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National Differences in Work Attitudes Between the UK and Germany

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In a comparative study involving approximately 900 UK and German adults, an attempt was made to explore the strength of the relationships between diverse but related work attitudes and to examine national differences in work attitudes, which may be related to economic growth. The UK sample preferred business-oriented occupations, rather than the professions—medicine, social work and teaching—(jobs in which Germans expressed higher interest) and was characterized by higher scores on work ethic, achievement motivation, competitiveness, and achievement/conformity, but lower scores on positive attitudes to savings. No significant difference was observed in terms of financial beliefs (valuation of money) or mastery. Work attitude and occupational interest were intimately interrelated, although the relationship was significantly moderated by gender. Socio-historical economic and political origins of these similarities and differences are discussed, along with the theoretical and methodological implications of these findings.

INTRODUCTION

It is often conjectured that attitudes to work (i.e. the work ethic, beliefs about money and savings, and achievement motivation) underlie national differences in economic growth (Lynn, 1991; McClelland, 1976; Weber, 1905/1929). The association between (Protestant) work ethic and capitalism

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was originally formulated by Weber in 1905. Unlike Marxist theory, which emphasizes economic determinants of capitalism, Weber felt that metaphysical beliefs were responsible for the growth of capitalistic economies. However, McClelland (1961) developed a socio-psychological explanation for the relationship between capitalism and protestantism. He argued (quoted in Furnham, 1984a, p. 91) that work ethic is influenced by child-rearing practises of, "independence, procrastination of gratification, rationality and mastery training, which in turn leads to the children acquiring strong achievement motivation", the latter representing a basic, underlying personality trait. Thus, whereas Marx stressed economic and political factors and Weber religious factors, McClelland emphasized the importance of psychological factors (particularly the need for achievement, affiliation, and power) in the development of an individual's and a country's overall wealth.

Recent psychological studies on work-related attitudes have yielded some particularly interesting results (Kirkcaldy, Furnham, & Lynn, 1991; Lynn, 1991). Furnham (1987, p. 94), who continued McClelland's research, asserted that high achievers become, "successful entrepreneurs and create the expansion of business becoming successful capitalists." People with a high need for achievement tend to succeed in obtaining monetary or other rewards. Although McClelland identified three factors related to achievement: need for achievement, affiliation, and power, it is the need for achievement (n.Ach) that appears the central variable conceived of at the level of the individual and extrapolated to society. McClelland's theory has generated much research on the sociological and psychological factors that determine n.Ach and on the economic consequences for these beliefs in national figures. There are, however, inadequacies and equivocalities, which include methodological shortcomings in the measurement of n.Ach (unreliable, unrepresentative or of limited scope), theoretical inadequacy (failure to adequately specify the social context in which n.Ach develops and the manner in which it is transmitted to entrepreneurial activity and economic growth), and policy relevance (policy-makers have little influence over n.Ach, which McClelland views as being determined by such factors as religious ideology and childrearing practises). Sceptics have claimed that, in concentrating on the impact of n.Ach on entrepreneurial activity, McClelland "overlooks" sociological, political, and economic practises that may affect entrepreneurial activity, irrespective of an individual's values and personal beliefs (Eisenstadt, 1963; Frey, 1984). Hence, "the main argument against McClelland's approach is that while psychological factors may be necessary, they are not sufficient to foster or sustain economic growth." (Furnham, 1990, p. 28-29).

Over the years, however, there has been substantial effort to develop instruments to measure the need for achievement (Fineman, 1977; Tziner

& Elizur, 1985), and the theory itself has been elaborated and refined (Furnham, 1990; Lea, Tarpy, & Webley, 1987),

Money beliefs and financial attitudes have unfortunately been a neglected topic, partly due to inadequate standardized instruments for assessing money beliefs and behaviour, partly due to a taboo associated with money, and partly to a lack of rapprochement between psychology and economics (Furnham, 1984b). An interesting intersect for study is that between money beliefs and attitudes to savings and work ethic. Work ethic can be conceived as a belief system—a set of attitudes, values, and attendant behaviours—concerned with work and related issues such as money (Furnham, 1990). More specifically, Protestant work ethic (PWE) can be considered as an important individual difference variable related to human motivation and involving a, “coherent, bi-polar belief system similar to the locus of control or just world beliefs constructs.” (Furnham, 1984a, p. 100). It seems to be associated with collecting, security, miserliness, and saving (Furnham, 1984a), as well as with autonomy and power, “PWE values and practices like training in postponement of gratification, stressing autonomy and focussing on the necessary contingency of all behaviours, are more likely to relate to later monetary beliefs and behaviours.” (Furnham, 1990, p. 61).

Another potentially important factor in economic growth is competitiveness. In a study of over 43 countries Lynn (1991) found that competitiveness (more than any other psychological variable) was the best predictor not only of economic growth over the years 1970–85 but also of per capita income measured by Gross Domestic Product in 1985.

Gender differences in work attitudes have been explored extensively. Bartol and Martin (1986) examined the evidence supporting the claim that women are more cooperative and altruistic than men. They report further (Bartol & Martin, 1986, p. 266) that, “cooperative effects are particularly evident in situations involving reward allocations.” Moreover, women tend to be unconcerned about pay, and this low emphasis on equitable pay may be perceived as consistent with the female stereotype of concern for others. Spence and Helmreich (1983) have shown that men express greater competitiveness and valuation of money (Lynn, 1991) than women, but that women usually display higher work ethic, although some researchers have failed to find sex differences in work ethic (Furnham, 1982).

