



Protean and boundaryless careers: A study on potential motivators [☆]

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ARTICLE INFO

Article history:

Received 21 October 2007

Available online 13 May 2008

Keywords:

Protean
Boundaryless
Motivation
Career
Age
Gender
Culture
Attitude

ABSTRACT

This paper conceptually links hypothesized scales of the Motivation Questionnaire (SHL (1992). *Motivation questionnaire: Manual and users' guide*. Thames Ditton: SHL) to the underlying dimensions of the protean (values-driven and self-directedness) and boundaryless career (physical and psychological mobility) attitudes. Results of regression-analyses ($N = 13,000$) confirmed most of the hypotheses in terms of the influence of gender, age, education, and managerial experience on motivators linked to the underlying dimensions. A cluster analysis that was conducted to explore how many profiles can be observed when matching work motives to the protean and boundaryless careers, resulted in four motivational groups (Protean career architects, Trapped/lost, Hired/hired hand, and Curious/wanderer). The clusters are discussed in light of the current career literature and provide empirical support for the latest theorizing about the protean and boundaryless career models. Managerial implications and directions for future research are offered.

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1. Introduction

In the organizational literature of the last decade the protean career and the boundaryless career are two popular career perspectives (Briscoe, Hall, & DeMuth, 2006). The former refers to a career that is driven by the person, not the organization (Briscoe & Hall, 2002), whereas the latter denotes a career that is “independent from, rather than dependent on, traditional career arrangements” (Arthur & Rousseau, 1996, p. 6). Traditional career arrangements emphasize vertical progression in one or two firms and the amount of success is defined by the organization in terms of increased responsibility and salary (Hall & Mirvis, 1995; Sullivan, 1999).

Despite the success of the protean and boundaryless career perspectives in the academic world, Briscoe and Hall, 2006b, p. 5, remark that “they tend to be interpreted simplistically and at times too intertwined as symbols of the new career”. Therefore, recent efforts have been made by Briscoe and Hall (2002, 2006b) to conceptually separate the two constructs. However, little empirical research exists in general to support the theoretical propositions around them. Hence, several authors (e.g. Briscoe et al., 2006; Eby, Butts, & Lockwood, 2003; Sullivan, 1999; Sullivan & Arthur, 2006) call for research taking into account gender, age, education level and other individual, as well as cultural differences which are hypothesized to influence the protean and boundaryless career attitudes.

[☆] We thank the editor and two anonymous reviewers for their constructive comments on a previous version of this paper.

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The main focus of this study is to explore which work motives might be related to a protean or boundaryless career attitude. Using the work of [Briscoe and Hall \(2002, 2006b\)](#) and [Briscoe et al. \(2006\)](#), motives at work are conceptually matched to the protean and boundaryless careers and hypotheses in terms of gender, age, education, managerial experience, industry sector and culture are constructed. [Briscoe and Hall \(2006b\)](#) discussed the combination of protean and boundaryless career attitudes, which leads to 16 theoretical profiles. An empirical exploration will be undertaken to see how many profiles can be observed when matching work motives to the protean and boundaryless careers.

We will start defining the two career models in more detail by describing their underlying attitudes. Hereafter we will match work motives to these attitudes and build hypotheses in terms of individual and contextual factors that might influence them. This is followed by an exploration of the interplay between motives related to protean and boundaryless career attitudes and the possible link with industry sectors and the resulting career profiles.

1.1. The protean career

A person is considered to have a full protean career orientation when displaying two predominant attitudes: first, the person is suggested to have a 'values-driven' attitude which refers to "a person's internal values that provide the guidance and measurement of success for the individual's career" ([Briscoe & Hall, 2006b, p. 8](#)). These values serve as an 'internal compass' which the individual follows rather than acting upon extrinsic factors such as money, promotion, or outside job offers ([Briscoe & Hall, 2002; Hall, 2004](#)). Second, a protean career orientation also entails 'self-directedness' in a person's own career management, meaning that "one is adaptive in terms of performance and learning demands" ([Briscoe & Hall, 2006b, p. 8](#)). Hence, people who follow a protean career are proposed to learn on a continuous basis and look for work challenges ([Hall, 1996; Hall & Moss, 1998](#)).

According to [Briscoe and Hall \(2006b\)](#), the combination of these two attitudes results in four main career orientations. People who are low on both components are considered 'dependent', as they do not follow their own principles, nor do they manage their career themselves. Individuals with 'reactive' profiles do manage their career, but do not use their internal values as guidance. They will guide their career by external values (e.g. organizational values) rather than internal values. On the other hand if a person is driven by his or her personal principles, but does not have a 'self-directed attitude', the person is considered to have a 'rigid' career orientation, as they are not "able to fully shape their own career" ([Briscoe & Hall, 2006b, p. 8](#)). Finally, it is the combination of being both 'values-driven' and 'self-directed' that leads to a 'protean' career orientation (see [Table 1](#)), according to [Briscoe and Hall \(2006b\)](#). The two attitudes are, however, considered as continua implying that one cannot simply state that a person has a protean career orientation or not, but rather has a certain level of protean career orientation.

1.2. The boundaryless career

Similar to the new conceptualization of the protean career model, the boundaryless career model has two axes on which it is built. The most known and researched dimension by scholars has been 'physical mobility' ([Arthur, Khapova, & Wilderom, 2005](#)), which refers to and is often measured by the mobility across organizations. However this definition is rather limiting. In their new framework [Sullivan and Arthur \(2006\)](#) introduce a definition of physical mobility which is broader, referring to the "actual movement between jobs, firms, occupations, countries" (p. 21).

[Sullivan and Arthur \(2006\)](#) point out that in line with the interest for physical mobility, [Arthur and Rousseau \(1996\)](#) give examples of other boundaries individuals can cross. For example, social expectations about vertical career advancement or work/life balance, creating marketability outside present employers and working in networks across one organization. These boundaries are more psychological in nature, and do not require physical mobility. Therefore [Sullivan and Arthur \(2006\)](#) propose psychological mobility to be the second dimension of the boundaryless career model, defined "as the capacity to move as seen through the mind of the career actor" (p. 21). [Briscoe et al. \(2006\)](#), refer to it as the 'boundaryless mindset', as it is the willingness "to initiate and pursue work-related relationships across organizational boundaries" (p. 31) from a set location.

Table 1
Career profiles: combinations of protean and boundaryless dimensions

Career profile	Protean			Boundaryless		
	Self-directed	Values-driven	Combination	Psychological mobility	Physical mobility	Combination
Lost/trapped	Low	Low	Dependent	Low	Low	Quadrant 1
Fortressed	Low	High	Rigid	Low	Low	Quadrant 1
Wanderer	Low	Low	Dependent	Low	High	Quadrant 2
Idealist	Low	High	Rigid	High	Low	Quadrant 3
Organization man/woman	High	Low	Reactive	High	Low	Quadrant 3
Solid citizen	High	High	Protean	High	Low	Quadrant 3
Hired gun/hired hand	High	Low	Reactive	High	High	Quadrant 4
Protean career architect	High	High	Protean	High	High	Quadrant 4

High and low scores on these two kinds of mobility lead to four broad quadrants (see Table 1). Sullivan and Arthur (2006) define quadrant 1 as low on both types of mobility and quadrant 4 as high on both types of mobility. In quadrant 2 people are high on physical mobility, but low in terms of psychological mobility, and in quadrant 3 the reverse is true. However, it is important to remember that these axes are considered to be continua as well. Hence, in the boundaryless career model, the career attitude of a person is reflected by the degree of physical and psychological mobility which they engage in, and how they interact, rather than applying an “either or” reasoning.

1.3. The combination of protean and boundaryless career attitudes

In the past the two concepts have been used almost synonymously, due to a lack of conceptual precision and the fact that a protean career “can play itself out in multiple organizations” (Briscoe & Hall, 2006b, p. 7), and “is more likely to cross-career boundaries” (Briscoe & Hall, 2006a, p. 1). The authors also argue that the “boundaryless person is more likely to act in a protean fashion” (Briscoe & Hall, 2006a, p. 1). However, the current conceptualizations, as outlined in the previous section, and the first empirical results by Briscoe et al. (2006) make the two career constructs appear to be related, but at the same time clearly distinct from each other. The protean and boundaryless career attitudes tend to influence each other to a certain extent but are likely to impact behavior in very different ways (Briscoe et al., 2006).

Briscoe and Hall (2006b) combine the four underlying dimensions of the boundaryless career and the protean career model, resulting in 16 possible career orientations of which eight are described in greater detail (see Table 1). The other profiles are not discussed as the authors argue that the chance to observe them in a natural setting is rather low. Each profile combines low and high scores on each of the four dimensions, i.e. ‘values-driven’, ‘self-directed’, ‘psychological mobility’ and ‘physical mobility’. For example, on one extreme, people are considered ‘lost or trapped’ when scoring low on all four dimensions: not being driven by personal values or by managing their own career, nor by physical mobility or by working across organizational boundaries. As a consequence this limits them in their career options and the control they have over their career. The ‘wanderer’ refers to a profile where individuals are only driven by physical mobility. The ‘idealist’ on the other hand is driven by personal values and has a psychologically mobile attitude (e.g. the curious professor who works from a set location).

