

Career profiles and organizational commitment: Analyzing necessary and sufficient conditions

Perfiles de carrera profesional y comportamiento organizativo: Análisis de condiciones necesarias y suficientes

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Abstract: There has been little research examining the effects of individual career attitudes upon employees' organizational commitment. Drawing on Briscoe and his colleagues (Briscoe & Hall, 2006; Briscoe, Hall, & DeMuth, 2006)'s research on protean and boundaryless careers, and on a QCA fuzzy set methodology (Ragin, 2000), the present study analyzes various career profiles as sufficient conditions for experiencing organizational commitment and examines necessary variables, in terms of career attitudes, that predict certain levels of affective and continuance commitment. Research results reveal that distinct combinations of the protean and boundaryless career delineations determine the same outcome (high or low affective and /or continuance commitment), thus implying equifinality.

Key words: boundaryless career, protean career, organizational commitment, affective commitment, continuance commitment.

Resumen: Hasta la fecha, pocos estudios han examinado los efectos de las actitudes individuales de carrera profesional sobre el compromiso organizativo de los empleados. Por ello, el presente artículo se basa en las investigaciones de Briscoe y sus colegas (Briscoe & Hall, 2006; Briscoe, Hall y DeMuth, 2006) sobre las carreras proteicas y nómadas y en una metodología basada en lógica difusa (Ragin, 2000) con la finalidad de (1) analizar varios perfiles de carrera profesional como condiciones suficientes para experimentar compromiso organizativo y (2) examinar las variables necesarias, en términos de actitudes de carrera, que permiten predecir ciertos niveles de compromiso afectivo y de continuidad. Los resultados revelan que distintas combinaciones de las actitudes de carreras proteicas y nómadas determinan el mismo resultado (compromiso afectivo y/o de continuidad alto o bajo), lo que implica equifinalidad.

Palabras clave: carrera nómada, carrera proteica, compromiso organizativo, compromiso afectivo, compromiso de continuidad.

1. Introduction

Today's dynamic and complex business environment has radically challenged traditional career patterns (Levinson, 1978; Super, 1957) that were associated with "long-term, full-time employment with a single employer, and involving movement through a series of interconnected and increasingly prestigious and powerful jobs arranged in a hierarchy" (Tolbert, 1996:331). Career researchers have argued that new emerging career paradigms, such as the boundaryless (Arthur & Rousseau, 1996) and the protean career (Hall, 1976, 2002), are more pertinent in the current business scenario as they enable capturing more idiosyncratic and heterogeneous career patterns that in-

dividuals embrace. Protean and boundaryless careers reflect that the responsibility for the development of the self has been placed in the hands of the possessor (Gratton & Ghoshal, 2003), who experiences job movements both within and across organizational boundaries. In this context, individuals are increasingly becoming more self-directed in their careers, by self-initiating international careers (Tharenou, 2009) or pursuing lateral, even downward career moves (Hall, Gardner & Baugh, 2008) in search of personal growing and fulfillment (Sullivan & Baruch, 2009).

Research drawn on new career patterns has explored the effects of boundaryless and protean careers upon individual outcomes, such as subjective and ob-

jective career success and employability (McArdle, Lea, Briscoe, & Hall, 2007; Mirvis & Hall, 1994). Yet, little research has examined the effects of individual career attitudes upon behavioral outcomes or their predictors, and more specifically, upon employees' affective and continuance commitment to their employing organizations. This is a notable gap in literature because organizational commitment is found to be an important predictor of focal and discretionary behaviors (Mathieu & Zajac, 1990; Meyer & Herscovitch, 2001; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Mowday, Porter, & Steers, 1982; Shore & Wayne, 1993). Moreover, in a context in which individuals perceive organizations as mere vehicles for their careers (Robbins, 2005) and the ability to attract and retain talent is becoming one of the key issues of human resources management (Hiltrop, 1999; Pfeffer, 2001), an examination of the effects of new career orientations upon employee's affective commitment, is timely, as it mirrors new challenges for individuals and organizations.