Other workers have reported gender differences in achievement motivation, using a measure of personal excellence in performance (McClelland, 1976). Men in the USA generally score higher than women on this dimension. Theories have been proposed to explain this sex difference, for example, men are supposedly exposed to greater socialization pressures to produce a higher achievement niveau, whilst women may develop anxiety originating from external pressures to avoid success (see Horner, 1970 for “fear of success”). Subsequent investigations failed to replicate these

findings and, if anything, females score marginally higher on achievement motivation (Lynn, 1991). The high levels initially reported amongst men in the USA studies have been ascribed to methodological inadequacies. Inferences drawn from research were tempered by the use of Thematic Apperception Pictures of a specific gender (males). Furthermore, the TAT pictures are outdated, have questionable reliability and validity, and are sensitive to the conditions of testing, e.g. scores are likely to be higher in situations that arouse a need for achievement than when the test is administered in a neutral/relaxed context.

This study is concerned with national (and gender) differences in work attitudes and compares one of Europe's most economically successful countries—Germany—and one of the least successful—the UK. There appears to be a consensually held view, both within and outside the UK, that British workers are less hard-working and productive than many of their European counterparts. Popular records and reports from the turn of the century would tend to confirm this belief. However, despite frequent invectives against the British worker for displaying little sign of the PWE there is little evidence to support this view (Nichols, 1986).

Several issues remain to be resolved. Is the long-established wisdom concerning the British worker true? Should this be the case, when did the decline occur? What caused it particularly in the UK? There is a wealth of material concerning macro-economic statistics and the UK's relative economic decline, but little empirical evidence exists on worker attitudes. Studies that have compared productivity in diverse European countries—and found the UK lagging behind—tend to invoke attitudes and the Protestant work ethic *post-hoc*, without testing this explanation. Furthermore, Nichols (1986) has shown that, even if British productivity is shown to be significantly lower than most other competitors, several alternative valid explanations may be provided without resorting to concepts of work attitudes. For instance, the lack of investment in the workplace, management practices, or a decline in work ethic of the managers (rather than the workers), may be the main causes for this decline. Thus, it is possible to observe the paradoxical situation of a maintenance or increase in worker PWE while simultaneously witnessing a comparative decline in productivity.

In a study of European value systems, Abrams, Gerard, and Timms (1985) found that the British appeared committed to their work, are exceptionally proud of and satisfied with their work and look forward to it (Kirkcaldy & Cooper, in press a). They further revealed a relatively strong emphasis on work as an interesting and satisfying way of life. Positive features were readiness to accept the existing pattern of ownership and management, commitment and satisfaction to work, and a growing interest in information and explanation as a basis for authority. Conversely,

although satisfied with their work, British workers experienced being taken advantage of and a lack of participation in decision-making. They tended to have a wide range of interests outside work, and were ambivalent about the usefulness of unions.

Harding, Phillips, and Fogarty (1986) examined West European attitudes to work using the same database. Three major factors emerged as important aspects of work: (i) opportunity for intrinsic personal development; (ii) extrinsic features associated with security/reward; and (iii) pleasant working conditions. Endorsement of these work-related factors tended to be related to socioeconomic status, political and religious beliefs, and age. For instance, Protestants were more frequently inclined to rate the majority of job characteristics as more important than were Catholics or individuals of no religious denomination. Harding and co-workers expressed caution in interpretation of these findings: Protestant values may facilitate specific aspects of work and work activity, whilst inhibiting other motivating features, such as enjoyment of work and its rewards. Harding et al. (1986) obtained a composite index of an individual's orientation to work, and found workers from Ireland, Denmark, Holland, and the UK to be high, in contrast to German and French workers, who were comparatively low. The Germans were considered to have higher unfulfilled job-expectations. Similar findings have been reported in a recent study of British and German managerial and executive personnel (Kirkcaldy & Cooper, in press a; b). It certainly seems that PWE still is relatively high in the UK, and a decline in PWE appears too simple an explanation for the diverse and complex historical, economic, and socio-political factors that contributed to the relative economic decline in the UK during the last century.

This study sets out to determine the degree of relationship between the diverse facets of work attitude, as well as occupational interests. It was predicted that the seven dimensions measured in this study: (i) work ethic; (ii) desire for mastery; (iii) the importance of savings; (iv) competitiveness; (v) achievement motivation; (vi) attitudes to money; and (vii) conformity, relate to occupational interest in a meaningful manner. For instance, achievement motivation should relate most strongly to "prestige" occupations in which there is recognizable achievement. Conversely, the caring professions (medicine, teaching, and social work) probably correlate negatively with money beliefs and competitiveness. It further explores whether there are gender and national differences in these attitudes that may underlie differential economic growth, specifically, in the strong German economy as contrasted with the British economic decline. It is recognized, however, that a study such as this cannot demonstrate that work attitudes cause economic growth and decline, although this is possible. It is more likely that work attitudes affect the amount of entrepreneurial activity in

a society, absenteeism, the centrality of work in a person's life, etc. (Furnham, 1990). Finally it examines national and gender differences in career preferences.

METHOD

Subjects

A total of 902 British and West German undergraduates/graduates made up the sample (492 women and 410 men). Ages ranged between 17 and 58 years, with a mean age of 22.56 years. Attempts were made to select a quota sample representing the national proportion of men and women from the various academic disciplines (medicine, business administration, educational studies, sport, social work, psychology, and art), from polytechnics and universities in several towns (in Germany, Cologne, Duesseldorf, Marburg, Essen, and Muenster were involved in the study). There were 192 German females and 114 German males; there were 300 British females and 296 British males. Separate analyses for each gender were performed, wherever necessary, to avoid gender bias.

The selection of a wide range of academics of both sexes was partly convenience and partly due to the assumption that this sample would contain a high proportion of potentially well qualified personnel for elite positions in business, the professions, or the academic world, who may therefore share above-average responsibility for the economic success of a country. Whilst the sample cannot be supposed to be representative of the two countries' populations as entities, there is little reason to assume that they will be atypical of the countries' educational elite. Certainly, it seemed an appropriate sample on which to do matched comparisons. If there are national differences in work motivations they should be present throughout the population and detectable in any sample (Hofstede, 1980; McClelland, 1976).