Another extreme profile is characterized by the ‘protean career architects’ whose personal success depends on their own personal principles and actively managing their career themselves. Having a physically mobile attitude and being psychologically boundaryless they “combine all of the potential of both protean and boundaryless career perspectives” (Briscoe & Hall, 2006b, p. 15). A last example is the ‘hired gun/hired hand’ which differs from the protean career architect by being low on the values-driven dimension. As Briscoe and Hall, 2006b, p.14 describe this profile, an organization can “hire their hand but not their heart”, as individuals do not know or respond to their own values.

1.4. Motivation and the protean and boundaryless careers

Briscoe and Hall (2006b) argue that a protean career should be thought of in terms of a career orientation or attitude; it is a certain mindset people have about their career which involves a cognitive, evaluative and behavioral component. According to Briscoe and Hall (2006b) “The behavioral component of the attitude is an action tendency or a predisposition to behave in certain ways” (p. 6). This raises the question of which motives differentiate and drive a protean or boundaryless career attitude. In the following section attitudes of the protean and boundaryless careers are linked to potentially underlying motives.

1.4.1. The protean career

As outlined earlier the protean career attitude consists of being driven by one’s personal values (values-driven) and managing one’s own career in terms of performance and learning demands (self-directedness). Hence, the objective is to identify the predominant work motives for both these aspects of a protean career.

1.4.1.1. Self-directed. The protean career has been explained in terms of career cycles which involves going through several cycles of exploration–trial–establishment–mastery–disengagement (Mirvis & Hall, 1994). Every time when people go through such a career cycle they have to adapt to new performance standards and learning requirements. This ability to learn new competencies each time requires the meta-skill of adaptability (Hall, 1996) which can be learned/trained “from job assignments that stretch us in new ways” (Hall, 2004, p. 10).

Therefore we suggest that a person with a protean career attitude should be motivated by challenging targets and stretching one’s abilities, i.e. achievement. Further, we suggest that being motivated by opportunities for further training and development (Personal Growth), whether it is through formal training or from people in the organization itself, will help people to adapt and to move through a career cycle. Kanfer and Ackerman (2000) have referred to the combination of the desire to learn and achieving as ‘Personal Mastery’ in their motivational trait framework, which has great resemblance with the last phase of a career cycle, as described by Mirvis and Hall (1994). The combination of being motivated by achievement and personal growth is likely to put people in a position that makes it easier to find and adapt to new tasks or roles. Moreover, as one is progressing through these cycles, job security will continue to fade in importance (Hall, 1996) as a result of the capability to adapt and learn. It is therefore suggested that people with a self-directed attitude will be less motivated by job security.

In sum, having a self-directed attitude is defined as being driven by achievement, personal growth, and less by job security.

1.4.1.2. Values-driven. Being values-driven means that one measures his or her success based upon his/her own values (psychological subjective success), rather than climbing up the corporate ladder within an organization (vertical objective success) (Hall, 1996). In line with Hall (2004) we argue that in order to share this aspect of the protean career attitude, an individual should be more motivated by following his own internal compass, or, in other words, by upholding personal ideals or principles, rather than extrinsic motivators such as money, status or promotion.

1.4.2. The boundaryless career

This career attitude is characterized by physical mobility and psychological mobility which can be mapped to specific underlying motives as described below.

1.4.2.1. Psychological mobility. Briscoe et al. (2006) operationalize psychological mobility as a boundaryless mindset, which refers to “the attitude that people hold toward initiating and pursuing work-related relationships across organizational boundaries” (p. 31) from a set location. This implies that one should be motivated by opportunities for interacting with other people, or in other terms, the need for affiliation (Murray, 1938). A higher need for affiliation leads to a higher identification with the organization (Wiesenfeld, Raghuram, & Garud, 2001), which would make them less prone to change organization. Affiliation is also related to extraversion (Costa & McCrae, 1988; SHL, 2002) which has been linked to a higher diversity in social network structure and a more diverse network in terms of content (Fleck, 2008).

People who consider themselves to have ‘the capacity to move’ across traditional organizational boundaries should not only be driven by affiliation; a boundaryless career is also, “more than anything else, characterized by autonomy” as Bird (1994, p. 340) points out. A person who thrives on autonomy will not like imposed constraints or boundaries but prefers to use his or her initiative and to organize the work as he or she sees fit, acting from his/her own will and endorsing his/her actions (Deci & Ryan, 2000). These actions will be “self-organized with respect to their inner and outer circumstances, instead of being merely cued up or prompted by nonintegrated processes or exogenous pressures” which leads to an adaptive advantage (Deci & Ryan, 2000, p. 254). The need for autonomy is likely to motivate individuals to cross existing boundaries and may result in positive and satisfying personal relationships (Hodgins, Koestner, & Duncan, 1996), as well as (affective) organizational commitment (Gagné & Koestner, 2002). Another motivator that might lead to working relationships across traditional boundaries is the drive towards variety and novelty in one’s work (Interest), which is intrinsically rewarding (Deci & Ryan, 2000).

Hence, we suggest that people who have a psychologically mobile attitude are more likely to be driven by autonomy, affiliation, and interest.

1.4.2.2. Physical mobility. Recently, Cheramie, Sturman, and Walsh (2007) used the theory of relative standing to explain physical mobility in a population of executives. Their results indicated that executives consider career changes to improve their pay or status when they perceive it to be lower than in their reference group. Therefore we argue that being motivated by money, status or promotion is part of a physical mobility attitude. The same motivator that might lead to psychological mobility might also lead to physical mobility. As the drive towards variety and novelty in one’s work is also linked to the motivation to work in places where there is something interesting going (Deci & Ryan, 2000). In addition, it seems logical that holding on to one’s job interferes with the basic notion of physical mobility. Therefore we assume that individuals who have a high physical mobility attitude are less driven by job security.

In sum, we argue that people who place importance on a high level of physical mobility are more driven by money, status, promotion or interest, and less by job security.

1.5. Individual differences in demographics and the protean and boundaryless careers

As a response to the call for more research upon the influence of individual differences on the protean and boundaryless career attitude, we will focus on several individual characteristics that could influence one’s career attitude from a motivational point of view.

1.5.1. Gender and the protean and boundaryless careers

1.5.1.1. Gender and the protean career. Although no gender differences were found in the study of Briscoe et al. (2006), we expect women to be more values-driven, as Inceoglu, Segers, Bartram, and Vloeberghs (2008) found that women were more motivated by their personal principles than men. Mainiero and Sullivan (2005) also found that women tend to build a more discontinuous career based upon shifting personal values over a life time (challenge, balance, and authenticity). Men on the other hand tended to have more linear, traditional career patterns (Mainiero & Sullivan, 2005) and were in general more motivated by the traditional measures of career success (e.g. money, status and promotion) than women (Inceoglu et al., 2008; Warr, in press).

Motivators linked to self-directedness are achievement (to adapt to performance requirements) and personal growth (to adapt to learning requirements). We do not expect to see any gender differences in terms of being self-directed, as

men tend to score higher on achievement (Costa & McCrae, 1988; Inceoglu et al., 2008; Mainiero & Sullivan, 2005; Warr, in press), but women tend to be more motivated by personal growth (Inceoglu et al., 2008; Ryff, 1995).

Hypothesis 1: Women have higher scores on values-driven motivation than men; however, there is no gender difference in terms of motivation related to self-directedness.

1.5.1.2. Gender and the boundaryless career. Sullivan and Arthur (2006) propose that women might be more psychologically mobile and men more physically as a result of social and psychological differences. From a motivational viewpoint, one could expect a similar pattern, as women tend to be more motivated by opportunities to interact with people than men (Costa & McCrae, 1988; Inceoglu et al., 2008; Ryff, 1995; Warr, in press). They also tend to build careers that are more relational based (Mainiero & Sullivan, 2005) and are more driven by variety in their work (Inceoglu et al., 2008). Men on the other hand tend to change jobs for money (Mainiero & Sullivan, 2005) and are more motivated by money and promotion (Inceoglu et al., 2008; Warr, in press), which could lead to a higher physical mobility attitude.

Hypothesis 2: Women score higher on motivation related to psychological mobility, while men score higher on motivation related to physical mobility than women.

1.5.2. Age and the protean and boundaryless careers

1.5.2.1. Age and the protean career. Kanfer and Ackerman (2004) draw attention to life-span theories such as Ryff and Baltes (1976) which argue that from midlife people are less motivated by 'instrumental values', such as financial security, and more through 'terminal values' such as 'world peace'. Levinson (1977) pointed out that in the midlife transition period, individuals (especially men) are starting to question what it is that they truly want for themselves and others. In line with this, Sullivan, Martin, Carden, and Mainiero (2003) expect that career-recycling is more likely to happen between the establishment (25–44 years) and maintenance phase (45–59 years) when people are more likely to have developed their own moral compass to guide their career or life which sometimes occurs after a personal crisis. Moreover, with age people are more able to resist social pressures about what to think and do, and are becoming more self-determining (Ryff, 1995) which is reflected in the finding that the motivation to uphold one's principles and ideals has been shown to increase with age (Inceoglu et al., 2008).

