

INDIVIDUAL DIFFERENCES IN WORK ATTITUDES

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Summary—Subjects completed a number of self-report questionnaires on both individual differences and work-related attitudes. Clear gender and age differences in work attitudes were observed in the sample of 310 Ss (women were less competitive and less money-oriented in their work than men; older Ss tended to be more interested in money and concerned about savings). Furthermore, personality variables, particularly toughmindedness and neuroticism, appeared to be related to work-related attitudes. These trait-work attitude relationships continued after partialling out the effects of age, sex and social dissimulation. Toughmindedness (psychoticism) was negatively correlated with an array of scales such as work ethic, attitudes to savings, money beliefs, achievement motivation, competitiveness and achievement through conformity. Emotional lability (neuroticism) was significantly negatively correlated with four of the work attitude scales—mastery, savings and both achievement scales—which is consistent with previous findings. Finally, extraversion was related to mastery. The importance of looking for trait correlates of work-related beliefs and behaviours is discussed.

INTRODUCTION

Work occupies a central area of activity in most people's lives. It is therefore surprising that there have been few empirical studies attempting to explore sources of individual differences in work attitudes (such as the work ethic) and experience (such as money saving habits). Most research looking at individual differences has related such things as the work ethic and need for achievement to motivation, satisfaction and productivity (Furnham, 1990a).

McClelland's (1976) basic personality dimension of need for achievement, despite various methodological shortcomings, has been a fruitful construct. Paspalanov (1984) reported a statistically negative correlation between psychoticism and need for achievement amongst male and female high school students. In a study involving Australian adolescents, Heaven (1990) found that achievement motivation was associated with internal locus of control, positive attitudes to authority, self-esteem, and the lie-scale, for females. For males, however, achievement motivation correlated with extraversion, tendermindedness (P-), (positive) self-esteem and the lie-scale. A second study revealed that psychoticism was negatively correlated with achievement motivation, and neuroticism was negatively correlated for males only (Heaven, 1990).

Ray (1990) recently described a series of international community studies using Ray's achievement orientation (AO) scale. The AO scale displayed low and negative correlations with either Taylor's MAS or Eysenck's Neuroticism scale; correlations were not always significant and Ray concluded that N was essentially irrelevant to achievement motivation (oscillating between orthogonality and slight negative correlations).

In a review of the Protestant Work Ethic (PWE), Furnham (1984a) reported that PWE was related to morality, conscience and guilt, and an array of conservative social attitudes "religious fundamentalism, pro-establishment politics, insistence on rules or punishment, promilitarism, preference for conventional art and institutes, an anti-hedonistic outlook, an intolerance of minority groups and a superstitious resistance to science" (p. 98).

This has been verified in several studies. For instance, Mirels and Darland (1990), found that persons endorsing the Protestant Ethic ("an ideology that espouses the virtue of achievement through systematic, industrious, effortful, self-disciplined work") described themselves as less impulsive and autonomous, orderly and persevering. They further found that work ethic was positively correlated with achievement, endurance and order, will-power and self-discipline.

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In another study, Furnham (1987) examined work-related beliefs and human values. PWE was positively correlated with obedient, polite, clean and responsible attitudes, and negatively correlated with courageous, imaginative, intellectual, forgiving and broadminded (instrumental) values. In 1990b, Furnham found that work ethic and Type A were intersecting sets, both underlining the importance of job success, work commitment, achievement-orientation and productivity. Work ethic was related to hard-driving, rather than job involvement, and speed/impatience.

The intimate interrelationship between psychoticism (P) and such work-related attitudes as PWE is in agreement with correlational studies. Kirkcaldy (1990) examined the relationship between personality traits and self-image and found P was positively associated with low self-control (bad with money, untidy, easygoing, tendency to lie, inconsistent and able to let go) and high dominance (often in arguments, self-willed, likes domineering, good at acting, difficult in close co-operation and impatient). Psychoticism has been shown to be related to immature, irresponsible, anti-authoritarian, difficult, querulous and non-conformist behaviour [based on a study by Thornton, cited by Eysenck and Eysenck (1976)]. High P-scoring individuals are generally non-co-operative (Brown, 1974), display a low acceptance of culture, a rejection of conservatism and anti-educational proclivities (Eysenck & Eysenck, 1976).