Materials

Subjects were requested to complete (anonymously) extensive questionnaires designed to measure an array of personality and motivational traits associated with work-related attitudes. These encompassed seven dimensions of attitudes towards work plus ratings on various occupational preferences. The questionnaires measured the following traits:

1. *Work ethic*. Weber's classic concept of a moral commitment to work e.g. "I like hard work" and "Part of my enjoyment in doing things is improving my past performance".
2. *Achievement motivation*. McClelland's concept of a need for excellence, although this measure may not be completely in accord with

- McClelland's definition, e.g. "Are you an ambitious person?" and "Do you tend to plan ahead for your job or career?"
3. *Mastery*. The need for mastery over problems and events, 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 more often attempt tasks that I am not sure I can do than tasks that I believe I can do".
 4. *Competitiveness*. The motive to outperform others, e.g. "I enjoy working in situations involving competition with others" and "I feel that winning is important in both work and games".
 5. *Achievement through conformity*. Identification with the organization and its success, e.g. "I liked school", "There is something wrong with a person who cannot take orders without getting angry or resentful" and "I like to plan out my activities in advance".
 6. *Money beliefs*. The importance attached to money, e.g. "I firmly believe money can solve all my problems" and "I would do practically anything legal for money if it were enough".
 7. *Attitude to saving*. The value attached to saving, e.g. "I do financial planning for the future" and "I follow a careful financial budget".
 8. *Occupational preferences*. The strength of preference for a career in business as contrasted with the professions, e.g. company director, farmer, etc.

The three scales: work ethic (based on Weber's classical concept of moral commitment to work), mastery (Spence-Helmreich's construct of mastery), and competitiveness (motive to outperform others) were assessed by an 19-item inventory constructed by Spence and Helmreich (1983). They are rated along a 5-point "strongly agree-strongly disagree" scale. The Savings Scale (Yamauchi & Templer, 1982) represents the importance attached to savings, and is used in conjunction with the Money Beliefs Scale, which assesses the valuation of money (Furnham, 1984b), both of which are short scales that have been shown to have good reliability. Both require a response on a 7-point rating scale ranging from "never" to "always", or "not-at-all" to "very much". Achievement motivation (McClelland's construct of a need for excellence) is evaluated using the Ray-Lynn scale (Lynn, 1969; Ray, 1979) comprising 14 items rated on a 3-point "Yes-?-No" scale. The scale for Achievement through conformity has ten items and was devised by Gough (1969). As with the Ray-Lynn scale it asks for ratings on a 3-point scale (Yes-?-Not-at-all). It refers to an identification with an organization and its success.

Finally, a Career preference rating scale was provided to gain an estimate of the degree of interest along diverse occupational domains (medicine, social work, company directing, teaching, farming, and small business). This was measured by a questionnaire devised by Lynn (1991).

RESULTS

First, the internal reliability of the scales were examined. Following that, the relationship between the various measures was examined. Finally, national and gender differences were analysed.

Reliabilities

Table 1 reveals that the reliability coefficients range from 0.41 to 0.90 (Germany) and 0.56 to 0.86 (UK). The average absolute difference in alpha coefficient was 0.09 and the largest difference was 0.17 (work ethic). Most scales, e.g. competitiveness, have good internal reliability as measured by Cronbach's alpha reliability coefficient. Some scales do not show adequate reliability, such as mastery (0.50) and achievement/conformity (0.41) in the German sample; it is not known why these alphas were so low. As a result, some caution is required in interpreting the data regarding the mastery and achievement/conformity scales.

Correlates Between the Work Attitude Scales

Pearson product-moment correlations were computed between all seven work attitude scales (Table 2). These were computed separately for males and females. The magnitude of the correlations ranged from -0.09 (between money and work ethic for the UK female sample) through 0 to $+0.59$ (mastery and work ethic). Hence, scales share as much as 35 per cent of the common variance. Overall the pattern for the two gender and national groups is remarkably similar, suggesting that the modest but significant overlap between these various measures are picking up reasonably stable attitudes.

TABLE 1
Alpha-coefficients for the Seven Work Attitude
Scales (Germany and the UK)

<i>Scales</i>	<i>Germany</i>	<i>UK</i>
Work ethic	0.57	0.74
Mastery	0.50	0.66
Achievement motivation	0.74	0.79
Competitiveness	0.90	0.86
Savings	0.75	0.77
Valuation of money	0.78	0.82
Achievement/conformity	0.41	0.56

UK–German Differences in Work Attitude Profiles

A between-nation comparison of work attitudes revealed five significant differences. British subjects displayed significantly higher scores along the scales, achievement/conformity ($t = -10.13, P < 0.001$), achievement motivation ($t = -8.08, P < 0.001$), work ethic ($t = -6.20, P < 0.001$) and competitiveness ($t = -5.05, P < 0.001$), but were lower on savings ($t = +4.53, P < 0.001$). The two national groups did not show any statistically significant difference with respect to valuation of money ($t = -1.05, P > 0.05$) and mastery ($t = -0.19, P > 0.05$).