From a self-directed point of view, it has been well documented that older people are less motivated to follow trainings and to develop themselves further (e.g. Inceoglu et al., 2008; Maurer, 2001; Warr, 2001; Warr & Birdi, 1998), which is essential to adapt to the learning requirement of each career cycle. In general, it is expected that the decline is a result of a changed cost-benefit trade-off and of greater anxiety about possible learning difficulties (Warr & Birdi, 1998) as with increasing age people seek to protect their self-concept (Kanfer & Ackerman, 2004; Maurer, 2001). Another part of the self-directed motivation is the need to achieve in order to adapt to the performance requirements which tends to decline with age (Kanfer & Ackerman, 2004). More specifically, achievement via independence decreases, while achievement via conformance increases (Warr, Miles, & Platts, 2001; Yang, McCrae, & Costa, 1998). Reasons for the decline are lower energy levels, habituation effects, and a reduced expected value from the effort undertaken with increased age (Warr, 2001).

Hypothesis 3: People score higher on values-driven motivation and lower on motivation related to self-directedness with age.

1.5.2.2. Age and the boundaryless career. Affiliation remains stable across the life span (Costa & McCrae, 1988; Inceoglu et al., 2008). Being motivated by autonomy on the other hand tends to increase with age (Inceoglu et al., 2008; Ryff, 1995). Hence, over a life time one becomes more motivated by defining one's own boundaries, which might lead to a more psychologically mobile attitude.

Based upon the theory of relative standing Cheramie et al. (2007) explained job change, finding that one is less inclined to do so as one becomes older. Typically, external motivators such as money, status or promotion tend to lose their motivational power with age (Inceoglu et al., 2008; Warr, 2001; Yang et al., 1998). This is the result of a decline in terms of the expected value-return as people are more settled, and have less energy (Kanfer & Ackerman, 2004), and as a result of habituation effects (Warr, 2001). Moreover, with age it becomes harder to find a new job in the labor market (e.g. Taylor, 2006). Warr (1997) suggests that the need for job security increases and it has been shown that older employees tend to experience more job insecurity (Näswall & De Witte, 2003). Taken together this might lead to a lower physical mobility attitude.

Hypothesis 4: People score higher on motivation related to psychological mobility and lower on motivators related to physical mobility with age.

1.5.3. Managerial experience and level of education and the protean and boundaryless careers

It is expected that managers and people with a higher education are more self-directed compared to non-managers and people with a lower education, as they have shown to score higher on achievement (Analoui, 2000; Campbell, Dunnette, Lawler, & Weick, 1970; Costa & McCrae, 1988; Warr, *in press*). Moreover, Warr and Birdi (1998) show that the more educational qualifications individuals have, and the more they are used to undertake development activities, the less likely it is that the decline in learning motivation will take place with age.

Managers are more driven by salary, status and promotion (Analoui, 2000; Campbell et al., 1970), which makes it more plausible that they will change organization, as shown by Cheramie et al. (2007). In addition, managers experience less job insecurity (Näswall & De Witte, 2003) as a result of their higher status. Taken together, this could make them more inclined to be physically mobile. Individuals who have a lower education on the other hand tend to experience more job insecurity, as they have fewer employment alternatives (Van Vuuren, Klandermans, Jacobson, & Hartley, 1991) and therefore value more job security (Warr, *in press*). In contrast, the higher educated value more good opportunities for promotion and interesting work (Warr, *in press*). This might make the lower educated less motivated to change jobs.

Hypothesis 5: Managers and people with a higher education score higher than non-managers and people with a lower education on motivators related to self-directedness and physical mobility.

1.6. Contextual differences

1.6.1. Culture and the protean and boundaryless careers

Sullivan and Arthur (2006) proposed that cultural differences might influence the career attitudes. The authors proposed that countries high on individualism might be more physically mobile, due to their focus on personal material rewards, and promotion (i.e. external motivators). Collectivist cultures on the other hand are more focused upon job security and group-rewards and “look to the existing group or organization for evidence of career success” (p. 26) which could make them more inclined to be psychologically mobile.

Therefore, we will explore to which extent some of the theoretically created career profiles may be influenced by the cultural dimensions of Hofstede (1980).

1.6.2. Industry sectors and the protean and boundaryless careers

Sullivan and Arthur (2006) and Briscoe and Hall (2006b) indirectly refer to different industries in the examples they give to describe the different career profiles resulting from combinations of the career dimensions. It seems that one would expect certain career profiles to be more present in certain industries. The attraction–selection–attrition model might explain why this is the case, as Schneider, Smith, Taylor, & Fleener (1998) used the model to predict that within industries and organizations there are relatively homogeneous sets of personality attributes. They argued that organizations and industries tend to attract and select the ‘right people’ and that people will leave or are asked to leave if there is no fit with the organization. Moreover, Hachen (1992) has shown that there are differences between industries in terms of job mobility.

Therefore, we will explore to which extent some of the theoretically created career profiles will be matched by motivational profiles found in specific industry sectors in the data.

2. Methods

2.1. Participants

Thirteen thousand six hundred and fifty-five individuals from Europe completed the SHL Motivation Questionnaire (MQ) between the last quarter of 2002 and the first quarter of 2007 on the SHL Online Assessment System for development or selection purposes. SHL Group Ltd., is an international provider of objectives assessments based in the UK who develops, implements, and sells products (e.g. aptitude test, personality tests, e.g. OPQ) and services that are grounded in scientific research to major corporations, public sector organizations and small- and medium-sized businesses.

The mean age of the sample was 40.11 ($SD = 8.33$) years, of which 64% were men. The majority had a university degree (60%), management experience (65%), and more than 10 years of work experience (63%). No detailed information about the type of jobs held by the respondents was available. However, 18 different industries were present, although there was an overrepresentation of sales (18%) and consulting (8%) profiles, as well as finance, banking, and insurance (11%), manufacturing (8%) and telecommunications (7%). Respondents were from nine European countries: Sweden (22%), Italy (16%), Belgium (15%), Denmark (11%), France (9%), Netherlands (9%), Norway (9%), Germany (5%), and the UK (4%). The overrepresentation of ‘smaller’ European countries resulted from a relative larger geographical presence of SHL in those countries, except in the UK where this specific online assessment system was not used by their clients. Detailed sample characteristics are shown in Table 2.

Table 2
Sample characteristics: frequency and percentages

Variable	Frequency	Percentages
Gender		
Female	4910	35.96
Male	8745	64.04
Age-group		
30 or under	1733	12.69
31–40 years	5654	41.41
41–50 years	4651	34.06
Over 50 years	1617	11.84
University degree		
No	5480	40.13
Yes	8175	59.87
Work experience		
No relevant experience	55	0.00
Causal and vacation work only	166	1.21
<1 year	195	1.42
1–2 years	471	3.45
3–5 years	1366	10.00
6–10 years	2785	20.40
>10 years	8594	62.94
Blank	23	0.17
Management experience		
None	4633	33.93
Up to 2 years	1881	13.78
2–4 years	2064	15.12
5 and more years	4940	36.18
Blank	137	1.00
Country		
Belgium	2003	14.67
Denmark	1552	11.37
France	1287	9.43
Germany	652	4.77
Italy	2169	15.88
Netherlands	1237	9.06
Norway	1165	8.53
Sweden	3038	22.25
UK	552	4.04
Industry		
Call center	125	0.92
Catering	103	0.75
Construction	197	1.44
Consulting	1118	8.19
Consumer goods	140	1.03
Education	305	2.23
Finances, banking and insurance	1567	11.48
Government and public sector	510	3.73
Health and social work	297	2.18
Internet/new technologies	787	5.76
Manufacturing	1142	8.36
Marketing	734	5.38
Retail	140	1.03
Sales	2428	17.78
Science and research	423	3.10
Telecommunication	938	6.87
Tourism	63	0.46
Transport and logistics	392	2.87
Other	2246	16.45

2.2. Measure

Motivation was assessed by the SHL Motivation Questionnaire (MQ; SHL, 1992) which asks respondents to rate a statement as to how it would affect his/her motivation to work, for example, “Being able to learn from others in the organization” (Personal Growth), “The job paying well” (Material Reward). The MQ response scale consists of a 5-point rating scale ranging from 1 = “Greatly reduces my motivation to work” to 5 = “Greatly increases my motivation to work”. The MQ measures 18 dimensions (144 items: 8 items per dimension) that are divided into four broad categories which are based on previous

Table 3
Stepwise regression

Variable	Standardized regression coefficients			
	Self-directed motivators	Values-driven motivators	Physical mobility motivators	Psychological mobility motivators
Gender ^a	-.01	-.06*	.03*	-.14*
Age	-.04*	.11*	-.17*	-.01
Level of education ^b	.19*	-.03*	.14*	.08*
Work experience ^c	.06*	-.04	-.03*	-.03
Management experience ^d	.19*	.02	.07*	.03*
Individualism	-.01	.03	-.02	-.06*
Masculinity	-.10*	-.32*	.15*	-.13*
Power distance	-.09*	.03	-.02	-.00
Industry ^e	-.02	-.04*	.01	-.02
	Model 6	Model 5	Model 6	Model 5
R ²	.10	.13	.07	.06
Adjusted R ²	.10	.13	.07	.06

^a Female = 0 and male = 1.

