Vlerick Leuven Gent Management School

the Autonomous Management School of
Ghent University and Katholieke Universiteit Leuven

Vlerick Leuven Gent Working Paper Series 2007/14

COGNITIVE STYLES AND PERSON-ENVIRONMENT FIT:

AN INQUIRY ON THE CONSEQUENCES OF COGNITIVE (MIS)FIT

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D/2007/6482/19

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ABSTRACT

There is currently considerable interest in the key elements of person-environment fit to understand vocational behaviour and to develop strategic human resource management practices. In the light of this interest, we wanted (1) to investigate with the new Cognitive Style Indicator whether people within similar functions have similar cognitive styles, and (2) to examine the consequences of cognitive (mis)fit on three work attitudes. We used two large-scale databases (N = 24,267 and N = 2,182) to address these issues. We identified mainly a knowing-oriented cognitive climate in finance, information technology (IT), and research and development (R&D) functions; a planning-oriented cognitive climate in administrative and technical and production functions; and a creating-oriented cognitive climate in sales and marketing functions and general management. Furthermore, our findings demonstrated that people with a creating style show more job search behaviour and intention to leave than people with a planning style, irrespective of the cognitive climate they are working in. We contribute to increased understanding of the influence of cognitive styles on organisational behaviour and work attitudes. This study is relevant for selection and recruitment policies of organisations and in the context of training, job design, and workforce planning.

INTRODUCTION

A major concern of organisational behaviour research is to understand and predict how people behave in organisational settings. To this end, researchers need to consider both person and situation factors and how they interact (Chatman & Flynn, 2005). Many organisational behaviour researchers have examined individual differences with respect to their impact on people in work settings (*e.g.*, Church & Waclawski, 1998; Judge & Cable, 1997; Nordvik, 1996). Given the amount of money that is spent in attracting, recruiting, selecting, training, motivating, and retaining high-quality employees, a lot of studies are conducted on person-environment (PE) fit (Ehrhart & Ziegert, 2005; Ployhart, 2006). A better understanding of the reasons why people leave their job and what satisfies them can improve selection and retention efforts and thus lead to large monetary savings.

One individual characteristic that is studied in the context of PE fit are cognitive styles (*e.g.*, Brigham, De Castro, & Shepherd, 2007; Chilton, Hardgrave, & Armstrong, 2005). Different scholars have investigated the occupational and work environment preferences of people with various cognitive styles, assuming that people self-select for jobs and environments in which the work demands are compatible with their preferred way of information processing (*e.g.*, Hirsh & Kummerow, 2000; Kirton, 1994; Whooten, Barner, & Silver, 1994). These studies have claimed that particular cognitive styles may be more suited than others for particular job types or work environments (Sadler-Smith, 1998). The identification of similarities in preferred ways of dealing with information within occupational groups has been considered to constitute a cognitive climate within the overall organisational climate (Kirton & De Ciantis, 1994).

Furthermore, as cognitive styles tend to be stable characteristics, people can not easily alter their style to suit the environmental demands (Clapp, 1993). A match between the job demands and one's style preferences has been expected to yield positive outcomes (*e.g.*, job satisfaction, organisational commitment), whereas a mismatch is expected to lead to negative outcomes (*e.g.*, increased turnover, interpersonal conflicts) (Fuller & Kaplan, 2004; Sadler-Smith & Badger, 1998). Contrary to the large emphasis on the importance of cognitive fit in theoretical works, few studies have investigated empirically whether cognitive (mis)fit actually leads to these expected outcomes.

We had two goals with this research: (1) to further investigate cognitive climates in organisations by focusing on the link between cognitive styles and occupational differences, and (2) to examine the impact of cognitive (mis)fit on job satisfaction, job search behaviour, and intention to leave. We conducted two studies to address these issues. The uniqueness of our research lies in two major aspects: (1) we used two large databases, with employees from diverse sectors and job types, to learn more about cognitive climates in organisations; and (2) we did not only study cognitive (mis)fit in different work environments, but also linked it with positive and negative work attitudes. Given the increased attention for cognitive approaches within industrial, work, and organisational (IWO) psychology (Hodgkinson, 2003) and the recent interest in the strategic role of human resource (HR) management in organisational performance (Werbel & DeMarie, 2005), we believe it is highly valuable to enhance our understanding on the impact of cognitive style differences in the context of PE fit.

THEORETICAL BACKGROUND AND HYPOTHESES

Cognitive styles

Building on existing conceptualisations (Hayes & Allinson, 1998; Messick, 1984), we define a cognitive style as the way people perceive stimuli and how they use this information to guide their behaviour (*i.e.*, thinking, feeling, actions). Cognitive styles are extensively studied in diverse research domains because they are considered to be the missing link between personality and cognition (Grigorenko & Sternberg, 1995; Riding & Rayner, 1998). They have gained prominence in the organisational behaviour and management literature over the last decades (Hayes & Allinson, 1994; Hodgkinson & Sadler-Smith, 2003). Over the years, researchers have identified a large variety of cognitive style dimensions (Rayner & Riding, 1997). Cognitive style researchers have traditionally focused on the distinction between analytical and intuitive thinking (Hodgkinson & Sadler-Smith, 2003). However, results of empirical research on the relationship between different cognitive style measures suggest that cognitive style is a complex variable with multiple dimensions (*e.g.*, Beyler & Schmeck, 1992; Leonard, Scholl, & Kowalski, 1999).

Cools and Van den Broeck (2007) demonstrated the relevance and usefulness of identifying three cognitive styles rather than two: a knowing, a planning, and a creating style. People with a knowing style are characterised by a preference for facts and details. They want to know exactly the way things are and look for facts and data. People with a knowing style prefer a logical, rational, and impersonal way of information processing. People with a planning style show a preference for structure and order. They favour an objective, structured, conventional, and efficient problem-solving approach. Planners like to organise and control and attach importance to preparation and planning to reach their objectives. People with a creating style see problems as opportunities and challenges. They like uncertainty and freedom. People with a creating style have a preference for a creative, unconventional, and flexible way of decision making. Because we found this a valuable multidimensional model to conceptualise cognitive style differences, we used this model in our research project. Cools and Van den Broeck (2007) developed the Cognitive Style Indicator (CoSI) to measure the three-dimensional model.

Work environment

Work environments differ in terms of the information-processing requirements that are placed on individuals (Hayes & Allinson, 1998). Because cognitive styles are individual preferences in information processing, researchers investigated whether they influence people's work environment preferences. Summarising previous studies, it became clear that analytical thinkers preferred to work in well-defined, stable, structured, ordered, and relatively impersonal situations, where they can function within existing rules and procedures and prevailing structures. Researchers found that people with an intuitive style favoured unstructured, changing, highly involving, innovative, flexible, dynamic, relatively personalised environments, where they can work autonomously and in freedom from rules and regulations (for these studies, see: Allinson & Hayes, 1996; Hirsh & Kummerow, 2000; Kirton, 1994; Whooten *et al.*, 1994).

Beside empirical studies on work environment preferences, scholars have extensively examined the link between cognitive styles and occupation type or career orientation.

These studies assumed that people with different cognitive styles differ in their occupational choices as they self-select for particular occupations on the basis of their preferences for certain task and job characteristics. Previous research with the Cognitive Style Indicator found some preliminary results on the link between cognitive style differences and people's job choices (Cools & Van den Broeck, 2007). People with a financial function scored significantly higher on the knowing style and lower on the creating style than people with a function in sales and marketing, or personnel. Allinson and Hayes (1996) found that personnel managers had a more intuitive cognitive style than production, marketing, and financial managers. Mean scores of people on the Kirton Adaption−Innovation continuum reflected the type and nature of tasks they had to do in their job (for an overview of relevant studies, see: Kirton, 2003; Tullett, 1997). People who worked within a structured environment and who were expected to work within prescribed rules (*e.g.*, established bankers), showed a bias towards adaption (*i.e.*, analytical style). People whose job gave them more freedom of action and who functioned within less structure, showed a bias towards innovation (*i.e.*, intuitive style), like strategic planners or people with responsibility for introducing new products within research and development departments. These studies also found that groups whose focus of operation is oriented outside the organisation (*e.g.*, sales and marketing) or across boundaries within organisations (*e.g.*, personnel, strategic planning, project management) had a more innovative cognitive style than those with a focus of operation which is more within function (*e.g.*, production, maintenance, administration).