As there were more German females (62.75 per cent) than males (37.25 per cent), which may have biased the between-culture results, separate national comparisons were calculated for each gender. Consistent with the results for the overall means, German men (compared to British men) displayed significantly lower scores on the scales work ethic ($t = -3.21,$

TABLE 2
Correlations Between the Seven Scales for British and German Male and Female Samples

	<i>Work ethic</i>	<i>Mastery</i>	<i>Competitive</i>	<i>Savings</i>	<i>Achievement motivation</i>	<i>Money</i>	<i>Achievement/conformity</i>	
<i>German adults</i>								
Work ethic	-	0.37***	0.28***	0.16*	0.48***	0.08	0.19*	MEN
Mastery	0.46***	-	0.23**	0.17*	0.49***	0.01	0.33***	
Competitive	0.30***	0.21**	-	0.19*	0.35***	0.39***	0.23**	
Savings	0.16*	0.08	0.12*	-	0.32***	0.26**	0.18*	
Achievement motivation	0.43***	0.45***	0.44***	0.34***	-	0.20*	0.45***	
Money	0.15*	0.03	0.15*	0.28***	0.13*	-	0.13	
Achievement/conformity	0.34***	0.24***	0.19**	0.29***	0.39***	0.06	-	
WOMEN								
<i>British adults</i>								
Work ethic	-	0.59***	0.29***	0.33***	0.45***	-0.09	0.39***	MEN
Mastery	0.39***	-	0.33***	0.28***	0.49***	-0.04	0.39***	
Competitive	0.23***	0.22***	-	0.24***	0.53***	0.32***	0.28***	
Savings	0.17***	0.11*	0.09	-	0.44***	0.26***	0.37***	
Achievement motivation	0.45***	0.45***	0.31***	0.29***	-	0.19***	0.51***	
Money	-0.01	-0.01	0.37***	0.18***	0.15**	-	-0.01	
Achievement/conformity	0.39***	0.38***	0.16**	0.32**	0.53***	-0.00	-	
WOMEN								

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. German sample: $n = 114$ males, $n = 192$ females; British sample: $n = 296$ males, $n = 300$ females.

$P < 0.01$), competitiveness ($t = -2.25$, $P < 0.02$), achievement motivation ($t = -3.07$, $P < 0.01$) and achievement/conformity ($t = -4.40$, $P < 0.001$), but scored higher on attitude to savings ($t = +2.39$, $P < 0.02$).

Similarly, in the comparison between British and German women, German women scored lower on work ethic ($t = -5.70$, $P < 0.001$), competitiveness ($t = -4.91$, $P < 0.001$), achievement motivation ($t = -7.53$, $P < 0.001$) and achievement/conformity ($t = -10.23$, $P < 0.001$), but were higher on attitude to savings ($t = +4.07$, $P < 0.001$).

Gender Differences in Work Attitudes

As shown in Table 3, men in both national groups were more competitive and higher in money beliefs than women. Women showed higher scores

TABLE 3
Sex Differences on the Various Scales for Each National Group

	Germany (n = 306)			UK (n = 596)		
	Men	Women	P	Men	Women	P
Work ethic						
mean	17.46	18.17	n.s.	18.74	19.70	0.001***
SD	3.52	2.92		3.66	2.88	
Mastery						
mean	17.89	17.07	n.s.	17.42	17.65	n.s.
SD	4.07	4.34		5.15	4.47	
Competitiveness						
mean	10.12	8.07	0.001***	11.37	9.90	0.001***
SD	4.47	3.92		4.70	4.09	
Attitude to savings						
mean	18.78	18.94	n.s.	16.25	15.68	n.s.
SD	10.25	8.94		9.37	8.43	
Achievement motivation						
mean	29.39	28.81	n.s.	31.28	32.43	0.05*
SD	5.35	4.98		5.69	5.32	
Money belief						
mean	6.61	4.78	0.01**	7.10	5.11	0.001***
SD	5.61	4.73		6.46	5.07	
Achievement/conformity						
mean	21.70	20.94	0.05*	23.30	23.96	0.05*
SD	2.99	3.05		3.42	3.27	

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$; n.s., not significant.

on the work ethic scale, but this reached statistical significance only for the British sample. British women also showed higher scores on achievement motivation and achievement/conformity than men, in contrast to German women who displayed lower achievement/conformity scores than their male counterparts. However, the poor reliability of this last measure throws some doubts onto the replicability of this result.

Occupational Choice Preferences

Figures 1 and 2 show the mean occupational interest scores for men and women for each of the two countries. German women indicate the lowest mean interest score for company director and other "male"-dominated occupations, whereas in the UK, the broad pattern of mean interest rankings for occupations among women is to a great extent reversed, as it is for males in the opposite direction.

With respect to interest in the career of company director, men demonstrated a stronger preference than women in both countries ($P < 0.05$). The teaching profession was rated more positively amongst British women than British men ($P < 0.05$), but was more highly rated amongst German men than German women ($P < 0.001$). There was a trend for women to show a greater interest in the career of social worker than men, but this reaches statistical significance only for the UK population ($P < 0.001$). With regard to the occupation of farmer, British men were characteristically higher in their expressed interest than British women ($P < 0.001$), but no differences were observed between German men and women. Finally, German men exhibited a stronger preference for small business ($P < 0.01$) than German women (this was not so for the British sample). This suggests that different social values and meanings are attached to the different occupations in the two countries.

When the sexes were pooled, and a series of cross-cultural comparisons made for each of the occupational interest scales, several pronounced differences were observed. British subjects yielded significantly higher scores on the business-oriented occupational interests and small business owner-occupational choice (UK, mean (m) 3.87, SD 1.88; German, m 2.56, SD 1.93; $t = +9.60$, $P < 0.001$), as well as with respect to company director as an occupational interest (UK, m 3.00, SD 2.19; German, m 1.55, SD 1.78; $t = +9.78$, $P < 0.001$). In contrast, German subjects showed a marked preference for the professions of doctor (UK, m 2.12, SD 2.00; German, m 2.84, SD 2.12; $t = -5.00$, $P < 0.001$), social worker (UK, m 2.13, SD 1.97; German, m 3.24, SD 1.95; $t = -8.07$, $P < 0.001$) and teacher (UK, m 2.68, SD 2.01; German, m 3.01, SD 2.13; $t = -2.29$, $P < 0.03$). No difference was observed between the countries for farming ($t = 0.98$, $P > 0.05$).