^b No university degree = 0 and university degree = 1.

^c No experience = 0, <1 year = 1, 1–2 years = 2, 3–5 years = 3, 6–10 years = 4, >10 years = 5.

^d None = 0, up to 2 years = 1, 2–4 years = 2, 5 and more years = 3.

^e Call center = 0, catering = 1, construction = 2, consulting = 3, consumer goods = 4, education = 5, finances, banking, and insurance = 6, government and public sector = 7, health and social work = 8, internet/new technologies = 9, manufacturing = 10, marketing = 11, retail = 12, sales = 13, science and research = 14, telecommunication = 15, tourism = 16, transport and logistics = 17, other = 18.

* $p < .001$.

factor analytical results (SHL, 1992; SHL, 2002). The first factor has been labeled 'Energy and Dynamism' and refers to the quantity and sources of energy with which an individual approaches tasks (e.g. achievement, level of activity). The second factor is labeled 'Synergy' and relates to feeling comfortable and at ease with the work environment. This factor describes aspects of the work environment that tend to be extrinsic to the task itself but are intrinsic to a company culture, values or work environment (e.g. affiliation and recognition). The third factor 'Intrinsic' contains scales linked to intrinsic sources of motivation such as features of jobs and tasks which individuals may find enjoyable or satisfying (e.g. task variety or autonomy). The fourth factor 'Extrinsic' summarizes motivators that are not integral to the task performed but which are gained as a result of working such as money and status. All 18 dimensions are the result of multiple item trials, and present a multi-variate systems framework, cf. (Steers, Porter, & Bigley, 1996) of motivation. Previous research has proven the reliability and validity of the instrument (e.g. Inceoglu, I, Warr, & Bartram, 2007; SHL, 2002).

For testing the hypotheses linking motives to cultural differences Hofstede's (1980) culture dimensions were used as published on http://www.geert-hofstede.com/hofstede_dimensions.php.

2.3. Analytic procedure

In a first step the following original MQ scales were selected that were conceptually aligned with the protean and boundaryless careers literature: Personal Principles, Achievement, Interest, Personal Growth, Material Reward, Status, Progression, Autonomy, Ease and Security, and Affiliation (for a detailed description of the scales and typical positive and negative items, see Table 4). Two scales were altered for the purpose of this study. The scale Ease and Security consists of two contextual factors: pleasant working conditions and job security. Only the 4 items measuring job security were selected for the analysis, resulting in the scale 'Job Security'. The original Affiliation scale contains items measuring being motivated by altruism and enjoying contact. Only the 3 items referring to enjoying contact were used. As a result of using fewer items reliabilities of the new scales were lower, .60 and .57, respectively. This is not uncommon in exploratory research, as Cronbach's α is greatly affected by the number of items in the scale (Nunnally, 1978) but it might lead to an underestimation of the associations observed.

Stepwise linear regression was used to test the hypotheses, while controlling for the other factors. The dependent variables were the four motivational dimensions relating to the four career attitudes (values-driven, self-directed, physical mobility, and psychological mobility). They were created by calculating the average of the combination of individual scales. More specifically, 'self-directed motivation' is the average of 'Personal Growth', 'Achievement' and 'Job Security' (reverse), 'values-driven motivation' is the average score of 'Personal Principles' and a reverse scoring of 'Material Reward', 'Status', and 'Progression'; 'psychological mobility' is the average of 'Autonomy', 'Affiliation' and 'Interest'; and finally 'physical mobility' is the average of 'Material Reward', 'Status', 'Progression', 'Interest', and the reverse scoring of 'Job security'. The independent variables were gender, age, level of education, work experience, management experience, individualism, masculinity, power distance, and, industry sector.

In order to explore to which degree some of the theoretically created career profiles from Briscoe & Hall (2006b) are reflected in empirical motivational profiles, a two-step cluster analysis was conducted using the Bayesian Information Crite-

Table 4
Factor analysis: scales, description, typical positive and negative items, factor loadings and explained variance for each country

Scales (Cronbach's α of total sample)	Description: the extent to which people...	Typical positive and negative item	Belgium	Denmark	France	Germany	Italy	Netherlands	Norway	Sweden	United Kingdom	Total sample
Extrinsic/security motivators (.71)												
Material reward (.73)	...are motivated by financial reward	Being able to earn more money by working harder. Being in a low paid job.	.80	.82	.76	.77	.73	.80	.77	.78	.82	.80
Status (.69)	...are motivated by outward signs of position and status and due regard for rank	Having a job title that reflects my status in the organization. Not getting facilities commensurate with my position.	.77	.74	.75	.71	.75	.76	.72	.73	.67	.76
Progression (.74)	...are motivated by having good promotion prospects	Having good prospects for advancement. Not advancing in the company.	.61	.71	.66	.63	.62	.57	.68	.61	.76	.70
Security (.60)	...are motivated by job security	Having a secure position in the company. Not being sure about job security.	.68	.52	.62	.65	.75	.64	.57	.64	.64	.58
Intrinsic/contact motivators (.67)												
Interest (.66)	...are motivated by jobs that provide them with variety, interest and stimulation	Working where there is always something of interest going on. Never having any complex problems to get absorbed in.	.92	.92	.92	.91	.91	.87	.87	.89	.93	.91
Affiliation (.57)	...are motivated by opportunities for interaction with other people in their work	Meeting many people through work. Seeing few people during a working day.	.87	.84	.89	.87	.88	.77	.81	.82	.88	.85
Autonomy (.68)	...are motivated by being given scope for organizing their work as they see fit	Being free to organize my own work. Being closely supervised in the job.	.50	.52	.43	.48	.52	.63	.57	.56	.50	.51
Values/growth motivators (.69)												
Personal principles (.61)	...need to be able to uphold ideals and conform to high ethical and quality standards	Knowing that what the organization does is ethically correct. Knowing that the organization does things that are detrimental to society.	.78	.76	.77	.80	.76	.76	.81	.81	.81	.79
Achievement (.69)	...are motivated by given challenging targets and feeling that their abilities are stretched	Having a job that challenges my abilities. Not having anything to achieve in my job.	.78	.75	.76	.80	.80	.84	.74	.80	.80	.79
Personal growth (.70)	...are motivated by opportunities for further training and development and the acquisition of new skills	Having to learn a new skill. Not having anyone in the company that I can learn from.	.65	.70	.53	.55	.50	.57	.53	.61	.66	.62
Explained variance			64.32	62.05	61.17	60.94	63.10	64.59	62.93	62.92	63.15	62.61

tion (BIC) algorithm to determine the number of clusters automatically. Two-step clustering is designed to handle very large datasets (SPSS Inc., 2001) and performs well if all variables are continuous and independent (Bacher, Wenzig, & Vogler, 2004). Therefore a Principle component analysis (PCA) with varimax-rotation was conducted on the 10 individual scales for the whole dataset as well as for each country separately to see if the overall factor structure was stable across cultures. For each factor, Cronbach's α was calculated using the total sample (see Table 4), as well as factor scores coefficients using the Anderson–Rubin method which ensures orthogonality. The emerging factor scores were used to run the two-step cluster analysis. In the first step of this procedure, the records are pre-clustered by calculating BIC for each number of clusters within a specified range where the standard is 15; the calculation is used to find the initial estimate for the number of clusters. In the second step, the sub-clusters from the pre-cluster step are clustered by finding the greatest change in the log-likelihood distance between the two closest clusters in each hierarchical clustering stage. As 16 theoretical clusters exist, the standard range of 15 was increased several times up to 100. The outcome, however, for our dataset was always a four cluster solution.

In order to test if all 10 motivators linked to the protean and boundaryless career attitudes differentiated between the four clusters, ANOVAs with post-hoc Schéffe tests were used on the 10 selected scales as the dependent variables and the cluster number as the factor (independent) variable (see Table 5). ANOVAs with post-hoc Schéffe tests were also applied on the eight scales of the MQ that were not used in the factor-analysis (Level of Activity, Competition, Fear of Failure, Flexibility, Power, Commercial Outlook, Immersion and Recognition; for a detailed description of the scales and typical positive and negative items see Table 6) to further explore the four clusters. For the nominal data 'gender' and 'university degree' the Pearson Chi-square measure was calculated and for the remaining nominal data that were available (industry, country, years of work experiences, and years of management experiences) Cramer's V was used in order to test for significant differences between the clusters. Due to the large sample size the threshold of statistical significance was set at $p < .001$ in every analysis.