Because of these diverse work environment preferences and differences between occupational groups, cognitive styles have also been studied in the context of cognitive climates in organisations (Kirton & McCarthy, 1988). Cognitive climate models suppose that the majority of people with a particular cognitive style constitute the group's cognitive climate (Kirton & de Ciantis, 1994). Hayes and Allinson (1998) have suggested that people within many groups in organisations will share a similar cognitive style which is related to the information-processing requirements of their work. To demonstrate the existence of cognitive climates as an aspect of the organisational climate, Kirton and McCarthy (1988) stated that it is necessary to show that groups of similar homogeneity (like occupational groups) have similar and expected cognitive styles. Therefore, we will compare the cognitive styles of people working in different functional domains.

On the basis of previous research on occupational differences, we formulate the following hypotheses in terms of the CoSI model:

> Hypothesis 1: We expect to find a knowing-oriented cognitive climate in finance and in information technology (IT) functions. In other words, people with a job in finance and IT will show a significantly higher mean score on the knowing style than people in other functional domains.

> Hypothesis 2: We expect to find a planning-oriented cognitive climate in administrative, technical, and production functions. This implies that people within these jobs will show a significantly higher mean score on the planning style than people in other functional domains.

> Hypothesis 3: We expect to find a creating-oriented cognitive climate in marketing and sales, personnel, research and development (R&D), and general management functions. In other words, people within these occupation types will show a significantly higher mean score on the creating style than people in other functional domains.

Person-environment (PE) fit

Examining the interaction between particular individual characteristics and the work environment is central to PE fit research. Throughout the years, researchers devoted a great deal of attention to PE fit in different domains, including the field of management (Jansen & Kristof-Brown, 2006), IWO psychology (Arthur, Bell, Villado, & Doverspike, 2006), and entrepreneurship (Brigham *et al.*, 2007). Several reviews on PE fit refer to the elusiveness of the concept, with a multitude of definitions, conceptualisations, and operationalisations (*e.g.*, Jansen & Kristof-Brown, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005). Scholars have, for instance, distinguished various types of PE fit theories according to (a) the focus of attention (*e.g.*, person-organisation, person-group, person-vocation, person-job, or person-supervisor fit), (b) the perspective or content of fit (*e.g.*, the demands-abilities or the needs-supplies perspective, complementary versus supplementary fit), or (c) the measurement of fit (*e.g.*, perceived versus actual fit, objective versus subjective fit).

In general, there seems to be consensus in the different conceptualisations of PE fit that it is concerned with creating congruence between characteristics of the employee and characteristics of the work context or organisation (Edwards, 1991; Kristof, 1996). Employee characteristics may include values, skills, knowledge, beliefs, personality traits, preferences, or cognitive styles, while organisational characteristics can be the climate, culture, norms, expectations, or needs of the work environment. Both the employer and the employee are expected to benefit from this congruence (Arthur *et al.*, 2006; Kristof-Brown *et al.*, 2005). Benefits for the employer include higher levels of productivity, organisational commitment, morale, and lower employee turnover. The benefits for the employee are associated with favourable work attitudes and lower levels of work stress. However, research on the effects of PE fit on work attitudes, intention to leave, and behavioural outcomes has produced mixed results due to the various ways fit has been conceptualised and measured (Arthur *et al.*, 2006; Hoffman & Woehr, 2006; Verquer, Beehr, & Wagner, 2003).

In the context of PE fit research, Chan (1996) introduced the concept of cognitive misfit (*i.e.*, the degree of mismatch between an individual's cognitive style and the predominant style demands of the work context). According to Kirton and McCarthy (1988), it is likely that it is the employee's subclimate within the organisation, which is crucial in determining whether cognitive fit or misfit will occur. We focus on cognitive (mis)fit in the context of cognitive style differences between occupations. More specifically, our study is concerned with actual fit (as opposed to perceived fit), in the context of person-job/occupation fit (*i.e.*, the compatibility between the person and the characteristics of the tasks a person is expected to accomplish), and is related to the needs-supplies perspective (*i.e.*, this perspective suggests that fit occurs when the work context satisfies the individual's needs, values, desires, or preferences).

Cognitive (mis)fit and coping behaviour

Several scholars within the organisational behaviour field refer to the importance of cognitive fit in the context of recruitment, selection, job design, and workforce planning (Armstrong & Sadler-Smith, 2006; Sadler-Smith, 1998). A fit between one's cognitive style and the job demands is expected to result in positive outcomes (*e.g.*, job satisfaction, organisational commitment, career success), while a mismatch is expected to lead to negative outcomes, like increased turnover, less motivation, higher levels of work-related stress, or interpersonal conflicts (Chan, 1996; Chilton *et al.*, 2005; Fuller & Kaplan, 2004). Kirton and McCarthy (1988) argued that people who find themselves in a cognitive climate that is not suited to their cognitive style are likely to be unhappy and will try to leave the environment. Kirton (1994b) referred to coping behaviour in the context of cognitive misfit. Coping behaviour implies using strategies and tactics in such a way that they sufficiently influence one's behaviour to meet the objectives in a particular situation. It intervenes between one's stable, preferred cognitive style and actual, needed behaviour (Hayes & Allinson, 1994). Clapp and de Ciantis (1989) concluded that people might modify their overt behaviour to fit the environmental demands, but that their underlying cognitive style remained intact. But it requires energy to show coping behaviour and function outside one's natural cognitive style. When people are under pressure, they will fall back to their less effortful natural style (Kirton, 1994).

Few empirical studies have been conducted to test the assumed consequences of cognitive (mis)fit. We identified four relevant, recent studies that each focused on another occupational group. In a study with engineering functions, Chan (1996) concluded that cognitive misfit was uncorrelated with employee performance, but provided significant contribution to predict actual turnover. Chilton *et al.* (2005) found that performance decreased and stress levels increased as the gap between the software developers' cognitive styles and the perceived environment demands became wider. Fuller and Kaplan (2004) concluded that the task performance of auditors significantly interacted with their cognitive style. Analytical auditors performed better on analytical tasks than on intuitive tasks and vice versa for intuitive auditors. In a recent study with entrepreneurs, Brigham *et al.* (2007) found that cognitive misfit led to lower levels of satisfaction with the work environment and higher levels of intention to exit and actual turnover.

To investigate the impact of cognitive (mis)fit, we selected three work attitudes that are relevant in the context of PE fit (Kristof-Brown *et al.*, 2005; Verquer *et al.*, 2003): one positive outcome (job satisfaction) and two negative outcomes (intention to leave, job search behaviour). Organisational behaviour researchers found an inverse relation between job satisfaction and job search behaviour (Boudreau, Boswell, Judge, & Bretz, 2001) and intention to leave (Hellman, 1997; Tett & Meyer, 1993). Job search behaviour and intention to leave are widely studied in the organisational behaviour and human resource management literature as antecedents of actual turnover in organisations (*e.g.*, Griffeth, Hom, & Gaertner, 2000; Kopelman, Rovenpor, & Millsap, 1992). On the basis of the theoretical discussion on cognitive (mis)fit and the limited number of relevant empirical studies, we formulate the following hypothesis:

> Hypothesis 4: People who work in a cognitive climate that suits their cognitive style will show higher levels of job satisfaction and lower levels of job search behaviour and intention to leave than people who are in a situation of cognitive misfit.