Furnham and Zacherl (1986) investigated the relationship between personality and job satisfaction as measured by a multidimensional scale. Psychoticism and Neuroticism were both negatively correlated with all subscale scores, whereas Extraversion and Social Desirability (Lie-scale) correlated positively with all subscales. High P (psychoticism) scorers (toughmindedness) tended to be significantly less satisfied with their supervisors, the nature of the work and coworker relationships than those (tenderminded) persons with low psychoticism scores. Individuals with high neuroticism scores (neurotic) were inclined to be fairly highly significantly less satisfied with the amount of work they were required to do, their coworkers and salary. A measure of conformity (Lie-scale), however, yielded the most and biggest correlations.

Neuroticism appears to be associated with lower productivity and lower satisfaction. Organ (1975) found neurotic (business) students experienced greater emotional stress when subjected to an ambiguous exam situation compared with non-neurotic students. In addition, Perone, de Waard and Baron (1979) reported that neuroticism and sensation-seeking were negatively correlated with satisfaction at work, suggesting that dissatisfaction may be symptomatic of (general) emotional disturbance (see Kirkcaldy & Hodapp, 1989). Negative affect seems to be a curious admixture of irritability, anxiety, neuroticism and self-depreciation (Levin & Stokes, 1989). Negative affectivity was demonstrated to be related to reduced job satisfaction: non-neurotics seem able to deny or repress various frustrations, disappointments or problems, in contrast to the neurotically predisposed, who worry considerably, feel distressed and view the world more negatively.

In an article on the psychology of money, Furnham (1984b) reported that males (more than females) were inclined to be obsessed with money, e.g. they worried more than women about having to sell their house or car in the future. Age differences were also observed. Younger persons used money as a means of having power (over others), were less careful and retentive with money and less security minded than older persons, who felt that money earned or possessed was associated with effort and ability. Older Ss were more pessimistic about the financial future, they worried about selling their homes or car, not being able to save up for old age and not providing for their family as they had hoped. Finally, individuals with more conservative social attitudes and beliefs were more obsessed with money, retentive and more security-minded.

The purpose of this present large-scale study was to determine the degree that individual differences (specifically personality, age, and gender) affect a wide range of work attitudes, using a multidimensional measure of work-related attitudes and personality. Specifically, it was predicted that (1) males would be more competitive and achievement oriented than females, and (2) neuroticism and psychoticism would be negatively correlated with all work-related attitudes.

METHOD

Respondents were 309 German men and women in college/university education. In this sample, participants included 113 males (36.45%), 192 females (61.94%), and 4 persons (1.29%) who were

unidentifiable with respect to gender. Of this total sample, 169 (55.52%) were between 18 and 25 yr, 103 (33.66%) between 26 and 33 yr, 24 (7.84%) between 34 and 41 yr, and 10 over 41 yr (3.30%); 3 Ss failed to specify their age.

The selection of a wide range of academics was partly for convenience, and in part due to the assumption that this sample will contain potentially well-qualified personnel who will enter diverse domains in the business, professions, or academic world. Although the sample cannot be supposed to be representative of the nation's population as a whole, there is little reason to assume that they are atypical.

The questionnaires on personality and motivational traits associated with work attitudes assess Weber's (1929) classical concept of moral commitment to work (work ethic), Spence-Helmreich's construct of mastery, motive to outperform others (competitiveness), the importance attached to savings (attitude to saving), McClelland's construct of a need for excellence (achievement motivation), valuation of money (money beliefs), identification with an organisation and its success (achievement through conformity). The first three scales (work ethic, mastery and competitiveness) comprise 19 items (Spence, 1983) rated on a 5-point Likert scale (ranging from 'strongly agree' to 'strongly disagree'). Both money beliefs and savings scales are short scales (Yamauchi & Templer, 1982; Furnham, 1984b) requiring rating on a 7-point scale. The Ray-Lynn inventory (see Ray, 1979; Lynn, 1969) comprises 14 items rated on a 3-point scale. Finally, achievement through conformity (Gough, 1986) is assessed by 10 items (on a 3-point scale from 'Yes' to 'Not at all').

