.

Goffin, Rothstein, Johnston (1996) have produced similar results for personality, assessment centres, and managerial selection. Their results suggest that personality and the assessment centre assessed different domains—with each uniquely and significantly predicting performance.

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