METHOD

Studies

Study 1. In the first study, we used data from people who completed an internet tool on *Vacature.com*, a Belgian website that specialises in recruitment communication and job advertising. The Competence Indicator is a tool that aims to assess the individual profile of people and accordingly provides them with relevant feedback for their further career. We analysed data from the first four years the tool was online. After cleaning the dataset, 24,267 useful questionnaires remained for this research project. Sixty-two per cent of these respondents were men, and 38 per cent were women. Sixty-four per cent of respondents were aged 21−35 years, and 22 per cent 36−45 years. Eight percent was aged over 46 years and 6 per cent was younger than 21 years. All educational levels were represented: 37 per cent of respondents had a university degree, 43 per cent a non-university higher education degree, and 20 per cent a degree of secondary school.

Respondents displayed a wide variety of careers: 31 per cent performed an IT function, 23 per cent a job in sales and marketing, 14 per cent an administrative function, 11 per cent a finance function, 7 per cent a job in personnel, 6 per cent general managers, 5 per cent research and development, and 3 per cent a technical and production job. Different sectors were represented, including bank and finance companies (36 per cent); telecom, ICT, and internet (26 per cent); media, entertainment, and communication sector (10 per cent); chemical and pharmaceutical companies (8 per cent); consulting and HRM companies (8 per cent); government, non-profit, and healthcare organisations (7 per cent); and logistics, transport, and distribution companies (5 per cent).

Study 2. We used data from a large-scale Belgian career decisions survey for the second study. Like in the first study, we collected data through *Vacature.com.* The survey focused on aspects that are important for people regarding career decisions, including measures of job satisfaction, intention to leave, and job search behaviour among others. We had a total of 2,182 useful questionnaires for this research project after cleaning the dataset. Sixty-one per cent of these respondents were men, and 39 per cent were women. The majority of the respondents were aged 20−35 years (59 per cent) or 36−45 years (25 per cent). Different educational levels were represented, including 14 per cent with a degree of secondary school, 47 per cent a non-university higher education degree, and 39 per cent a university degree. This sample showed a fairly similar gender, age, and educational level ratio than the sample from the first study.

People performed a variety of functions, including 24 per cent within sales and marketing, 17 per cent with an IT job, 16 per cent with an administrative function, 11 per cent in research and development, 10 per cent within personnel, 8 per cent in a technical and production function, 7 per cent general managers, and 7 per cent within finance. Different sectors were represented: government and healthcare organisations (26 per cent), IT companies (22 per cent), bank and insurance companies (17 per cent), chemical industry (14 per cent), telecommunication (14 per cent), and distribution and logistics (7 per cent).

Measures

All respondents completed the cognitive style measure. The respondents of study 2 also answered three other scales.

Cognitive styles. We used the 18-item Cognitive Style Indicator (CoSI) to measure cognitive styles (Cools & Van den Broeck, 2007). The CoSI distinguishes between three cognitive styles: a knowing style (4 items, *e.g.*, 'I like to analyse problems'), a planning style (7 items, *e.g.*, 'I prefer clear structures to do my job'), and a creating style (7 items, *e.g.*, 'I like to extend the boundaries'). The response format was a five-point likert scale from 1 (*totally disagree*) to 5 (*totally agree*). Item and confirmatory factor analyses supported the three-dimensional cognitive style model. We found a Cronbach alpha coefficient of .78 and .72 for the knowing style, of .84 and .81 for the planning style, and of .83 and .79 for the creating style in study 1 and 2 respectively.

Job satisfaction. We used a scale of Hoy and Miskel (1982) to assess job satisfaction that measures the degree to which a person is satisfied and happy with his/her job. This is a four-item questionnaire (*e.g.*, 'Generally, I'm satisfied with my current job'), yielding a Cronbach alpha coefficient of .86 in our study. The response format was a five-point likert scale from 1 (*totally disagree*) to 5 (*totally agree*). Higher scores indicated higher levels of job satisfaction (with one item reverse scored).

Job search behaviour. We used the Job Search Behaviour Index (JSBI) of Kopelman *et al.* (1992) to assess job search behaviour. This 11-item scale was developed to sample some of the actions a person might logically be expected to take during job search processes (*e.g.*, 'During the past year have you gone on a job interview?', 1 = *yes*, 2 = *no*). The internal consistency of the scale was .84. We recoded the scale as such that higher scores indicated more job search behaviour.

Intention to leave. We used a short version of the eight-item Staying or Leaving Index (SLI) of Bluedorn (1982) to measure intention to leave. Four items assessed the intentions of people to leave their current job within a certain time period (*e.g.*, 'How do you rate your chances of still working in your current organisation two years from now?'). The Cronbach's alpha coefficient of the scale was .92.

The response format was a seven-point likert scale from 1 (*very high*) to 7 (*very low*). Higher scores indicated higher intentions to leave (with two items reverse coded).

Analyses

Study 1. To test hypothesis 1−3, we performed independent sample *t* tests. We compared for each hypothesis the occupations that are expected to score higher on a particular style with the other occupations. We additionally conducted analysis of variance (ANOVA) with post hoc Scheffé tests to compare the mean CoSI scores for all occupation types.

Study 2. We trichotomised the CoSI scores (which are initially measured with a five-point likert scale) to investigate the consequences of cognitive (mis)fit. We identified three groups within each cognitive style on the basis of the respective means and standard deviations (high = 1 *SD* above the mean; intermediate; low = 1 *SD* below the mean). We used these extreme groups to reduce classification errors that are the greatest around a mean value. Subsequently, we selected the 'high' group of each style for further analyses. As cognitive styles usually are continua ranging from one extreme to another or from low to high for a particular style, it is a common technique within the cognitive style field to use a dichotomy or trichotomy to study differences between styles (*e.g.*, Armstrong, 2000; McNeilly & Goldsmith, 1992; Whooten *et al.*, 1994).

Previous researchers used several procedures to identify the work demands of particular occupations, like subjectively labelling jobs as either adaptive or innovative on the basis of literature (Chan, 1996), on the basis of job titles (Kirton, 1980), or participants' résumés (Foxall, 1986). Chilton *et al.* (2005) and Brigham *et al.* (2007) used questionnaires to measure people's perceptions of the work environment, although this is more related to perceived fit (whereas our study focuses on actual fit). To identify the cognitive climates in this research project, we used the results of study 1. This way, we used a rather objective starting point to identify the predominant style demands in the work context instead of subjectively assigning a particular cognitive climate to a particular occupation.

Schneider (2001) also referred to the usefulness of conceptualising the environment as a function of the attributes of the people in them. This means, in his perspective, assessing the environment on the basis of the aggregate of individuals in the environment. We performed ANOVA within each of the cognitive climates to investigate whether people with different cognitive styles showed significant different scores on the three work attitudes (Hypothesis 4).

RESULTS

Descriptive statistics

Table 1 shows the correlations of the study variables (Study 2), together with the corresponding means, standard deviations, and alpha reliabilities.

Insert Table 1 About Here

None of the cognitive styles correlated significantly with job satisfaction (knowing style, $r = –.01$, $p = .54$; creating style, $r = –.03$, $p = .24$), except for a very small negative correlation with the planning style ($r = –.04$, $p < .05$). Analysis of variance showed no significant differences between any of the cognitive styles and job satisfaction ($F(2,494) = 1.03$, $p = .36$). Remarkably, we found a positive correlation between the creating style and job search behaviour on the one hand ($r = .16$, $p < .001$) and intention to leave on the other hand ($r = .11$, $p < .001$).

Looking at the relationships between the different work attitudes, we see similar results than previous studies (*e.g.*, Boudreau *et al.*, 2001; Hellman, 1997; Tett & Meyer, 1993). We found a strong negative correlation between job satisfaction and job search behaviour on the one hand ($r = –.41$; $p < .001$) and intention to leave on the other hand ($r = –.58$; $p < .001$). We found a strong positive correlation between intention to leave and job search behaviour ($r = .49$; $p < .001$).