In addition, assessment includes various measures of demographic and psychographic variables (age, sex, education, marital status and children). Personality is assessed using a German standardized abbreviated 50-item form of the EPQ-R (Ruch & Hehl, 1989) which yields scores on toughmindedness (Psychoticism), sociability (Extraversion), emotionality (Neuroticism) and social desirability (Lie-scale). The P-scale (supposedly assessing unorthodox, nonconforming behaviour) incorporates 14 items, and the remaining three scales each contain 12 items. This truncated version of the EPQ-R, based on Ruch and Hehl's (1989) large-scale factor analysis of the German EPQ-R, has demonstrated psychometric viability (α coefficients all exceed 0.60). The justification of the short form of the EPQ has been examined by Walkey, Green & McCormick (1986) and Green (personal communication, 1990).

RESULTS

A univariate analysis between gender was calculated with regards to the personality variables. Only neuroticism was reported to be higher among women ($t = -3.95$, $P < 0.001$). A second univariate statistical analysis of between-gender work attitude profiles revealed that no differences were observed along the scales work ethic, mastery, attitude to savings, or achievement motivation. Men were, however, more competitive ($t = 4.20$, $P < 0.001$), and displayed higher money beliefs ($t = 3.05$, $P < 0.01$), and higher achievement/conformity ($t = 2.14$, $P < 0.05$).

Table 1 displays the Pearson product-moment correlations between the four personality dimensions and the attitudes related to work. The coefficients range between -0.43 (P and attitudes to savings among women), and $+0.28$ (E and competitiveness, for men). Social desirability (L-scale) does appear to influence women's scores on three attitude scales, but partial correlations—controlling for effects of social dissimulation—scarcely altered the magnitude of the correlations.

Table 1. Pearson product-moment correlations between the four personality variables (psychoticism, extraversion, neuroticism and social desirability) and the seven work-related attitude scales (work ethic, mastery, competitive, attitude to savings, achievement motivation, money beliefs, and achievement/conformity)

	Psychoticism		Extraversion		Neuroticism		Lie-scale	
	Men	Women	Men	Women	Men	Women	Men	Women
Work ethic	-0.31^{***}	-0.36^{***}	0.01	0.04	-0.11	-0.08	0.00	-0.04
Mastery	-0.00	-0.18^{**}	0.01	0.25^{***}	-0.12	-0.14^*	0.00	0.13^*
Competitive	-0.20^*	-0.12^*	0.28^{**}	-0.04	0.07	0.10	-0.03	-0.11
Attitudes to savings	-0.35^{***}	-0.43^{***}	-0.13	0.01	-0.12	-0.14^*	0.10	0.18^{**}
Achievement motivation	-0.37^{***}	-0.37^{***}	0.04	0.03	0.04	-0.19^{**}	0.04	0.12^*
Money beliefs	-0.25^{**}	-0.10	0.16^*	-0.10	-0.04	0.05	0.05	-0.00
Achievement/through conformity	-0.35^{***}	-0.39^{***}	0.07	0.07	-0.20^{**}	-0.28^{***}	-0.07	0.10

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table 2. Correlations between the three major personality dimensions and the work-related attitude scales (age, gender and social desirability partialled out)

	Psychoticism	Extraversion	Neuroticism
Work ethic	-0.34***	0.02	-0.09
Mastery	-0.10	0.17**	-0.12*
Competitive	-0.16**	0.09	0.09
Attitudes to savings	0.37***	-0.05	-0.11*
Achievement motivation	-0.36***	0.04	-0.12*
Money beliefs	-0.15**	0.01	0.02
Achievement/conformity	-0.37***	0.07	-0.24***

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$ ($n = 303$).

Toughmindedness appears to be a major determinant of work attitude, particularly for work ethic, competitiveness, attitudes to savings, achievement motivation, and achievement/conformity. Emotional lability is negatively correlated with achievement (conformity), mastery, attitudes to savings, and achievement motivation, the last three being statistically significant for females only. These associations persist even after partialling out the effects of age, gender and social desirability (Table 2).