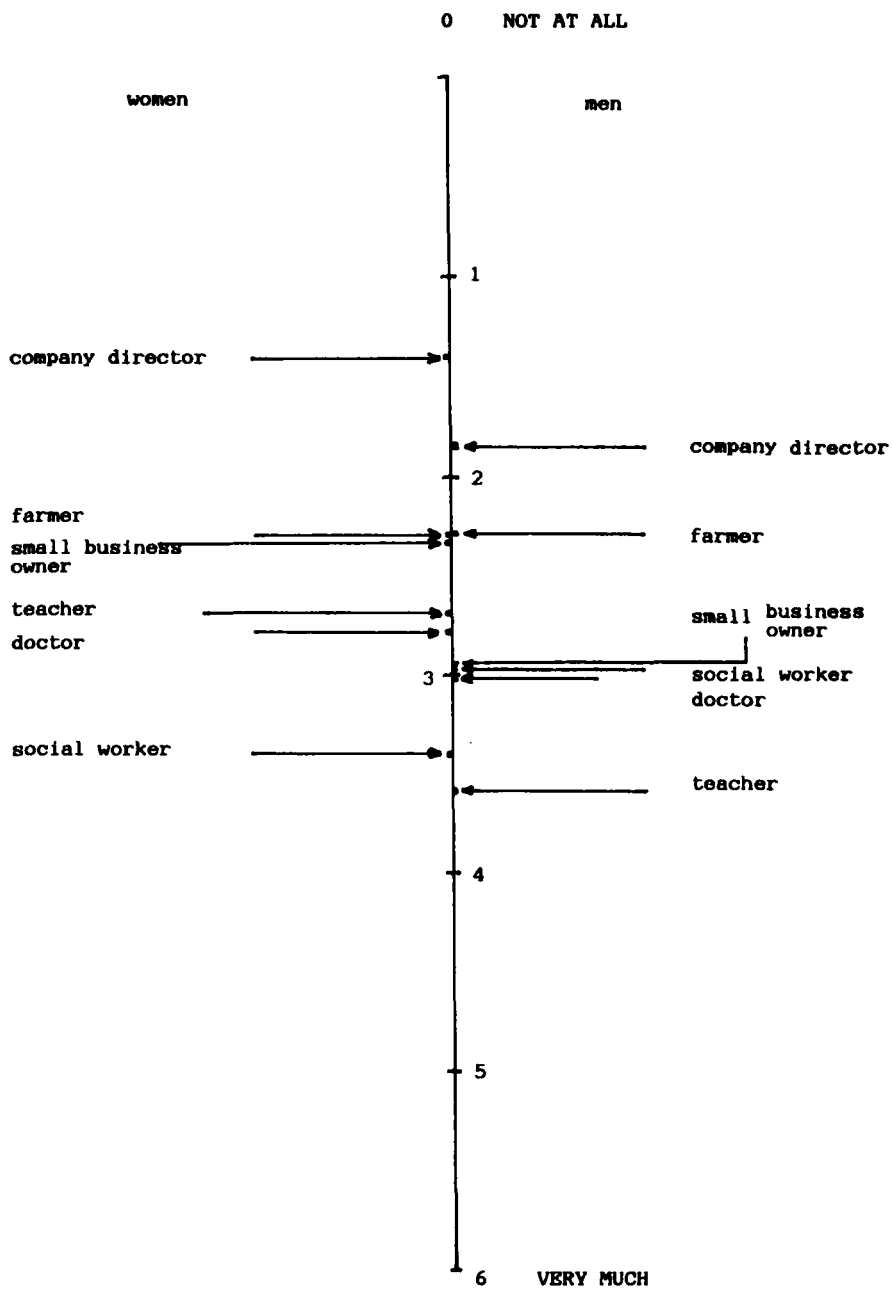


FIG. 1 Mean occupational interest scores for German men and women.