Cognitive climates

We performed independent sample *t* tests to investigate Hypotheses 1−3. On the basis of previous empirical studies on the link between cognitive styles and occupation types, we hypothesised that people within particular functions (*i.e.*, a function in IT or finance for the knowing style; an administrative or technical and production function for the planning style; and a sales & marketing, personnel, general management, or R&D function for the creating style) would show a higher mean score for a particular cognitive style than people within the other occupations. We found support for these hypotheses, but the reported differences are small (see Table 2).

Insert Table 2 About Here

We additionally checked our findings with ANOVA, comparing the mean CoSI scores for all occupation types (see Table 3). We found that people within R&D scored significantly higher on the knowing style than people with a function in administration, personnel, and sales and marketing ($F(7,24259) = 53.09$, $p < .001$, $\eta^2 = .015$). No significant differences were found for the other job types on the knowing style (*i.e.*, general management, IT, finance, production), but they all scored higher than the overall mean of the knowing style in the total sample ($M = 3.66$; $SD = .73$). We found that administrative functions and technical and production employees showed a significantly higher mean score on the planning style than people in IT, R&D, personnel, and general management ($F(7,24259) = 57.26$, $p < .001$, $\eta^2 = .016$). No significant differences were found for finance and sales and marketing employees on the planning style, but they both scored higher than the overall mean of the planning style in the total sample ($M = 3.42$; $SD = .73$). We found a significantly higher mean score on the creating style for general managers and sales and marketing employees than for people within administration, finance, and personnel $F(7,24259) = 108.18$, $p < .001$, $\eta^2 = .03$). No significant differences were found for the other job types on the creating style (*i.e.*, IT, R&D, production), but they all scored higher than the overall mean of the creating style in the total sample ($M = 3.74$; $SD = .62$).

Insert Table 3 About here

On the basis of these analyses, we identified some cognitive climates. In Figure 1, the z-scores of the knowing, planning, and creating style are represented for the different job types. We found a knowing-oriented cognitive climate for finance and IT employees (on the basis of the independent sample *t* test). We also saw – on the basis of an additional ANOVA – that R&D occupations showed a significantly higher mean score on the knowing style than the other occupations, resulting in a second knowing-oriented cognitive climate. Administrative and technical/production functions yielded a planning-oriented cognitive climate. Finally, we found a creating-oriented cognitive climate for sales and marketing functions and general management. We can not draw clear conclusions for personnel functions, as this function scored low on all cognitive styles.

Insert Figure 1 About here

As stated in the method section, we used the results from study 1 as a basis for defining the cognitive climates in study 2. This means that we used finance and IT functions to constitute a knowing-oriented cognitive climate. We used the R&D function as a second knowing-oriented cognitive climate. Administration and production functions constituted a planning-oriented cognitive climate, while we used general management and sales and marketing functions to form a creating-oriented cognitive climate. Before we proceeded with testing Hypothesis 4 on cognitive (mis)fit, we performed some additional ANOVAs to check the cognitive style differences between people in diverse occupations in study 2.

The trends of study 1 were to a large extent confirmed. People with a financial job scored significantly higher on the knowing style than people in personnel ($F(7,2174) = 4.57$, $p < .001$, $\eta^2 = .015$). No significant differences were found for the other occupations on the knowing style, although people in R&D and IT also scored above the mean on the knowing style in this study. We did not find significant differences between the various occupations for the planning style ($F(7,2174) = 1.59$, $p = .13$, $\eta^2 = .005$), but the highest mean scores on the planning style were shown by people in administrative and production functions.

Analysis of variance showed a small significant difference on the creating style for people in different job types ($F(7,2174) = 2.94$, $p < .01$, $\eta^2 = .009$). We found the highest mean scores on the creating for people in sales and marketing and in general management (but the differences were not significant). We summarised the findings from these additional analyses in Figure 2.

Insert Figure 2 about here

Cognitive (mis)fit

Table 4 shows the results of the various ANOVAs on the work attitudes of people with different cognitive styles in varying cognitive climates. Table 5 gives an overview of the means and standard deviations. We found limited support for Hypothesis 4.

Insert Table 4 & 5 About here

Knowing-oriented cognitive climate. When we look at the results of the ANOVAs in the first knowing-oriented cognitive climate (constituted of IT and finance functions), we found no significant differences between people with different cognitive styles on job satisfaction ($F(2,192) = .94$, $p = .39$). People with a high creating style showed higher levels of job search behaviour than people with a high knowing and planning style ($F(2,192) = 5.15$, $p < .01$) and higher levels of intention to leave than people with a high planning style ($F(2,193) = 3.43$, $p < .05$).

Looking at the second knowing-oriented cognitive climate (on the basis of the R&D function), we found no significant differences between the different cognitive styles for job search behaviour ($F(2,113) = 1.97$, $p = .14$) and intention to leave ($F(2,113) = 1.47$, $p = .23$). A small significant difference was found for job satisfaction ($F(2,113) = 3.17$, $p = .05$), although additional tests did not yield significant differences between the knowing, planning, and creating style.

Planning-oriented cognitive climate. We found no significant differences for job satisfaction ($F(2,238) = .77$, $p = .46$) between the three cognitive styles in this cognitive climate.

Also in this climate, people with a high creating style showed higher levels of job search behaviour than people with a high knowing and planning style ($F(2,237) = 11.11$, $p < .001$) and higher levels of intention to leave than people with a high planning style ($F(2,238) = 3.49$, $p < .05$).

Creating-oriented cognitive climate. Finally, in the creating-oriented cognitive climate, we did not find significant differences between the different cognitive styles for any of the work attitudes (job satisfaction, $F(2,356) = .29$, $p = .75$; job search behaviour, $F(2,355) = 2.90$, $p = .06$; intention to leave, $F(2,357) = 1.38$, $p = .25$). We provide a visual summary of these results in Figures 3a, 3b, 3c, and 3d, using the z-scores on the different work attitudes for people with different cognitive styles in various types of cognitive climates.

Insert Figures 3a, 3b, 3c, and 3d About here

DISCUSSION

Different styles, different climates?

Firstly, we wanted to learn more about cognitive climates in organisations. Similar to previous research on the link between cognitive styles and occupational and work environment preferences, we found cognitive style differences for various occupation types, resulting in particular cognitive climates within particular job types. What can we conclude from our research?

Finance. We found that financial jobs can mainly be characterised as belonging to a knowing-oriented cognitive climate. This finding confirms and refines previous studies that found a more analytical profile among people in financial jobs (*e.g.*, Allinson & Hayes, 1996; Foxall, 1986; Kirton, 1994).

Information technology. We found that IT functions can mainly be characterised as belonging to a knowing-oriented cognitive climate. We did not find previous studies that focused specifically on the IT function. We hypothesised to find a knowing-oriented cognitive climate based on the reasoning that people who operate more within function showed a more adaptive, analytic profile (Kirton, 1994), which was confirmed in our study.

Administration. Administrative functions can be defined as planning-oriented cognitive climates. This confirms and refines previous research that found a more adaptive, analytical cognitive climate in administration (Kirton, 2003).

Technical and production functions. We found that technical and production jobs can mainly be characterised as belonging to a planning-oriented cognitive climate, but also seem to have characteristics of a knowing-oriented cognitive climate. This confirms previous studies that found a more analytical profile among people in technical and production jobs (*e.g.*, Allinson & Hayes, 1996; Foxall, 1986).

Sales and marketing. Sales and marketing jobs can be characterised as creating-oriented cognitive climates. This finding confirms previous studies that found a more innovative, intuitive profile among people who do a job that is more oriented outside the organisation and that involves less structured tasks (*e.g.*, Foxall & Hackett, 1994; Kirton, 1994).