3. Results

3.1. Regression-analyses

Table 3 presents the regression results. All equations were significant at $p < .001$. Ten percent of the variance of motivators related to self-directedness was explained by having a university degree ($\beta = .19, p < .001$), management experience ($\beta = .19, p < .001$), living in a low masculine ($\beta = -.10, p < .001$) or low power distance culture ($\beta = -.09, p < .001$), work experience ($\beta = .06, p < .001$), and age ($\beta = -.04, p < .001$). These results supported Hypotheses 5 and 3. Gender was not related to being motivated by being self-directed ($\beta = -.01, ns$), which supported Hypothesis 1.

Thirteen percent of the variance of motivators related to being values-driven, was explained by living in a low masculine culture ($\beta = -.32, p < .001$), as well as age ($\beta = .11, p < .001$) and being female ($\beta = -.06, p < .001$), hereby supporting Hypotheses 3 and 2. Industry sector ($\beta = -.04, p < .001$) and level of education ($\beta = -.03, p < .001$) were also significant predictors.

Seven percent of the total variance of motivators linked to physical mobility was explained by being of younger age ($\beta = -.17, p < .001$), living in a masculine culture ($\beta = .15, p < .001$), having a higher level of education ($\beta = .14, p < .001$), being a manager ($\beta = .07, p < .001$) and being male ($\beta = .03, p < .001$), confirming Hypotheses 2, 4, and 5.

Finally, 6% of the variance of motivators related to psychological mobility was explained by being female ($\beta = -.14, p < .001$), living in a low masculine ($\beta = -.13, p < .001$) and individualistic culture ($\beta = -.06, p < .001$), which supports

Table 5
Clusters solutions: means and standard deviations on 10 motivational scales

Variables	Cluster 1 (N = 4150; 30.4%) means (SD)	Cluster 2 (N = 3035; 22.2%) means (SD)	Cluster 3 (N = 2793; 20.5%) means (SD)	Cluster 4 (N = 3677; 26.9%) means (SD)	Total (N = 13,655; 100%) means (SD)
Extrinsic/security motivators					
Material reward	3.90 (.37)	3.88 (.36)	4.44 (.29)	3.90 (.33)	4.01* (.41) 3 > 1, 4, 2
Progression	4.02 (.41)	3.86 (.41)	4.42 (.33)	3.82 (.36)	4.01* (.44) 3 > 1 > 2, 4
Status	3.62 (.36)	3.52 (.33)	4.12 (.32)	3.68 (.33)	3.72* (.40) 3 > 4 > 1 > 2
Security	3.61 (.47)	3.46 (.45)	4.17 (.45)	3.99 (.43)	3.79* (.53) 3 > 4 > 1 > 2
Intrinsic/contact motivators					
Interest	4.23 (.28)	3.58 (.25)	3.96 (.37)	4.12 (.29)	4.00* (.38) 1 > 4 > 3 > 2
Affiliation	4.30 (.40)	3.45 (.35)	3.95 (.50)	4.18 (.40)	4.01* (.52) 1 > 4 > 3 > 2
Autonomy	4.14 (.35)	3.75 (.37)	4.06 (.37)	4.02 (.34)	4.00* (.38) 1 > 3 > 4 > 2
Values/growth motivators					
Personal principles	4.55 (.25)	4.11 (.37)	4.28 (.32)	4.07 (.29)	4.27* (.36) 1 > 3 > 2 > 4
Achievement	4.63 (.27)	4.26 (.40)	4.44 (.33)	4.13 (.33)	4.37* (.38) 1 > 3 > 2 > 4
Personal growth	4.19 (.38)	3.88 (.40)	4.01 (.40)	3.74 (.37)	3.96* (.43) 1 > 3 > 2 > 4

* $p F(\text{ANOVA}) < .001$.

Table 6

Other motivators: scales, description, typical positive and negative items, means and standard deviations

Scales (Cronbach's α of total sample)	Description: the extent to which people...	Typical positive and negative item	Cluster 1 (<i>N</i> = 4150; 30.4%)	Cluster 2 (<i>N</i> = 3035; 22.2%)	Cluster 3 (<i>N</i> = 2793; 20.5%)	Cluster 4 (<i>N</i> = 3677; 26.9%)	Total (<i>N</i> = 13,655; 100%)
Level of activity (.67)	...are motivated by having to work under pressure, cope with multiples demands, and accomplish a great deal within a rapid time frame	Being required to do several things at once. Being able to take my time over jobs.	3.53 (.46)	3.35 (.43)	3.24 (.46)	3.15 (.44)	3.33 [*] (.47) 1 > 2 > 3 > 4
Competition (.76)	...are motivated by the impact of working in a competitive environment	Knowing if I work hard I can be the best in the department. The lack of any competition in the organization.	3.73 (.49)	3.65 (.45)	3.91 (.45)	3.48 (.46)	3.68 [*] (.49) 3 > 1 > 2 > 4
Fear of failure (.83)	...are motivated by the need to avoid failure, criticism and negative judgments by others and the loss of self- esteem which is likely to accompany these experiences	Fear of being seen to fall down on the job (there are no negative loading items).	2.69 (.73)	2.93 (.69)	2.56 (.76)	2.48 (.67)	2.66 [*] (.73) 2 > 1 > 3 > 4
Power (.74)	...are motivated by the opportunities for exercising authority, taking responsibility, negotiating and being in a position to influence others	Having to decide about another employee's future. Not directing the work of others.	3.97 (.40)	3.70 (.43)	3.94 (.41)	3.61 (.43)	3.81 [*] (.45) 1, 3 > 2 > 4
Immersion (.72)	...are motivated by work, which requires commitment way beyond 'normal' working hours	Having to work home. Being able to forget about work once I leave the office.	2.67 (.47)	2.78 (.41)	2.58 (.50)	2.53 (.46)	2.64 [*] (.47) 2 > 1 > 3, 4
Commercial outlook (.73)	...are commercially or profits orientated	Working for a profit-making organization. A lack of emphasis on commercial success in the organization.	3.83 (.50)	3.65 (.44)	3.90 (.45)	3.61 (.45)	3.75 [*] (.48) 3 > 1 > 2, 4
Recognition (.70)	...are motivated by praise and other outward signs of recognition for their achievements	Being congratulated on a job well done. My boss making no comment on my work.	4.45 (.32)	4.10 (.38)	4.35 (.35)	4.19 (.34)	4.27 [*] (.39) 1 > 3 > 4 > 2
Flexibility (.66)	...are motivated by the absence of clearly defined structures and procedures for managing tasks	Working in a fluid, unstructured environment. Having clear rules and systems for doing tasks.	4.07 (.37)	3.82 (.37)	4.24 (.36)	4.04 (.36)	4.04 [*] (.37) 3 > 1, 4 > 2

* p F (ANOVA) <.001.

Hypothesis 2. Although not hypothesized, a higher level of education ($\beta = .08, p < .001$) and being a manager ($\beta = .03, p < .001$) predicted having higher scores on motivators linked to a psychologically mobility attitude. Hypothesis 4 on the other hand was not supported as age was not a significant predictor ($\beta = -.01, ns$).

3.2. Factor-analysis: external/security, intrinsic/contact and values/growth

Two-step cluster analysis works best if the variables are independent (Bacher et al., 2004). Therefore, a PCA with varimax rotation was conducted. Table 3 presents the scales, a short definition and typical positive and negative items of the scales, the explained variance and the loadings for each country as well as the total sample. The same three-factor solution appeared for all countries as well as the total sample.

The first factor was labeled 'External/Security', as three out of four of the motivators (Material Reward, Progression, and Status) concern motivators linked to extrinsic rewards, and the last motivator concerns Job Security. The second factor was labeled 'Intrinsic/Contact' as two of the three motivators are features of jobs and tasks which individuals may find intrinsically enjoyable or satisfying (i.e. Interest and Autonomy), and 'Affiliation' refers to the motivation to enjoy contact with people. Finally, the last factor which was labeled 'Values and Growth' contained the following three scales: Personal Principles, Achievement, and Personal Growth.

There were no cross-loadings higher than .40 when using the total sample. Two scales, however, had cross-loadings higher than .40 in certain countries: Job Security loaded negatively in Denmark ($-.41$) on the Values/Growth factor, in Norway the scale loaded also negatively on the 'Values/Growth' ($-.44$) and positively on the 'Intrinsic/contact' (.45) and in Sweden the scale loaded also positively on the 'Intrinsic/contact' factor (.42). Progression loaded positively on the 'Values/Growth' factor in three countries: Belgium (.46), Sweden (.47) and UK (.44).

3.3. Four-cluster solution: four motivational groups

The cluster analysis resulted in a solution of four large clusters (ranging from 2793 to 4150 respondents). The average scores (ranging from 1 to 5) and standard deviations for the 10 scales on each cluster are shown in [Table 5](#).