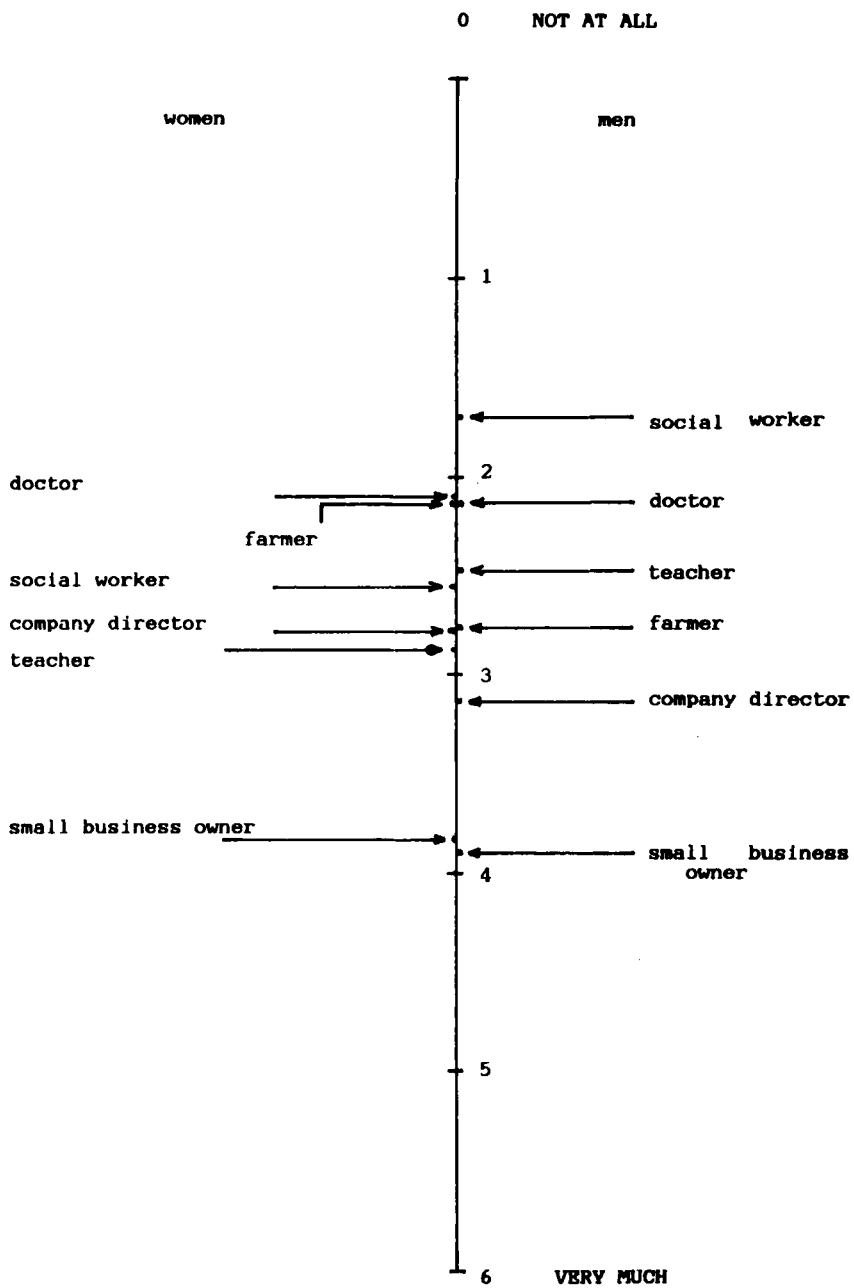


FIG. 2. Mean occupational interest scores for British men and women.

The Relationship Between Occupational Interest and Work Attitudes

From a total of 168 correlations computed, 73 (43.45 per cent) emerged as statistically significant. The magnitude of the correlations was largest between interest expressed in the job "company director" and achievement motivation (they share about 20 per cent of the variance). Negative correlations were reported between the occupation "social worker" and valuation of money, and between the teaching profession and the value of competition (for British men only).

What major patterns emerge from these intercorrelations between work attitudes and occupational interests? Achievement motivation correlates primarily with occupations where recognizable achievement is a significant aspect of that occupation, as compared to occupations like social worker, farmer or teacher. Similar patterns are found for competition and money beliefs. A competitive work attitude is associated with a preference for occupations that symbolize success, e.g. business owner, director or physician. Some relationships are clearly influenced by culture. For instance, competitiveness, achievement/conformity, and mastery are significantly correlated with teaching interests, but for the German sample only. Similarly, for the German students, an interest in the job of "doctor" appears more related to competition (and work ethic) than to money. Finally, an interest in social work was negatively correlated with valuation of money.

TABLE 4
Pearson Product-Moment Correlations between Work Attitudes and Occupational Interests

		<i>Work ethic</i>		<i>Mastery</i>		<i>Competitive</i>	
		<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
Doctor	Germany	0.04	0.21**	0.13	0.21**	0.16*	0.22***
	UK	0.05	-0.03	0.14**	0.11*	0.10	0.14**
Social worker	Germany	-0.02	0.05	-0.02	0.06	-0.14*	-0.07
	UK	0.03	-0.11*	0.03	0.06	-0.07	-0.01
Company director	Germany	0.07	0.03	0.15*	0.14*	0.32***	0.23***
	UK	0.06	0.13*	0.13*	0.22***	0.43	0.31***
Teacher	Germany	0.28***	0.07	0.17*	0.12*	0.18*	0.03
	UK	0.04	-0.01	0.04	-0.09	-0.17***	0.02
Farmer	Germany	-0.04	-0.00	-0.07	0.01	0.05	-0.02
	UK	-0.10	-0.06	-0.07	-0.02	0.08	0.07
Small business owner	Germany	-0.07	0.21***	-0.08	0.14*	0.36***	0.35***
	UK	-0.02	0.08	0.03	0.04	0.31***	0.05

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. German sample: $n = 114$ males, $n = 192$ females;

DISCUSSION

The reliability of each of the scales was satisfactory (except for mastery and achievement conformity, which seem less reliable) and relatively consistent for both nations.

Correlational analyses showed that the findings in both nations were similar.

None of the correlations accounted for more than 35 per cent of the variance between the measures of work attitudes, indicating that although a good "section" of the variance between the scales were shared, a substantial amount of the variance between the attitude scales remains explained by the individual scale.

The results afford credence to Lynn's (1991) suggestion of a psychological mechanism in which competitiveness may be a core trait ("global competitiveness") in a country's economic success: Competitive individuals are inclined to focus their ambitions towards making money, because capital acquisition is regarded as highly desirable. The gender differences in work attitudes for both countries—men scoring higher along the scales of competitiveness and money beliefs—partly supports Wiersma's (1990) contention that men place more value on salary, achievement motivation, and directing others, whereas women emphasize good interpersonal relationships, interesting work, feelings of accomplishment, and professional growth.

(For Men and Women of Each Country Separately)

<i>Savings</i>		<i>Achievement motivation</i>		<i>Money</i>		<i>Achievement/conformity</i>	
<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
-0.04	0.03	0.26**	0.26***	0.10	0.01	0.19*	0.19**
0.21***	-0.00	0.19***	0.08	0.15	0.14**	0.06	0.16**
0.17*	-0.08	-0.08	-0.04	-0.15*	-0.13*	-0.11	-0.09
-0.04	-0.00	-0.13*	-0.07	-0.15**	-0.07	-0.14**	0.02
0.10	0.07	0.43***	0.22***	0.42***	0.16*	0.28***	0.16*
0.21***	0.06	0.41***	0.36***	0.39***	0.24***	0.27***	0.22**
-0.01	0.06	0.24**	0.14*	-0.01	-0.08	0.28***	0.30**
0.04	-0.06	-0.13*	-0.11	-0.08	-0.03	-0.06	-0.03
0.13	0.03	0.04	0.07	0.11	0.08	-0.13	-0.02
0.15**	0.02	-0.02	-0.13*	0.22***	-0.02	-0.02	-0.04
0.13	0.16*	0.08	0.31***	0.34***	0.21**	0.09	0.22***
0.20***	0.07	0.20***	0.16**	0.30***	0.11*	0.09	0.11*

British sample: n = 296 males, n = 300 females.