General management. General management can be characterised as a creating-oriented cognitive climate. This is consistent with some studies that found that intuition (*i.e.*, an intuitive cognitive style) increased with seniority and was predominant among top managers (*e.g.*, Allinson & Hayes, 1996; Gardner & Martinko, 1996). However, this result is in contrast with research with the Kirton Adaption−Innovation continuum that found a score for general managers equal to the population mean, implying that this function can not be clearly labelled adaptive or innovative (Foxall, 1986). Kirton (1994) clarified this intermediate position with the reasoning that the group of general managers contains subgroups with different cognitive styles, which can be subdivided according to their internal or external task orientation. Moreover, Kirton (1994a) claims that in functions in which people with different cognitive styles can do equally well, the cognitive style scores are expected to approach the population mean.

Personnel. Personnel functions did not show any clear preferences in our study, as they scored low on all styles. Previous studies consistently found a more intuitive, innovative cognitive style for personnel employees (*e.g.*, Allinson & Hayes, 1996; Kirton, 1980).

Research and development. On the basis of our research, research and development jobs can mainly be characterised as belonging to a knowing-oriented cognitive climate, but also seem to have characteristics of a creating-oriented cognitive climate.

This result was rather unexpected because previous empirical studies systematically found that R&D people scored higher on an innovative, intuitive cognitive style (*e.g.*, Keller & Holland, 1978; Kirton, 1984, 1994). However, whereas earlier studies with the Kirton Adaption−Innovation model consistently found a more innovative style for R&D professionals, Tullet and Davies (1997) reported a mean score for R&D personnel that did not differ from the theoretical mean of the KAI continuum (implying no clear preference towards adaption or innovation respectively). Scott and Bruce (1995) found that people who work in R&D positions scored significantly higher on a rational decision-making style than other occupations. These authors clarify this by referring to the technical proficiency and analytical thought that are necessary in these positions.

Importantly, Kirton (1984; 1994; 2003) claimed that there are not only differences between occupational groups within organisations, but also within the boundaries of the job itself. Occupation types can contain differing cognitive style orientations within them, depending on the style demands of the job (*e.g.*, production engineer versus R&D engineer). This might clarify why study 1 and 2 yielded slightly different nuances for some occupations. For instance, a research and development job needs analytical as well as creative thinking, as new products need to be developed based on thorough knowledge and analysis. Depending on whether the focus lies on research (R) or development (D), different cognitive profiles can be needed. We could not further investigate this proposition due to our data collection method (see further). However, even if it was the case that there was high within-occupation variance in cognitive style demands, then the true effect sizes will even be higher than the observed effects because ignoring the within-occupation demands could have attenuated the true relationship (Chan, 1996).

Demystifying cognitive (mis)fit

Secondly, given the importance that is attributed to cognitive fit to stimulate people's effectiveness and job satisfaction and decrease their chance of leaving the organisation, we wanted to investigate whether people in cognitive fit showed higher levels of job satisfaction and lower levels of job search behaviour and intention to leave than people in cognitive misfit. We found limited support for this hypothesis within our research design.

Our results do not confirm the hypothesis that people in cognitive fit are more satisfied with their job, as was found by Brigham *et al.* (2007) in their study with entrepreneurs. However, Rahim (1981) also did not find a link between people's MBTI type and satisfaction with their occupation. Löfstrom (2002) did not find differences between analytics and intuitives on the sources of satisfaction and dissatisfaction in their job. Previous research on cognitive styles and job satisfaction in general (irrespective of occupation type) did not find significant correlations between them (*e.g.*, Gryskiewicz, Taylor, & Fleenor, 1995; Keller & Holland, 1978).

Organisational behaviour researchers agree that job satisfaction is a complex and multifaceted phenomenon, which contains, for instance, satisfaction with the work itself, satisfaction with co-workers, or satisfaction with supervision (Wright & Bonett, 2007). People can be relatively satisfied with one aspect of their job and dissatisfied with another. It is possible that the different aspects of job satisfaction compensate for one another.

Regarding job search behaviour and intention to leave, our findings suggest that it is more related to the characteristics of particular cognitive styles than to cognitive misfit whether people intent to stay or leave. We found that people with a creating style showed more job search behaviour and intention to leave, irrespective of the cognitive climate they are working in (except for R&D functions). Table 1 showed a positive correlation between the creating style and job search behaviour on the one hand and intention to leave on the other hand. Analyses of variance confirms that people who score high on the creating style score significantly higher on job search behaviour ($F(2,492) = 7.66$, $p < .01$) and intention to leave ($F(2,494) = 6.69$, $p < .01$) than people who score high on the knowing or the planning style, irrespective of their occupation. Previous research found that people with an intuitive or creating cognitive style preferred to leave options open, liked to restructure situations, had a proactive personality, and could tolerate ambiguity, which might clarify this higher intention to leave and more intensive job search behaviour (*e.g.*, Cools & Van den Broeck, 2006; Judge & Cable, 1997; Kickul & Krueger, 2004). Schmit, Amel, and Ryan (1993) also found that people who were more open to experience presented more assertive job-seeking behaviour. In contrary, our findings suggest that people with a planning style show the least intention to leave and job search behaviour, irrespective of the cognitive climate they are working in. People with a planning style to search for certainty.

Previous research found a significant negative correlation between the planning style and tolerance for ambiguity on the one hand (Cools & Van den Broeck, 2006) and openness to experience on the other hand (Cools & Van den Broeck, 2007). Previous studies also found that people who are more conscientious tended to be cautious and risk averse (Järlström, 2000; Judge & Cable, 1997).

CONCLUSION

We had two aims with this research project. Firstly, we aimed to enhance our understanding of cognitive style differences between people in different occupations, using a new cognitive style instrument. On the one hand, our findings mostly confirm results from similar existing studies. When looking at the strongest trends, we identified mainly a knowing-oriented cognitive climate in finance, IT, and R&D functions; a planning-oriented cognitive climate in administrative and technical and production functions; and a creating-oriented cognitive climate in sales and marketing functions and in general management. On the other hand, our results also refine and extend previous studies, demonstrating the usefulness and relevance of distinguishing three types of cognitive climates rather than two. This lends support to the predictive validity and practical relevance of the new Cognitive Style Indicator.

Secondly, we wanted to examine empirically the consequences of cognitive (mis)fit on three work attitudes. The uniqueness of our study lies in the exploration of cognitive (mis)fit on one positive and two negative work attitudes together, and in the investigation of different occupational groups at once. Previous studies on cognitive (mis)fit have involved only one occupational group in their research project (*e.g.*, Brigham *et al.*, 2007; Chan, 1996; Chilton *et al.*, 2005; Fuller & Kaplan, 2004). Moreover, reviews on the consequences of PE fit in general came to the conclusion that the evidence on the beneficial versus detrimental effects of PE (mis)fit is mixed and often reveals indirect relationships (*e.g.*, Arthur *et al.*, 2006; Westerman & Cyr, 2004). The major contribution of our study lies in this regard in the demystification of the cognitive (mis)fit concept. We found limited support for the proposition that people in cognitive fit are more satisfied with their job on the one hand, and that they show less intention to leave and less job search behaviour than people in cognitive misfit on the other hand.

These results may not be interpreted as if cognitive fit or misfit is not important or not relevant to clarify work attitudes and organisational behaviour. What they do suggest is that it is not easy to measure cognitive misfit and to understand the process that is behind it. Chan (1996) also concluded that it is a challenging endeavour to understand the consequences of cognitive misfit, due to possible underlying mediating variables, the multidimensional nature of PE fit, and the necessity to include a time dimension.

Moreover, the changing nature of work (*e.g.*, boundaryless careers) and the changing psychological contracts are also affecting the relationships between employees and their work organisation (Ehrhart & Ziegert, 2005; Patterson, 2001; Sullivan, 1999). In sum, studying cognitive misfit probably needs more complex models in which more individual and environmental factors and multiple levels are taken into account. Jansen and Kristof-Brown (2006) also stated that it has become clear that increasing our understanding of single dimensions of fit, in isolation of time and context, is no longer sufficient.