The clusters were labeled based upon the career profiles of [Briscoe and Hall's \(2006b\)](#) combination of low/high scores on specific dimensions. A career profile with high scores on all for dimensions was called a 'Protean career architect'. This label was also used for the first motivational group, as it revealed high scores on Personal Principles (values-driven), Achievement and Personal Growth (self-directed), Autonomy and Affiliation (psychological mobility) and Interest (psychological and physical mobility), and medium scores on Progression and Material Reward (physical mobility), and low scores on Job security (self-directed and physical mobility).

Respondents in cluster 2 scored low on all scales, especially on the 'External/security' factor and 'Intrinsic/Contact'. Due to the lack of emphasis on inner values or growth, or on motivators leading to mobility, this group was referred to as 'trapped/lost' as their motivation "ultimately restricts them to very narrow career possibilities" ([Briscoe & Hall, 2006b, p. 10](#)).

Respondents in cluster 3 were labeled 'hired gun/hired hand' (cf. [Briscoe & Hall, 2006b](#)), as they scored low on being motivated by personal values versus money, status or promotion, but high on the motivators required for self-directedness and medium on the mobility dimensions.

Finally, respondents in cluster 4 scored very low on all motivators associated with being values-driven or self-directed. However, this group was to a medium degree motivated by physical mobility, as they had high to medium scores on Status and Material Reward. In addition, they liked variety in their work. They were also motivated by contact with other people, and a certain degree of autonomy which is linked to higher psychological mobility. The combination of being physically and psychologically mobile and low on the protean dimensions was not present in the typology of [Briscoe and Hall \(2006b\)](#). In this study we added this profile and labeled it 'curious/wanderer', as the profile was similar to their 'wanderer' career profile (only high on physical mobility), and shared the curiosity aspect with the 'Idealist' career profile.

3.4. Testing the cluster solution by other motivators

To test the clusters, we first examined to what extent respondents were more or less strongly motivated by the remaining motivators of the MQ. [Table 5](#) gives an overview of the results. The 'Protean career architects' (cluster 1) were also motivated by personal recognition (Recognition), taking responsibility (Power) and coping with multiple demands (Level of Activity). Average scores were observed for work that requires commitment (Immersion), and working in an environment that lacks clearly defined structures (Flexibility) and is competitive (Competition). The group of respondents that were labeled 'trapped/lost' (cluster 2) scored relatively high to avoid failure (Fear of Failure) and work that requires extra hours (Immersion). Scores on these motivator scales were, however, low in comparison with the other dimensions. Low scores were observed on all other scales. The 'hired gun/hired hand' group (cluster 3) scored high on working in a competitive (Competition), commercial (Commercial outlook), and flexible (Flexibility) environment, exercising authority (Power), and personal recognition (Recognition). Finally, the 'curious/wanderer' group (cluster 4) scored low on all the other motivators, except on working in a flexible environment (Flexibility) where they scored average.

3.5. Exploring the cluster solution by demographics

In order to further understand the differences between people with different career attitudes, demographic profiles of the clusters were created. For a complete overview, see [Table 7](#).

A higher proportion of women was found in the 'Protean career architects' cluster (42.9% vs. the total sample average of 36%). In general, respondents in this cluster tended to be above 30 years old with 68.5% (vs. 59.9%) having a university degree. Managerial experience was also related to a 'Protean career architect' motivational profile, as the non-managerial group was relatively underrepresented (27.6% vs. 33.9%) and the group with more than five years of management experience was overrepresented (41.1% vs. 36.2%). Relatively more people with a 'Protean career architects' motivational profile were observed in the Scandinavian countries (Sweden, Norway and Denmark) as well as in the Netherlands, 32.1%, 10.8%, 14.1%, and 11.1%, respectively, compared to the total sample average of 22.2%, 8.5%, 11.4%, and 9.1%. People motivated by both protean and boundaryless motivators were more likely to be found in the following industries: marketing, government and public sector, health and social work, consulting and science, and research.

Employees who were in the 'trapped/lost' cluster on the other hand, were found in construction, manufacturing, transport and logistics and in the internet/new technologies industry. The typically employee in this cluster was male (73.1% vs. the average of the total sample of 64%) and higher percentages were observed in the group with more than 10 years of work experience (66.5% vs. 62.9%). Both percentages were the highest of all groups. Higher numbers were also observed in the groups older than 30 years old, and the group with no university degree.

'Hired gun/hired hand' profiles were more likely to be found in especially sales (24.9% vs. 17.8%), telecommunication and the finance industry. More males were found in this group (69.1% vs. 64%) as well as individuals that were below 40 years old. Respondents with 3–10 years of working experience were more frequently observed in this profile and were more likely to hold a university degree in comparison with the average population. Italians were more present in this cluster (30.7% vs. 15.9%) compared to the other European countries.

Table 7
Profiles of the respondents in the four clusters

Characteristics (percent)	Cluster 1	Cluster 2	Cluster 3	Cluster 4	All respondents
Gender					
Female	42.9	26.9	30.9	39.4	36*
Male	57.1	73.1	69.1	60.6	64*
Age group					
30 or under	10.5	10.3	13.9	16.3	12.7*
31–40 years	41.2	41.7	44.8	38.8	41.4*
41–50 years	36.3	35.9	31.3	32.1	34.1*
Over 50 years	12	12	10.1	12.8	11.8*
University degree					
No	31.5	43.3	38.4	48.6	40.1*
Yes	68.5	56.7	61.6	51.4	59.9*
Work experience					
No relevant experience	0.2	0.4	0.3	0.7	0.4*
Causal and vacation work only	1.4	0.7	1.0	1.7	1.2*
<1 year	1.5	1.0	1.1	1.9	1.4*
1–2 years	3	3.3	3.5	4.0	3.4*
3–5 years	8.9	8.8	11.7	11.0	10.0*
6–10 years	20.3	19.2	23.1	19.5	20.4*
>10 years	64.5	66.5	59.3	61.1	62.9*
Blank	0.2	0.2	0.1	0.2	0.2*
Management experience					
None	27.6	32.4	32.7	43.3	33.9*
Up to 2 years	13.7	13.1	16.6	12.3	13.8*
2–4 years	16.9	14.3	15.4	13.5	15.1*
5 and more years	41.1	38.9	34.0	30.0	36.2*
Blank	0.7	1.3	1.3	1.0	1.0*
Country					
Belgium	10.1	13.7	13.5	21.5	14.7*
Denmark	14.1	10.6	8.0	11.5	11.4*
France	6.8	8.9	11.1	11.5	9.4*
Germany	4.3	5.1	5.9	4.2	4.8*
Italy	8.4	18.1	30.7	11.3	15.9*
Netherlands	11.1	9.0	5.3	9.7	9.1*
Norway	10.8	7.1	6.9	8.4	8.5*
Sweden	32.1	22.5	11.6	18.9	22.2*
UK	2.3	5.0	7.0	3.0	4.0*
Industry					
Call center	0.7	0.9	0.8	1.3	0.9*
Catering	1	0.4	0.6	0.9	0.8*
Construction	1.4	2	0.9	1.4	1.4*
Consulting	10	7.9	6.9	7.3	8.2*
Consumer goods	1.3	0.8	1.1	0.8	1.0*
Education	2.4	1.5	1.4	3.2	2.2*
Finances, banking and insurance	11.2	11.1	12.5	11.3	11.5*
Government and public sector	5.2	3.3	2.4	3.5	3.7*
Health and social work	2.8	1.4	1.5	2.6	2.2*
Internet/new technologies	4.4	6.8	5.9	6.3	5.8*
Manufacturing	7.3	10.5	8.7	7.5	8.4*
Marketing	7.5	4.9	4.5	4	5.4*
Retail	1.2	0.9	0.7	1.2	1.0*
Sales	12.7	17.4	24.9	18.4	17.8*
Science and research	3.9	3.0	2.1	3.1	3.1*
Telecommunication	6.5	7.1	8.7	5.7	6.9*
Tourism	0.6	0.4	0.3	0.5	0.5*
Transport and logistics	2.9	3.2	2.3	3.0	2.9*
Other	17.1	16.5	13.6	17.8	16.4*

* $p \chi^2$ (Pearson, Chi-square) or Cramers $V < .001$.

Finally, in the ‘curious/wanderer’ profile relatively more women (39.4% vs. 36%) were found and individuals who were younger than 30 years (16.3% vs. 12.7%). This was further reflected in their work and management experience: the groups that had 5 to 0 years of work experience were more frequently observed, and they were less likely to have any management experience (43.3% vs. 33.9%). It was also the group where most people did not have a university degree (48.6% vs. 40.1%). Especially in Belgium, more respondents were observed in this cluster (21.5% vs. 14.7%). In terms of industry sectors there were higher numbers in the call center, education and health and social work, and sales industry.