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The work ethic, which is a dimension associated with a motivation to achieve derived from reinforcement in the performance itself, was also found to be higher among women—particularly among the British sample. This finding is congruent with Spence and Helmreich's (1983) observation that women tend to score a little higher than men, and is further substantiated by Lynn's (1991) large scale international study, in which females in 43 countries scored higher than males in 35 countries.

Why are gender differences strongest on those scales related to competitiveness and finance? Competitiveness is considered a desire to win against others (items include "It annoys me when other people perform better than I do", and "I try harder when I am in competition with other people"). Lynn (1991) found that, consistent with Spence and Helmreich's (1983) earlier findings in the United States, men show an overall tendency to score higher on this scale. Sex differences may have a genetic basis, as males are inclined to compete for rank or "territory" more than females. Alternatively, males tend to be more socialized into becoming aggressive and competitive, particularly with each other. Both explanations are possible but the importance of Lynn's (1991) finding was that competition was the best predictor of economic growth.

Stein and Bailey (1973) examined achievement dispositions among women and men. They reported that both genders were concerned with achievement goals, it is the areas towards which motivations are focused that vary as a function of social norms about gender-appropriate activities. Indeed, Veroff, McClelland, and Ruhland (1975) found that among an adult American population, men and women failed to differ with respect to task competence motivation (similar in content to the achievement motivation scale). Men did, however, score higher than women on the measures of assertive competence motivation (a scale that relates more to this study's competitiveness than to achievement motivation).

The possession of money constitutes a type of status symbol offering some gratification. Lynn (1991, p. 67) comments on the valuation of money:

Money is used as the motivator for work effort. In organisations there are hierarchies of grades which carry differential salaries the object of which is to motivate people to work efficiently to obtain promotion to higher grades. Frequently there are in addition incentive payments of various kinds for efficient work. In small businesses, shops, farms and so on the annual profits are the incentive for the owners to work efficiently.

Money is not the only motivator for work effort, and people appear to differ in the value they attach to monetary incentives. A general trend for males to attach more value to money has been witnessed in all but 3 of 43 nations (Lynn, 1991). Money (particularly disposable cash) does seem to be perceived as being symbolic of success: correlation coefficients of 0.29

and 0.36 were obtained in our study between competitiveness and money beliefs for Germany and the UK respectively (combining gender).

It is not surprising that men were more likely than women to select business occupations (company director and small business owner), as these jobs confer high financial reward and power and men are still, in both countries, more likely to occupy these positions. In fact, men who were conforming in terms of attitudes towards work (competitive and money-oriented) were likely to express more interest in the male sex-stereotyped occupations (company director and small business owner). Consistent with other findings (Moore & Richel, 1980), women in non-traditional (managerial) business roles differed from those in managerial positions in feminine-typed role occupations (e.g. nursing) in terms of their showing greater achievement values and more production-orientation. Hence, women who showed a preference for jobs such as company director and small business owner (rejecting the feminine sex-stereotype) were likely to be higher on mastery, competitiveness, achievement orientation, and valuation of money.

For the British, the caring professions (social worker and teacher) were rated more highly among females (sex-stereotyped), but this relationship was not found in the German group, presumably because teaching professions are comparatively well-paid and generally of a civil-service-type character, with a high socially desirable image. There was no pronounced sex difference for the occupation of doctor, which yields high financial rewards/power coupled with a caring component, indicating that this career is probably attractive to men and women for different reasons.

It would be interesting to examine national statistics concerning the proportion of men and women in both countries who choose to study medicine, farming, social work, teaching, business, and management studies. In this way, it would be possible to establish whether a larger proportion of German males select the caring professions than their British counterparts, and indeed whether British females express more interest than German females in business and managerial occupations.

What reasons are available that may explain the rejection by German male students of the traditionally male sex-typed occupations? German students generally leave secondary education a year later than their British counterparts (at 19 years), and their first degree courses are generally at least a year longer than in the UK. Furthermore, males are required to do "compulsory service" in the armed services ("Bundeswehr") for at least 18 months. Those who opt not to do their military service are required to do 2 years "social" service, e.g. working in a hospital, children's home, social welfare unit, etc. German male students will, on average, be older than their British counterparts, and many will have experienced work in the caring professions prior to entering university, hence interests in social-

oriented professions may well be reinforced as a result. It would be of value to examine similarities in work attitudes and occupational interests in other countries who have compulsory national service.

What differences existed between cultures along the work attitude scales? British subjects displayed considerably higher scores on five of the seven scales (work ethic, achievement, motivation, competitiveness, and achievement/conformity). The effect size was largest for achievement motivation and achievement/conformity (both of which were highly inter-related based on bivariate correlational analysis). Achievement motivation is intended to be a measure of the need to achieve personal excellence in task performance (McClelland, 1976). It is questionable how closely the scale "achievement motivation" in this study reflects McClelland's definition of *n.Ach*. The work ethic scale is at least close to the original definition, whilst the *n.Ach* scale correlates more strongly with the competition scale.

The scale, achievement through conformity, is related to, but in some respects is quite distinct from, achievement motivation. Man as a social being is motivated to some extent by the need to conform to group norms and expectations. This is shown in personal identification with the organization, contributing to the success of a company. Individual motives may be important prerequisites for entrepreneurial and innovative success, but conformity-mediated achievement motives are likely to be conducive to success in large organizations with a common purpose and group commitment. It is interesting that achievement/conformity, in contrast to achievement motivation, is unrelated to valuation of money.