Research implications

We also need to focus on some limitations of our study and address other avenues for further research beside the call for more complex and multidimensional models to study cognitive (mis)fit. First, due to the data collection method – large-scale internet surveys – in this research project, we could not take full advantage of the possibilities to investigate cognitive style differences in various occupations. We did, for instance, not have detailed job descriptions or résumés (*e.g.*, Foxall, 1986; Kirton, 1980). To get a more thorough and refined understanding of cognitive style differences in various job types, future research should look beyond the functional domain in which people are operating, more specifically into the direction in which their work is oriented (internally or externally) or to how much people are in contact with other domains and departments.

Second, although we tried to use a rather objective way of defining the work demands of particular occupations to investigate cognitive (mis)fit by basing ourselves on the empirical results of study 1, this was not without limitations. Again, relying on functional domains to define cognitive climates and cognitive (mis)fit led not always to the expected results.

Remember, for instance, the different results for the two knowing-oriented cognitive climates (on the basis of IT and finance jobs versus on the basis of R&D functions). The conceptualisation of the 'environment' part in PE fit theories is continuously addressed as a weakness in review articles on PE fit research (Furnham, 2001; Kristof, 1996; Kristof-Brown *et al.*, 2005). Future research on cognitive (mis)fit should explore possible opportunities to define accurately the 'environment' aspect (beside the previously used job titles, résumés, or job descriptions). A useful approach according to Chilton *et al.* (2005) and Brigham *et al.* (2007) is to measure the environmental variable instead of assuming or subjectively assigning it.

Third, many scholars have stressed the consequences of cognitive (mis)fit for people's performance. The fit model stated that people will actualise their potential when the organisational climate is congruent with their own preferences, work values, styles, interest, or capabilities (Miron, Erez, & Naveh, 2004). Arthur *et al.* (2006) remained more sceptical about the relationship between PE fit and job performance as they found only a small relation between them that was also partially mediated by work attitudes. Chan (1996) found that cognitive misfit was uncorrelated to employee performance, whereas other studies did find that cognitive misfit led to decreased performance (Chilton *et al.*, 2005; Fuller & Kaplan, 2004). As we did not measure job performance, we could not investigate this issue in our research project. Similarly, we did not include a measure of actual turnover in our study (as was done by Brigham *et al.* (2007) and Chan (1996)). Although intention to leave and job search behaviour yielded remarkable levels of predictive validity for explaining actual turnover (Griffeth *et al.*, 2000; Hellman, 1997), previous studies found that intention to leave or job search behaviour not necessarily led to actual turnover (Bretz, Boudreau, & Judge, 1994; Kopelman *et al.*, 1992). Studying actual turnover instead of intentions or job search behaviour might be an interesting endeavour for further research.

Finally, a longitudinal research design can significantly increase our understanding of cognitive misfit. People do not only self-select for different occupations on the basis of their preferences. According to cognitive climate theories, groups tend to select and retain individuals whose cognitive style agrees with the group's cognitive climate (Kirton, 1980).

Moreover, new entrant groups are expected to conform over a short period of time to the host group's mean, due to turnover, not as a result of individual changes in cognitive style (Kirton & McCarthy, 1988). Hayward and Everett (1983), for instance, found that organisations became adaptive or innovative mainly because people left or stayed according to whether the organisation suited their cognitive style. Thus, individual and group recruitment and selection processes interact and may be mutually reinforcing in creating particular cognitive climates in organisations. This is consistent with the Attraction-Selection-Attrition (ASA) cycle (Schneider, Goldstein, & Smith, 1995). According to the ASA cycle, attraction to an organisation, selection by the organisation, and attrition from it results in particular people being in organisations. It is difficult to assess cognitive misfit only with a cross-sectional design, as misfitting people may already have left the organisation. Moreover, we can not assume that the environment (*e.g.*, work organisation, occupation) is static or fixed, implying that cognitive (mis)fit can fluctuate over time.

Hence, longitudinal studies can contribute to deeper understanding of the influences of the continuously changing environment and the interactive ASA cycles on cognitive (mis)fit.

Managerial implications

Knowledge of the cognitive styles of employees and the cognitive climates in organisations can be useful for the selection and recruitment of future employees and in the context of job design, training, and workforce planning.

Several authors referred to the usefulness of cognitive styles in the context of recruitment and selection (*e.g.*, Chan, 1996; Chilton *et al.*, 2005; Sadler-Smith, 1998). Organisations increasingly use all kinds of formal tests for selection (Arthur *et al.*, 2006; Ployhart, 2006; Wolf & Jenkins, 2006). Although a lot of controversy has surrounded the use of tests in personnel selection (*e.g.*, debates concerning the predictive validity of such tests), Robertson and Smith (2001) have claimed that the last decade has shown an increased confidence of researchers in most personnel selection methods due to the promising results of some recent meta-analytic studies.

As cognitive styles are by nature value differentiated (*i.e.*, non-pejorative, all styles have their merit in particular circumstances), they may be perceived as less threatening for job applications and as such be a useful additional perspective beside ability, personality, or other measures in the process of selection and recruitment (Hayes & Allinson, 1994; Sadler-Smith, 1998). Moreover, cognitive style measures give organisations the possibility to identify people's habitual or typical rather than maximum performance. Importantly, it is necessary to take a whole range of individual and environmental factors into account when selecting people for fit. On the one hand, cognitive styles are only one individual difference, but people differ in many other ways (*e.g.*, gender, personality, age, relevant experience). On the other hand, organisations are not fixed entities, as their goals are likely to change over time (*e.g.*, due to increased maturity of the organisation, growth of the organisation in size, reorganisations) (Brigham *et al.*, 2007; Schneider *et al.*, 1995). This implies that the requirements for particular cognitive styles will also evolve over time. The challenge for managers is to achieve an optimal level of various types of PE fit in the organisation (Kristof, 1996).

Furthermore, Furnham (2001) made an important distinction between two types of fit, being 'fitting the person to the job' (primarily by selection and training), and 'fitting the job to the person' (primarily through work design and ergonomics). In this regard, it can be more important to consider person-task matching when assigning particular work tasks to particular people than to try to recruit the perfectly fitting person for a particular job. Roe and van den Berg (2003) called for a paradigm shift in personnel selection. The classical paradigm, labelled 'the right man on the right place', is "based on the assumption of a universe of stable people and stable jobs, and the idea that selection is basically a matter of matching individuals and jobs" (Roe & van den Berg, 2003, p. 274). The alternative paradigm, labelled 'the theatre model', uses the theatre as a metaphor of the modern work environment. The assumption is this model is "the changeability of people and tasks within an organisational framework that is essentially dynamic and depends on the delivered performance for its existence" (Roe & van den Berg, 2003, p. 275). Selection is in this model a recurrent process that takes place before each new organisational arrangement becomes operational and which is in close connection with training and coaching during the work process.

Accordingly, managers can use cognitive style difference in workforce planning by taking into account the particular preferences and strengths of each of the cognitive styles.

Finally, the debate on the advantages of cognitive fit may not be interpreted as implying that the best result will be obtained from building completely homogeneous environments. Schneider *et al.* (1995), for instance, warned for the negative consequences of homogeneity, like the risk of being unable as organisation to adapt to changing environmental demands or a lack of organisational innovation. Considerable attention is currently devoted to increase diversity rather than fit in organisations. Researchers expect that diversity leads to more perspectives to enhance problem solving and creative thinking and increases the organisation's flexibility to respond to changing environments (Elfenbein & O'Reilly, 2007; McMillan-Capehart, 2005). Moreover, Kirton and McCarthy (1988) emphasised that many groups and departments in organisations contain "wide ranges of style in which not all the less fitting members are necessarily unhappy or ineffective" (p. 181). PE fit theories have stressed the importance of both complementary and supplementary fit (Kristof, 1996). According to Powell (1998), the key is to pursuit PE fit and diversity simultaneously. Consequently, the effective management of cognitive styles and of strategies to facilitate style versatility (*i.e.*, having a mixture of cognitive style profiles) is an important issue for organisations to stimulate individual and organisational learning and innovation and to achieve interpersonal respect and cooperation (Leonard & Straus, 1997; Sadler-Smith & Badger, 1998). Training and developmental sessions can in this respect be important to stimulate style awareness and to develop cognitive strategies to deal with situations that are not commensurate with people's habitual style (Armstrong & Sadler-Smith, 2006; Sadler-Smith, 2000). To conclude, the challenge for managers is to acknowledge the individual differences of their employees and to use them constructively, implying careful consideration about when to 'match', when to 'mismatch', and how to stimulate cognitive versatility (Sadler-Smith, 1999).