Multiple regression analyses were undertaken in which gender, age, and the four personality variables (E, P, N and L) were regressed on each of the seven work attitude scales in order, to see which of the various independent variables (traits) were major determinants of the various dependent variables (work attitudes). Gender ('1' and '2' represent men and women respectively) emerged as a powerful predictor of work ethic, competitiveness and money beliefs. Age was associated with financial concerns (savings and money beliefs). Consistent with the bivariate correlations, the most potent predictor of the work attitudes from the personality set was Psychoticism, which was moderately and consistently predictive of work ethic, competitiveness, savings, achievement motivation, money beliefs and achievement (conformity). These individual difference variables accounted for between 7 and 21% of the variance observed in the work attitude scales.

As age was a predictor of attitude towards saving and money beliefs, and availability of money is likely to be a central problem for individuals with children, a set of univariate comparisons were made between those (few) *Ss* with ($n = 39$) and those without children. Emphasis on saving was much larger amongst the parent group ($M 24.36$, $SD 9.28$) than the childless group ($M 17.87$, $SD 9.29$), the difference reaching statistical significance ($t = -4.07$, $P < 0.001$). Individuals with children also yielded higher scores along the scale for belief in money ($t = -1.50$, $P < 0.07$).

Table 3. Multiple regression analyses; individual difference variables as predictors of work-related attitudes

Work attitude scale and trait	Coefficient			
	<i>V</i>	<i>R</i>	<i>R</i> ²	<i>F</i> (6,296)
Work ethic		0.38	0.15	8.41***
Sex	0.96***			
Psychoticism	-0.50***			
Mastery		0.26	0.07	3.66**
Extraversion	0.21***			
Competitiveness		0.34	0.12	6.52***
Sex	-2.27***			
Psychoticism	-0.35**			
Extraversion	0.15*			
Neuroticism	0.17*			
Savings		0.46	0.21	12.89***
Age	0.29***			
Psychoticism	-1.56***			
Lynn/Achievement motivation		0.39	0.15	8.97***
Psychoticism	-0.89***			
Money beliefs		0.27	0.08	4.02***
Age	0.11*			
Sex	-1.80**			
Psychoticism	-0.36**			
Achievement/Conformity		0.45	0.21	12.75***
Psychoticism	-0.51***			
Neuroticism	-0.23***			

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

DISCUSSION

The results show that specific demographic and personality variables such as sex, age, neuroticism and toughmindedness do indeed correlate with various aspects of people's work-related attitudes. A note of caution must be raised, however: correlational studies such as this one cannot yield any information on causation. Traits such as psychoticism may determine work attitudes, or it may be that work attitudes influence personality (probably the relationship is bidirectional, each factor affecting the other). Only longitudinal studies can determine the direction of causality.

Gender differences were observed along the scales competitiveness and money beliefs, which are themselves interrelated. Men are inclined to be more competitive and tend to focus their ambitions towards making money, as capital acquisition is regarded as highly desirable. These sex differences are consistent with Wiersma's recent study (1990), where men were reported to place more value on salary, achievement motivation, and directing others, whereas women emphasize good interpersonal relationships, interesting work, feelings of accomplishment and professional growth.

Psychoticism showed the strongest—always negative—relationship with work attitude. This is consistent with high P-scorers being reportedly untrustworthy, unreliable, unlikeable, selfish and unco-operative at work (the magnitude of these correlations scarcely changed after removal of the exceedingly high P-scorers, nor did they change significantly after partialling out for possible confounding effects of gender, age and social desirability). Of interest was the significant negative correlation between P (itself connected with a rejection of social, economic and moral conservatism) and work ethic (see Furnham, 1987). This is consistent with findings of Furnham and Zacherl (1986).

Mastery was one of the few scales which seemed least related to psychoticism. In the multiple regression analysis, only extraversion was a significant predictor variable of mastery, although it accounts for only about 7% of the variance. Mastery represents a preference for complex as opposed to simple, undemanding tasks, e.g. 'If I am not good at something, I would rather keep struggling to master it than move on to something I may be good at', and 'I prefer to work in situations that require a high level of skill'. Thus extraverts seem to prefer tasks which are demanding in the sense of being variable and stimulating. This fits perfectly with theoretical work on extraversion. Introverts have been shown to be chronically more aroused than extraverts, but as the optimal level of arousal declines with increasing task difficulty, extraverts should cope better with complex tasks than introverts (Eysenck, 1982; Kirkcaldy, 1983).