4. Discussion

The main focus of this study was first to conceptually link motivators at work to the values-driven and self-directed dimensions of the protean career and the two dimensions of the boundaryless career attitude (physical and psychological mobility) and secondly to explore these links empirically. Motivators were linked to these dimensions on the basis of the work by Briscoe and Hall (2002, 2006b) and Briscoe et al. (2006). Hereafter hypotheses in terms of gender, age, education, and managerial experience of people were formulated for relationships between these variables and the four dimensions. The potential influence of cultural and industrial differences on the profiles were also discussed. Theoretical career orientations were created following Briscoe and Hall (2006b) by applying combinations of the protean and boundaryless career dimensions. To explore these theoretical motivational profiles empirically, a two-step cluster analysis was undertaken, after factor-analyzing the hypothesized motivators, resulting in four motivational clusters that were clearly distinct in terms of their demographic and motivational profiles. The hypotheses and motivational profiles will be discussed in more detail as follows.

4.1. Gender and the protean and boundaryless careers

Although Hall (2004) suggests that gender is unrelated to a person's career attitude, several researchers (e.g. Eby et al., 2003; Mainiero & Sullivan, 2005), have found that women exhibit more non-traditional careers. Sullivan and Arthur (2006) argue that from a boundaryless career perspective, women may have higher levels of freedom to engage in psychological mobility, as they are less obligated to conform to traditional work roles, which is in line with the recent kaleidoscope career model of Mainiero and Sullivan (2005). This line of reasoning is confirmed by the results with men scoring higher on motivators linked to physical mobility than women, as predicated by Hypothesis 2. They are more driven by money, status and making promotion, and less by job security than women (Inceoglu et al., 2008). Women on the other hand are less driven by objective, traditional measures of career success such as money, status and promotion and enjoy more working according to their own principles, having variety and contact with other people in their work (Inceoglu et al., 2008; Warr, *in press*). This is assumed to be important to create work-related relationships across e.g. department or organizational boundaries. Women scored higher on motivators linked to the values-driven and psychological mobility career dimensions, hereby supporting Hypotheses 1 and 2.

No gender differences were found in terms of being self-directed, confirming Hypothesis 1. Men tend to score higher on achievement and women on personal growth (Inceoglu et al., 2008). Both motivators help to manage one's own career and to adapt to new performance and learning requirements that come with each career-cycle.

Taking the results of the four career dimensions together women were more present in the 'curiosity/wanderer' cluster as a result of their higher psychological mobility compared to men and in the 'protean career architect' cluster, as result of their higher values-driven motivation. In line with this, men were more present in the 'hired gun/hired hand' cluster, as a result of their lower values-driven motivation, but higher drive towards physical mobility.

4.2. Age and the protean and boundaryless careers

The modern career literature suggests thinking of career-cycles in relation to chronological aging (e.g. Mirvis & Hall, 1996). The results indicate that chronological aging remains indeed important as Hypothesis 3 was supported, and Hypothesis 4 partially. In the framework of the protean career model, this implies that individuals become less motivated to actively manage their own careers, due to a reduced expected value/effort balance (Kanfer & Ackerman, 2004), as well as habituation (Warr, 2001). However, people become more motivated to follow their own values with age which is consistent with Briscoe et al. (2006) who reported in their second study that age correlated positively with the value-driven dimension of a protean career. Hence, within the protean career model, people's motivation tends to change from a 'reactive' to a more 'rigid' career attitude with age if no organizational intervention takes place. From a boundaryless career perspective a decline in motivators linked to physical mobility is suggested: Sullivan, Carden, and Martin (1998) make the case that as a result of more realistic expectations about employment contracts younger people adapt better to fluid and changing employment arrangements than older workers. This might explain, in combination with the decline in effort/value balance of elderly people, why they are probably less motivated to move physically. However, as individuals age the motivation to operate autonomously increases (Inceoglu et al., 2008). Therefore people were expected to become more motivated to create work relations which are crossing traditional boundaries as the need for affiliation is unaffected. However, this part of Hypothesis 4 was not supported indicating that the drivers related to psychological mobility were not affected by age.

4.3. Managerial experience and level of education and the protean and boundaryless careers

Hypothesis 5 was supported: having management experience or a higher education was positively related to motivators linked to physical mobility and managing one's own career and, although not hypothesized, to psychological mobility. This suggests that more highly educated individuals become managers as a result of higher self-directedness, due to the more development activities they undertake (Warr & Birdi, 1998), in combination with the higher importance on promotion

and interesting work (Warr, *in press*) for which they are willing to be physically mobile, as a result of the lower importance of job security and the greater employment alternatives (Van Vuuren et al., 1991). This makes them ideal candidates for a 'hired gun/hired hand' career profile and Briscoe and Hall (2006b) describe them as productive resources, but not self-leaders. In line with this, individuals in the 'hired gun/hired hand' cluster were more motivated by a competitive environment, and by being commercially oriented. From the cluster analysis, it appears that this career profile is more present with managers with up to four years of management experience. By getting older they tend to become more motivated and aware of their own values and less driven by money or status (Ryff & Baltes, 1976; Warr, 2001). Hence, it is not a surprise that in the 'protean career architect' cluster more managers with more than 5 years of management experience were observed. No clear explanation however, seems to be present for the fact that higher educated individuals are less values-driven. It might be because they are more motivated by promotion, but on the other hand, they tend to be more motivated by useful jobs for society (Warr, *in press*), and rank money lower than people with a lower education (Warr, *in press*). Taken together, it seems that individuals with a lower education would be overrepresented in the 'fortressed' career profile (only high on values-driven). The cluster analysis indicated that people without a university degree were found more in the 'trapped/lost' cluster, which only differs from the 'fortressed' career profile by being also low on values-driven.

4.4. Contextual factors and the protean and boundaryless careers

Sullivan and Arthur (2006) suggested that national culture might play a role in the endorsement of the boundaryless career dimensions and Dany (2003) indicated that for France external factors such as broader economical factors and government policies impact the attitude people hold towards career mobility. In our study culture dimensions were investigated, as well as the relationship of industry sectors in which people worked.

4.4.1. Culture and the protean and boundaryless careers

Individuals living in a low masculine culture were more motivated by motivators linked to being psychologically mobile and values-driven, and less by motivators linked to physical mobility. A possible explanation for the first two career dimensions is the higher focus upon relationships and quality of life (work to live) in low masculine culture (Hofstede, 1980). The scores for physical mobility might be explained by the lower importance of money and status in this culture. It will be a much smaller trigger for individuals to change jobs than in high masculine cultures which are characterized by competition (Hofstede, 1998). This implies that in low masculine cultures one could potentially observe more 'solid citizen' career profiles and in high masculine cultures more 'wanderer' career profiles.

In collectivistic cultures a higher proportion of individuals was found to be motivated by job features linked to high psychological mobility. As suggested by Sullivan and Arthur (2006) a potential reason for this finding might be the higher focus on the "existing group or organization for evidence of career success" (p. 26). However, in contrast to Sullivan and Arthur's expectation, our study found that motivators linked to high physical mobility were not predicted by individualism.

Finally, living in a low power distance culture implies that one is expected to find his or her own path and that the individual is more respected than authority (Hofstede, 1980). This probably explains why this characteristic predicts that people working in those countries are more motivated to manage their own career.

4.4.2. Country and the protean and boundaryless careers

In the next section we will take a closer look at the distribution of the different countries in the clusters. First of all it is not surprising that in Scandinavian countries and the Netherlands the 'protean career architects' are overrepresented and underrepresented in the 'hired gun/ hired hand' cluster, as the Scandinavian countries are low on power distance and masculinity. The only challenge these countries face is that they score relatively high on individualism, which downplays to a certain degree their scores on motivators linked to physical mobile.

However, the Scandinavian countries tend to follow the 'flexicurity' model that the Danish government implemented which refers to a combination of easy hiring and firing, generous temporary unemployment benefits for a certain period and an active labor market policy (e.g. strong incentives for continuous learning). The effect of this model is clear: Vandenberghe (2006) showed that within Europe Denmark had the highest job mobility, as a result of high employability, followed by Sweden.

Italy on the other hand shows a higher proportion than the average in the 'hired gun/hired hand' cluster, meaning that they are less values-driven. This should not come as a surprise given the importance Italians give to rank and status (Hofstede, 1980) and the finding by Bagdadli, Solari, Usai, and Grandori (2003) that in the Italian New Economy the evolutionary career logic (changing job and function) is dominant.

An explanation of the higher proportion of Belgians in the 'curious/wanderer' group, which is characterized by a relatively high psychological and medium physical mobility, may lie in the fact that the country has three official languages, and six different governments for a population of only 10 million people, a central position in West-Europe and an openness to different traditions (Sels, Janssens, Van den Brande, & Overlaet, 2000). As a consequence many people cross psychological boundaries on a daily basis. In a recent study by Dreher (2006) Belgium had the highest score on the KOF Index of Globalization of the Swiss Economic Institute. This overall index covers the economic, social and political dimensions of globalization. On both the Social Globalization Index (which measures the spread of ideas, information, images and people) and its

sub-index of Personal Contacts (which measures the direct interaction among people living in different countries) Belgium was ranked on place four. On the sub-index 'information flows' Belgium was number two after Canada.