In sum, our findings can contribute to increased understanding of the influence of cognitive styles on organisational behaviour and work attitudes, and are relevant in the context of selection, recruitment, training, and job design policies of organisations.

Given the importance of the 'human capital' of organisations for its productivity and efficiency, the recruitment, selection, and retention of an effective workforce is central to the success of organisations (Ployhart, 2006; Wolf & Jenkins, 2006). From recent reviews on personnel selection, it is clear that there is considerable interest in the key elements of PE fit to understand vocational behaviour and to develop strategic human resources management practices (Robertson & Smith, 2001; Roe & van den Berg, 2003; Werbel & DeMarie, 2005). Measurement and assessment, both of current and potential future employees, are important, because they enable organisations to act tactically and strategically to enhance their effectiveness (Batram, 2004).

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TABLE 1

Descriptive statistics, reliabilities, and correlations of variables (Study 2, N = 2,182)

Variable	*1*	*2*	*3*	*4*	*6*	*7*
1. Knowing style	(.72)					
2. Planning style	.48***	(.81)				
3. Creating style	.29***	.15***	(.79)			
4. Job satisfaction	–.01	–.04*	–.03	(.86)		
6. Job search behaviour	.02	.01	.16***	–.41***	(.84)	
7. Intention to leave	.01	–.01	.11***	–.58***	.49***	(.92)
Mean[a]	3.90	3.77	4.00	3.18		3.38
Standard Deviation	.59	.60	.51	.97		1.86

Note. Alpha reliabilities are shown in parentheses on the diagonal; *$p < .05$, **$p < .01$, ***$p < .001$.
[a] All scales used a five-point likert-scale format, except for intention to leave (seven-point likert-scale) and job search behaviour (forced-choice: yes/no).

TABLE 2

Results of comparison of different job types on mean CoSI scores (Study 1, *N* = 24,267)

Hypothesis 1: knowing style					
Job function	*n*	*M*	*SD*	*t* statistic	Partial η^2
IT and financial functions	10,279	3.72	.70	*t*(24265) = 11.24***	.005
Other functions	13,988	3.61	.75		
Hypothesis 2: planning style					
Job function	*n*	*M*	*SD*	*t* statistic	Partial η^2
Administrative, technical, and production functions	3,935	3.58	.71	*t*(24265) = 14.51***	.009
Other functions	20,332	3.39	.73		
Hypothesis 3: creating style					
Job function	*n*	*M*	*SD*	*t* statistic	Partial η^2
Sales & marketing, personnel, general management, and R&D	10,053	3.81	.59	*t*(24265) = 15.25***	.009
Other functions	14,214	3.69	.63		

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

TABLE 3

Job function differences of scores on the Cognitive Style Indicator (Study 1, *N* = 24,267)

		Knowing style		Planning Style		Creating style	
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*
Overall	*24,267*	*3.66*	*.73*	*3.42*	*.73*	*3.74*	*.62*
Finance	2,720	3.73	.71	3.48	.72	3.61	.65
IT	7,559	3.71	.70	3.32	.73	3.76	.59
Administrative function	3,296	3.53	.77	3.58	.70	3.57	.67
Technical & production	639	3.77	.70	3.55	.77	3.78	.61
Sales & marketing	5,536	3.59	.77	3.47	.72	3.83	.58
General management	1,506	3.71	.71	3.41	.75	3.96	.55
Personnel	1,755	3.54	.73	3.34	.73	3.65	.62
Research & development	1,256	3.84	.66	3.34	.74	3.77	.60
F statistic		$F(7,24259) = 53.09^{***}$		$F(7,24259) = 57.26^{***}$		$F(7,24259) = 108.18^{***}$	
Partial η^2		.015		.016		.030	

Note. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

TABLE 4

Results of analyses of variance for work attitudes in different cognitive climates, Study 2 (main effects) [a]

Knowing climate (IT and finance)						
Source of variation	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Job satisfaction	26.88	2	13.44	.94	.393	.010
Job search behaviour	97.20	2	48.60	5.51	**.005**	.055
Intention to leave	348.89	2	174.45	3.43	**.034**	.034
Knowing climate (R&D)						
Source of variation	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Job satisfaction	93.70	2	46.85	3.17	**.046**	.053
Job search behaviour	41.48	2	20.74	1.97	.144	.034
Intention to leave	147.51	2	73.75	1.47	.234	.025
Planning climate						
Source of variation	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Job satisfaction	25.64	2	12.82	.77	.462	.006
Job search behaviour	209.25	2	104.62	11.11	**.000**	.086
Intention to leave	403.26	2	201.63	3.49	**.032**	.029
Creating climate						
Source of variation	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Job satisfaction	9.68	2	4.84	.29	.752	.002
Job search behaviour	59.55	2	29.78	2.90	.056	.016
Intention to leave	158.07	2	79.04	1.38	.253	.008

Note. [a] Knowing climate (finance & IT): $n = 195$; Knowing climate (R&D): $n = 116$; planning climate: $n = 241$; creating climate: $n = 360$.

TABLE 5

Mean scores on work attitudes for various cognitive styles in different cognitive climates (Study 2)

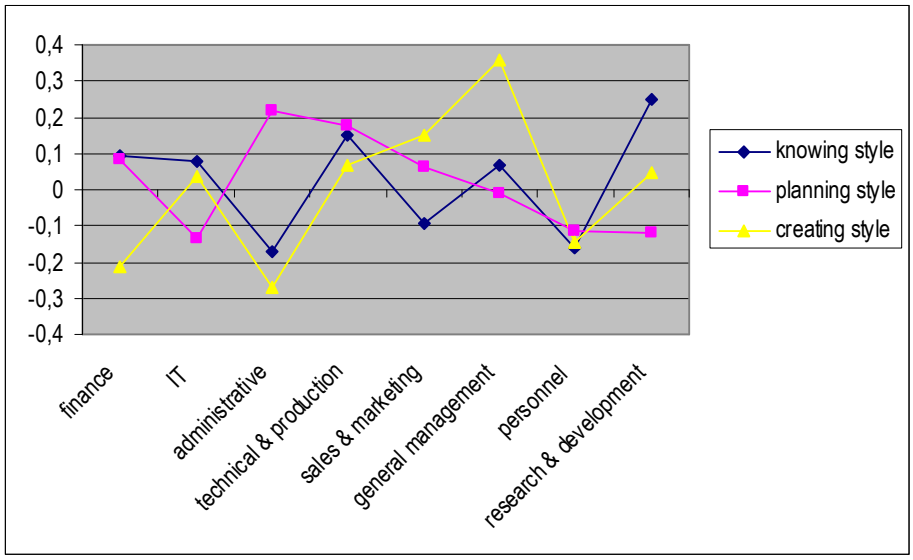
	Knowing style High	**Planning style High**	**Creating style High**
Knowing climate (finance and IT)	*n* = 107	*n* = 33	*n* = 55
Job satisfaction[a]	13.39 (3.80)	12.61 (3.50)	12.67 (3.93)
Job search behaviour[b]	16.47 (3.10)	17.16 (2.78)	18.11 (2.79)
Intention to leave[c]	13.27 (7.39)	12.52 (6.57)	16.00 (6.92)
Knowing climate (R&D)	*n* = 50	*n* = 21	*n* = 45
Job satisfaction[a]	12.70 (3.37)	12.19 (4.61)	14.36 (3.96)
Job search behaviour[b]	17.29 (2.99)	16.81 (3.74)	15.95 (3.26)
Intention to leave[c]	14.44 (6.84)	11.52 (6.74)	12.69 (7.50)
Planning climate	*n* = 78	*n* = 72	*n* = 91
Job satisfaction[a]	12.59 (4.05)	12.25 (4.19)	11.81 (3.99)
Job search behaviour[b]	16.36 (3.14)	16.25 (3.41)	18.23 (2.69)
Intention to leave[c]	13.36 (7.26)	12.56 (7.87)	15.56 (7.66)
Creating climate	*n* = 105	*n* = 89	*n* = 165
Job satisfaction[a]	12.62 (4.00)	12.31 (4.46)	12.72 (4.00)
Job search behaviour[b]	17.02 (3.30)	16.41 (3.23)	17.42 (3.12)
Intention to leave[c]	14.12 (7.63)	13.86 (7.84)	15.32 (7.38)

Note. [a] Measured with a four-item five-point likert scale. [b] Measured with a eleven-item forced-choice scale.