The finding that neuroticism yielded a significant negative correlation with achievement motivation for women only is consistent with Kirkcaldy and Hodapp's finding that, in contrast to men, women with a strong career motivation (e.g. 'I would be prepared to invest quite a bit of effort in order to improve my position within my work') were likely to score high on the neuroticism scale of the EPQ. Close scrutiny of the items constituting Lynn's Achievement Motivation scale reveals that the items cover a similar domain (e.g. 'Are you an ambitious person?' or 'Do you tend to plan ahead for your job or career?') to those item-constituents of the career motivation scale. This may reflect a fear or success among women, associated with the negative consequences which may arise in achievement, particularly in a competitive working climate (Horner, 1972).

Even after partialling out for the potentially confounding of gender, significant negative correlations persisted between neuroticism and both achievement scales, lending support to the notion that high-anxiety individuals are inclined to be more pessimistic than low-anxiety *Ss* about the likelihood of performing a task successfully (see Eysenck, 1982).

Why was the negative effect of neuroticism on achievement not larger? Previous studies have documented the undesirable effect of neuroticism in the work-setting, but some evidence suggests that neuroticism is connected with academic success. Certainly, the potentially deleterious influence of neuroticism on achievement may be moderated by 'intelligence' and 'appropriate coping skills' (McKenzie, 1989). Consequently, one of the limitations of these results is that the selected sample of college students was of well above average intelligence.

There was some evidence indicating a relationship between the two EPQ dimensions which share descriptive characteristics with Type A, that is, neuroticism and extraversion (see Stelmack, 1985), and competitive attitude at work, but it was the effects of gender (maleness) and psychoticism which

were more substantial. Competitiveness reflects a drive to win against others, e.g. 'I enjoy working in situations involving competition with others', and 'I feel that winning is important in both work and games'. Toughmindedness (P) would be expected to be positively correlated with competition (Wong & Reading, 1989), and it is difficult to make sense of the negative correlation reported. Kirkcaldy and Lynn (1991) reported that a global competitiveness factor comprising valuation for money and competitiveness, seems to represent a need for autonomy and power over others, a need which high P-scorers were prone to reject. This unexpected relationship may be specific to the German population, or may indeed imply that psychoticism has more to do with self-sufficiency and independence and less with social competitiveness.

Savings and money belief were both positively correlated with age, and this may relate to disposable cash (e.g. 'I firmly believe money can solve all my problems'). Availability of money is likely to be an important factor with advancing age, as financial demands imposed on older individuals—especially mature students who may have growing children to care for and support—will generate ambiguity and tension (Warr, 1987). There was evidence that those Ss with children were more likely to express a high need for saving, and a high belief in money, compared with those without children. There are indeed obvious financial constraints and costs incurred on parents who are still studying, and the economic situation exerts pressure on the families, because of insecurity of the economic, educational and social future (Cooper, 1986). The high value placed on money, its acquisition and retention with increasing age is in agreement with Furnham's (1984b) analysis of psychological correlates of money-related behaviour, in which, in contrast to young persons (who viewed money as a means of power, and who were less careful and retentive about money), older persons believed that acquisition of money was related to more effort and ability.

In conclusion, therefore, personality variables play a significant role in work-related attitudes in a coherent and consistent manner. Certainly, future analyses of work attitudes would benefit from a psychological level of analysis, and assessment of attitudes towards work as complex and multifaceted. Psychoticism, neuroticism and, to a lesser extent, extraversion can account for over 20% of the variance with work attitudes. There are some practical implications of the findings on the relationship between work-related beliefs and behaviour and traits. For instance, organizations may want to 'screen out' undesirable traits in the work-place, in this instance, psychoticism in particular, and to a lesser degree neuroticism, although caution must clearly be exercised regarding the over-interpretation of such psychological factors.

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