4.4.3. *Industry sector and the protean and boundaryless careers*

Although the relationship between industries and motivators linked to the four career dimensions was limited, it did predict significantly if people were more energized by values-driven motivators. It seems that certain industries attract and retain more 'protean career architects', as they can be found predominantly in health and social work, consulting, science and research, marketing, and the government sector. The first four industries are characterized by a lot of physical and psychological mobility and room to follow one's internal compass, the latter however may be more of a surprise. Several studies have, however, indicated that public sector employees are more motivated by job content, self-development, recognition, autonomy, interesting work, and the chance to learn new things (e.g. Buelens & Van den Broeck, 2007; Houston, 2000) which are characteristic for protean and boundaryless career attitudes. Results from research around motivation and job security in the public sector remains, however, conflicting (Buelens & Van den Broeck, 2007).

The 'hired hand/hired gun' cluster is observed especially more than average in sales, and also to a certain degree more in the telecommunication and finance industry. Sales people are typically part of a sales force compensation plan. This plan rewards them with more money or higher status, in case they reach their personal objectives. These objectives are closely linked to the corporate objectives and performance (Coughlan & Sen, 1989; Farley, 1964). Therefore this type of industry or profession makes it harder to be motivated by personal values. Probably in high-wage industries there will be more inter-firm mobility rather than intra-firm mobility, as there is little to gain in external movement (Ng, Sorensen, Eby, & Feldman, 2007).

The 'curious/wanderer' cluster is more likely to be present in the education, health and social work, call center and sales industry. Overall this is in line with Sullivan and Arthur (2006) who argued that people with high psychological mobility but lower levels of physical mobility, might be "respected academics, experienced management consultants or skilled nurses" (p. 23). The fact that fewer people with university degrees are present in this cluster might explain why education rather than science and research (as in the protean career architects) appears in this cluster. The nature of the call center and sales industries require almost by definition that one crosses the boundaries of one's own company, without real inter-firm mobility, but are however also characterized by a relative high turnover.

Finally, in the construction, manufacturing, transport and logistics and in the internet/new technologies industries people indicated to be more 'trapped/lost' in terms of their motivation. This is in line with Hachen (1992) who would found that labor-intensive industries have higher involuntary exit rates and low inter- and intra-firm mobility. The 'demotivation' might be partly explained by the higher focus on labor cost competition and lower development and retention policies in these types of industries

4.5. *Implications for organizations and managing employees*

If the protean and boundaryless career models are combined, one could expect young professionals to have more 'hired gun/hired hand' career profiles (only low on values-driven), as a result of their 'reactiveness'. However, it seems that one has to have at least some work experience in order to become motivated to be self-directed, as the 'curious/wanderer' cluster contained more people with fewer than five years of work experience compared to the average. This seems to indicate that people just entering the workforce probably go through a phase of trial and error, trying to find out how and where they can manage their careers. The higher score on motivators linked to psychological mobility was due to a strong need to interact with others (which might help them in their socialization process), but less related to the drive to be autonomous which tends to increase with age. It seems that the turning point is between 3 and 5 years, as the 'hired gun/hired hand' cluster of this study had more people between 3 and 10 years of work experience, and they were consequently below 40 years old. Briscoe and Hall (2006b) described the 'hired gun/hired hand' career profiles as good resources for a company, because they are likely to be fairly productive but missing awareness of their own values to become real leaders. This profile reflects to a certain extent a very ambitious, productive person, who wants to build a career at any cost and therefore, they align themselves with the values of the organization. Typically, these are young managers (with up to 4 years of experience in the job) that are physically and psychologically mobile and manage their own career but are unlikely to drive change. It appears that 'protean career architects' have reached a certain age and have more than 4 years of management experience, as the cluster predominantly comprised people between 30 and 50 years of age and more experienced managers.

Therefore, the major challenge for companies to develop 'protean career architects', is to help people, especially men, to be motivated to discover their personal values in an early stage of their career. Offering development coaching to younger people might be a solution (Grant & Cavanagh, 2004; Witherspoon & White, 1996). Women and older employees would benefit more from incentives to become or remain motivated by physical mobility. Hence, offering performance coaching might be a solution (Grant & Cavanagh, 2004; Witherspoon & White, 1996).

With regard to older employees companies should also encourage them to remain self-directed. A solution might be job enlargement to take them out of their comfort zone, although they probably favor job enrichment, due to their increasing need for autonomy (cf. Hackman, 1976). This might result in some tension between the person and the organization. However, if the decline in self-directedness and physical mobility takes place, the elderly person is more likely to have an 'idealist' or 'fortressed' career profile. Therefore, an organization with older employees will probably benefit from people sharing the

same values. If this is not the case the individuals will probably be perceived to be working in an “ivory tower” or, if the business conditions change, especially older employees who have a lower education level, run the risk of becoming ‘trapped or lost’.

The ‘trapped/lost’ cluster had more people between 40 and 50 and had the highest score on being motivated to avoid failure and the loss of self-esteem. This is problematic as it indicates that they are not willing to take risks, and explore new opportunities out of themselves. This is in line with [Briscoe and Hall \(2006b\)](#) who mention that a ‘trapped/lost’ career profile “may avoid the very experiences and interventions that would help them” (p. 12).

From a European perspective, it seems that the ‘protean career architects’ are best looked for in countries that have a low masculine culture. However, the challenge will be to motivate them to be physically mobile. On the other hand the European and national governments have helped organizations that are resident in such a culture by introducing a ‘flexicurity’ model. In Italy companies should really turn towards coaching their people on personal values, if they would like to develop protean career architects. Taken together, it looks like global companies as defined by [Bartlett and Ghoshal \(1989\)](#) will have a harder time developing protean career architects than transnational or multidomestic companies, as culture differences tend to play a role in people’s motivation toward certain career profiles.

4.6. Conclusion, suggestions for future research and limitations

Overall this study, which was based on a dataset of more than 13,000 people across nine European countries, generally supports the latest theorizing about the protean and boundaryless careers. Hypotheses in terms of gender, age, level of education, management experience, individualism, masculinity and power distance were created for the underlying dimensions (i.e. being values-driven, self-directed, psychological and physical mobility) and most of the hypotheses were confirmed. Moreover three of the sixteen theoretical career profiles of [Briscoe and Hall \(2006b\)](#), and one mixed career profile were identified and discussed in terms of work and managerial experience, gender, age, industry, culture and educational differences. Therefore one can conclude that the results of the regression and cluster analysis point to four underlying dimensions which can be allocated to distinct sets of work motives.

As this is the first study matching motives to the protean and boundaryless career concepts, it is obviously not without limitations. First, the sample was large and culturally diverse; however, some industries were underrepresented, as well as non-managers and individuals with a lower education. Unfortunately no information was available on the type of job people had and if they completed the questionnaire for selection or development purposes. A second limitation is the cross-sectional nature of the study which does not allow for any causal inferences. Third, the adapted motivation scales (Affiliation and Job Security) had low reliability, which could lead to an underestimation of the associations with the other variables. Fourth, despite the fact that the results of the regression and cluster analysis support the conceptualizations from the literature, no direct empirical relationship between work motivators and an instrument measuring career attitudes has been established (such as the protean and boundaryless career attitude scales developed by [Briscoe et al., 2006](#)). Including such an instrument would allow for the possibility of exploring the weighting of each of these work motives in relation to the specific career dimensions. The results are therefore not conclusive evidence but create future avenues for research.

As a result of the cross-sectional nature of the study, one question that arises is whether some clusters are more present today than for example twenty years ago as a result of specific cohort values. Another question that requires further research is whether individuals with a non-university degree are indeed more values-driven. A next step might involve establishing a link between the different work motives and real vocational behavior as motivation linked to career attitudes is obviously not the same as vocational behavior. Although 30% of the sample is inclined to have a ‘protean career architect’ attitude, it does not mean their track record would show that they have such a career, as [Briscoe and Hall \(2006b\)](#) predict this to be rare. Other, external factors such as the perceived social consequences and behavioral control are likely to influence the final behavior as shown and explained by the theory of planned behavior, which has been used to predict physical mobility ([Brett & Reilly, 1988](#)) and looking for new positions ([Van Hooft, Born, Taris, & Van der Flier, 2004](#)). These factors particularly have an influence if the behavior is complex which is the case if we think about building a career. Therefore it is recommended that future research takes into account contextual factors, such as e.g. the industry in which people work, specific jobs they exercise or organizational staffing policies. Future research should also include other inventories as e.g. the value classification of [Schwartz \(1992\)](#).

Nevertheless, if we can show with the help of future research, that the protean and boundaryless career attitudes are linked to specific motives at work, it will further increase our insights into contemporary careers allowing for meaningful and practical recommendations that could be made in terms of career counseling, selection, and career management strategies.

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