[c] Measured with a four-item seven-point likert scale.

FIGURE 1

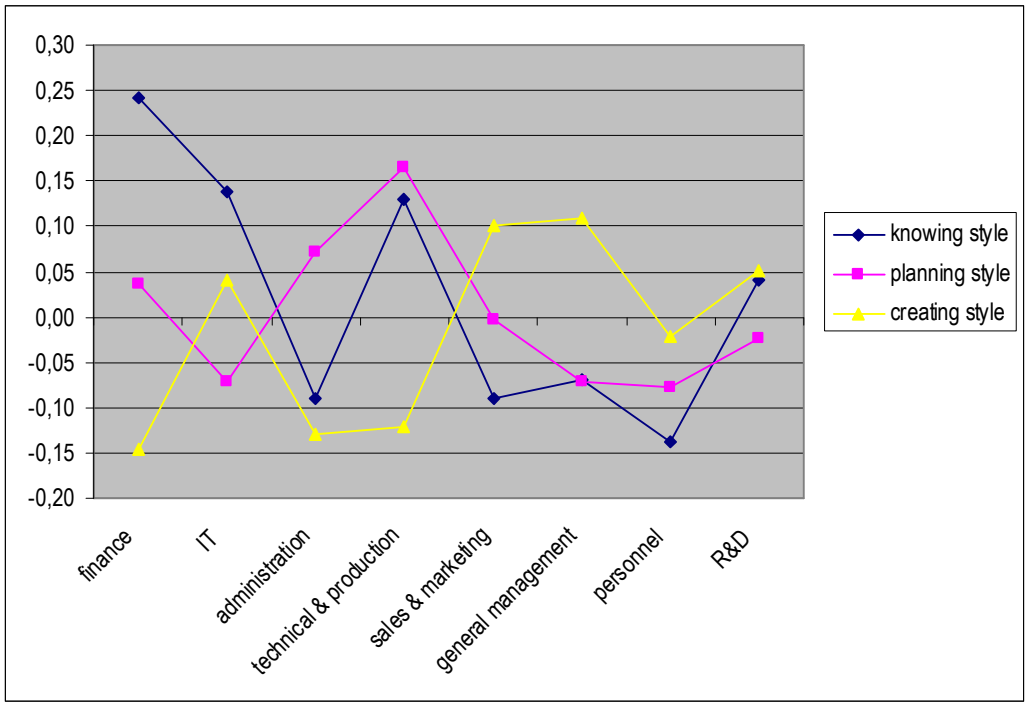
CoSI scores for different job types (Study 1, *N* = 24, 267)



Note. For comparability the mean scores were transformed to z-scores.

FIGURE 2

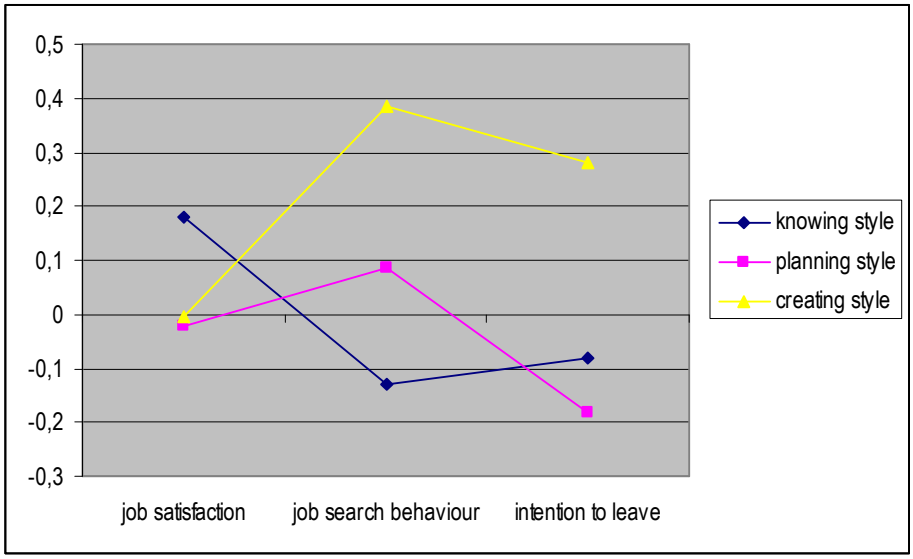
CoSI scores for different job types (Study 2, *N* = 2,182)



Note. For comparability the mean scores were transformed to z-scores.

FIGURE 3A

Work attitudes of people with different cognitive styles in a knowing-oriented cognitive climate (IT & finance functions) (Study 2, *n* = 195)



Note. For comparability the mean scores were transformed to z-scores.

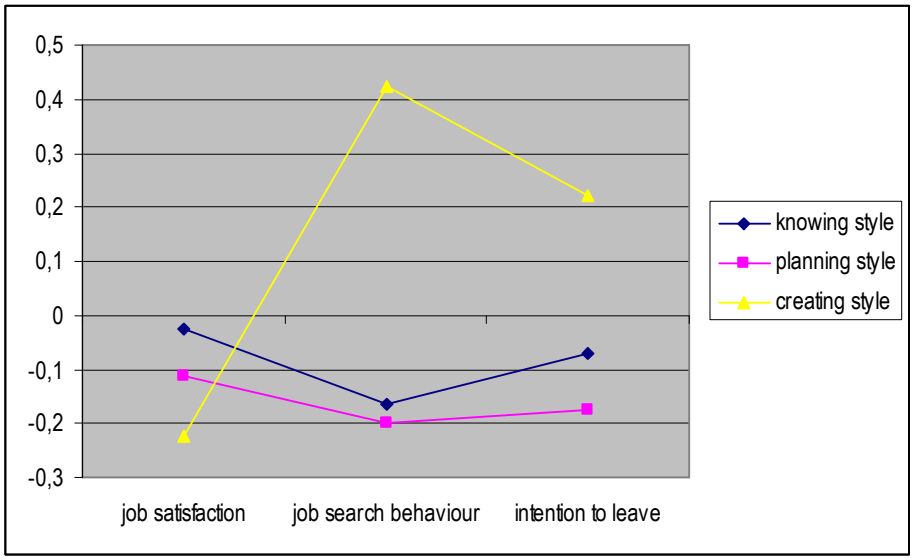
FIGURE 3B

Work attitudes of people with different cognitive styles in a knowing-oriented cognitive climate (R&D functions) (Study 2, *n* = 116)

Note. For comparability the mean scores were transformed to z-scores.

FIGURE 3C

Work attitudes of people with different cognitive styles in a planning-oriented cognitive climate (Study 2, *n* = 241)



Note. For comparability the mean scores were transformed to z-scores.

FIGURE 3D

Work attitudes of people with different cognitive styles in a creating-oriented cognitive climate (Study 2, *n* = 360)

Note. For comparability the mean scores were transformed to z-scores.