The German subjects exhibited higher scores than the British subjects on just one scale—attitude to savings. This reflects the extent that individuals believe in saving and the security against possible misfortunes offered by saving, e.g. "I do financial planning for the future", "I keep track of my money", "I follow a careful financial budget", and "I am very prudent with money". It could be argued that only financially secure individuals can afford to put money aside for the future. Certainly, in a country with a less powerful economy, such as the UK, it is unlikely that its citizens will be able to save, as saving is clearly a function of disposable income. It could also be argued that after experiencing a defeat at war, the "new" generation of Germans were indoctrinated in the values of "financial caution" (being less carefree with expenditure) and saving (safeguarding against financial misfortunes).

The only aspect of work attitude to reveal no significant gender or cultural difference was mastery. Mastery is a form of competitiveness, but not in terms of social comparisons, rather it, "evokes the reinforcing properties of problem solving, of tackling the difficult task and succeeding in the face of difficulty" (Cassidy & Lynn, 1989). It did emerge as correlated

with interest in the occupations of doctor, company director, and teacher—arguably occupations requiring lengthy periods of qualification/training for their attainment.

The comparison of means for the work attitude scales is interesting because of the differences between Germany and the UK. The UK sample showed higher scores on the achievement and competition-related scales, in contrast to what one might expect from common stereotypes.

There was no evidence that the work ethic was higher in the more prosperous German economic community. Our findings are consistent with those reported in a review of eight studies using different measures of work ethic (Furnham, 1990) in which British subjects scored higher than German subjects on all but one work ethic scale (“spirit of capitalism”). Furthermore, Germans demonstrated lower scores along the dimension of achievement motivation. Thus, both Weber’s and McClelland’s theses received no direct support from this data. Others have argued that work ethic declines after significant developments have been made in a country’s economy. In Germany, for instance, young people have been reported to “openly and explicitly reject the PWE of their parents which may have played a part in the (economic) recovery” (Furnham, 1990).

Even Weiner’s theory (1981) suggesting that the low rate of economic growth in the UK is attributable to the low social status of business as compared with the professions and land estates, was unsupported. The finding was quite the opposite: Germans, both men and women, rated the caring professions higher than the business occupations, in contrast to the British group, for whom caring professions showed the lowest ratings. This too may reflect adoption of a new set of values by the younger German generation, particularly among men who, in rejecting the masculine sex-typed occupations, may be rebelling against the pronounced work ethic of their parents, which was responsible for the economic recovery after the war.

Overall, our findings fit in with those reported by Lynn (1991) in a 43-nation analysis of work attitude. He reports that in the developed countries there was a statistically significant negative correlation between per capita income and interest in the occupation of company director, and a positive correlation between income and the occupations of social worker and teacher. It is likely that as societies become more affluent there is a turning away from the major business occupations. Conversely, the caring professions of doctor, social worker, and teacher become more attractive for young people in economically developed nations. It could, therefore, be argued that countries with a stronger economy, such as Germany, will witness (more than less economically successful cultures such as the UK) many of its young academics being drawn towards the caring occupations and avoiding business-oriented occupations.

Furthermore, according to Lynn (1991, p. 98) it is less a decrease in the strength of work ethic/commitment with increasing affluence in economically developed countries, as a, "redirection of the work ethic from the drive to make money in business and towards the caring professions . . . consistent with evolution of an ethic of hedonism and leisure predicted by a number of sociologists in the post-industrial society."

These results beg the inevitable "so what?" question: namely how is this experimental approach and general perspective of any value, and what implications may this study have in practice?

Although it is evident that work-related attitudes do seem quite useful in predicting occupational interests, the situation is much more difficult with respect to explaining overall economic performance. It is unlikely that psychological variables alone can adequately predict micro- or even macro-economic variables, although they are able to explain some of the unique variance. Certainly, work attitudes may be necessary, but are not sufficient, to instil and maintain economic growth. On the other hand, just as it is unwise to focus solely on psychological variables, the same applies to restricting theories to historical, philosophical, economic, and sociological accounts of economic growth and underplaying individual differences. By using a multidimensional array of developed and reliable work-related measures, there exists an opportunity of testing alternative and rival theories of economic change.

Our conclusions are tenuous, of course, because the comparison is based on two West European countries. But using the same set of questionnaires, recent studies (Lynn, 1991; Kirkcaldy, Furnham, & Lynn, 1991) involving 43 countries from five continents, have convincingly shown that attitudes to competitiveness, money, and savings are clearly and logically related to gross domestic product (GDP) and economic growth over a 10-year period. However, it still remains to be demonstrated whether individual attitudes can be considered a cause of economic change or a product of it (Lea et al., 1987).

On the assumption that work-related attitudes do result in a "superior economy", and that this is socially desirable, what practical tools can be implemented to "sculpt" a specific set of beliefs? Values, attitudes, and behaviour are developed by rewarding them or, in more technical psychological terminology, administering positive reinforcements. It is plausible that a schedule of early learning experiences in family life and at primary and secondary school would provide a context for shaping work attitudes (which it probably does anyway!). Attitudes to leisure, money, and success are almost certainly shaped during early critical periods of education. But as Furnham (1990, p. 226) states, "It is of course difficult, and some would argue highly undesirable, to attempt any mass indoctrination of beliefs and values through state-controlled education." At an individual level, it may be possible to educate and sustain work-related beliefs and values.

Some methodological shortcomings require more detailed attention in future research. For example, the results are dependent on the composition of the populations sampled and it may prove very useful to repeat the analysis on a bigger sample. If, for example, there is a predominance of social worker students in Germany, and should these persons have an "affluent work orientation", then this would simply reflect there being more jobs in the social sector than in the UK. If, however, German students who may be more likely to be in leading positions in the economy (economic and business students) also have different value structures than their British counterparts, our interpretation would be even more convincing. Unfortunately, our study neglected to partition groups according to subject of study. A further criticism is that by selecting young people (students who are generally inexperienced in the world of work) our study may be serving more to anticipate the future of work and work attitudes. Finally, it would have been valuable to incorporate a measure of impression management (social desirable responding) as nations may differ in their openness to respond to personal beliefs.

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