This study attempts to examine the extent to which protean and boundaryless career attitudes, which could be interpreted as *mindsets*, reflecting self-direction, predisposition to make choices based on personal values, openness to the exterior and individual inclination to organizational embeddedness (Briscoe, et al., 2006) affect organizational commitment mindsets reflecting desire (affective commitment) and perceived cost (continuance commitment). Due to the fact that there have been calls in literature for more empirical research on new career patterns (Eby, Butts, & Lockwood, 2003; Sullivan, 1999), this study draws on a fs/QCA methodology in order to empirically test that distinct career attitudes combine rather than compete to obtain a given extent of affective and/or continuance commitment. Moreover, establishing a relationship between career profiles and organizational commitment will enable determining behavioral consequences of the different career mindsets, as commitment has been identified as one of the most salient predictors of turnover, organizational citizenship behaviour, performance and attendance (Mathieu & Zajac, 1990; Meyer, et al., 1989; Meyer, et al., 2002; Mowday, et al., 1982; Shore & Wayne, 1993). Therefore, this relationship may provide newer insights and challenges for both individuals and organizations, in the dynamic contemporary context in which careers are unfolding.

2. Theoretical framework and literature review

2.1. Boundaryless and protean careers / corresponding attitudes

The traditional career was defined in terms of progressive lineal advancement in one or two organizations and was conceived as evolving through a series of stages towards a pinnacle of power, income and prestige within the hierarchical organization (Levinson, 1978; Super, 1957). By contrast, the boundaryless career metaphor highlights an independent, individually driven and subjectively addressed career concept (Arthur & Rousseau, 1996). Recently, we have witnessed a proliferation of the studies centered on the concept of the boundaryless careers (see Valcour, Bailyn & Quijada, 2007; Sullivan & Baruch, 2009). In spite of some constructive critiques (e.g. Zeitz, Blau & Fertig, 2009), the idea of "boundaryless careers" has garnered increasing interest in United States, as well as in other countries (Dany, 2003; Pang 2003; Ituma & Simpson, 2009). However, there are very few studies in the Spanish context centred on the aspects of the new careers. Therefore, this study echoes Baruch and Sullivan's (2009) call for research on the potential differences in career enactment due to national and cultural differences. Moreover, the studies centered on the integration of the boundaryless and protean career concepts with the career profiles combinations are even more limited (Segers, Inceoglu, Vloeberghs, Bartram, & Henderickx, 2008).

The boundaryless career focuses on career enactment (Weick, 1996) and has been defined as "a sequence of job opportunities that goes beyond the boundaries of a single employment setting" (Defillippi & Arthur, 1994:307), capturing career moves crossing physical and psychological dimensions (Briscoe, et al., 2006; Sullivan & Arthur, 2006). Arthur and Rousseau (1996) identified six different meanings of the boundaryless career, arguing that it is a complex concept that, apart from emphasizing inter and intra-organizational mobility, encompasses careers that can be extrapolated to employees' perceptions of the desirability or instrumentality of increased mobility (Feldman & Ng, 2007). A common denominator in the occurrence of all these meanings is "one of independence from, rather dependence on traditional career arrangements" (Arthur & Rousseau, 1996). Briscoe, Hall and DeMuth (2006) provided empirical evidence, supporting the existence of two boundaryless career attitudes: boundaryless mindset (BM) and organizational mobility preference (OMP).

Briscoe et al. (2006) defined a boundaryless mindset as an opening-up attitude to the world, as it refers to a general attitude of transcending organizational boundaries, by feeling comfortable in interacting with people from different organizations and seeking out opportunities for experiencing new situations that result beneficial for the individual (e.g. providing the opportunity to enhance knowledge and skills). Organizational mobility preference, on the other hand, refers to the strength of interest in remaining with a single or multiple employer(s) (Briscoe, et al., 2006). Thus, it is concerned with one's preference for job security, predictability and long-term employment arrangements.

It has been argued that when examining these new career patterns from the viewpoint of the individual careerist, it may make more sense to use the term "protean career" (Sullivan, 1999). Rather than simply responding to their changing environment, these career actors are in charge of and responsible for creating their own careers paths. As Hall (2004) and Hall and Chandler (2005) remarked, the hallmarks of a protean orientation are: freedom and growth, professional commitment, and the attainment of psychological success, through the pursuit of meaningful work and the discovery of a "calling". Protean careers combine individual qualities of strong sense of identity and high adaptability to fit new situations (Hall, 2002). The adaptability factor is important in today's rapidly-changing career conditions, while the identity factor provides an anchor or "compass" such as occupation or industry may give the individual a sense of a secure base (Peel & Inkson, 2004). Briscoe

et al. (2006) identified two protean-career relevant attitudes: self-directed career attitudes (SD) and values-driven predispositions (VD), and developed scales for measuring them. As they remarked, a self-directed person takes an independent and proactive role in managing his or her vocational behavior, while individuals who hold values-driven attitudes rely on their own values, instead of borrowing external standards, when making career choices.

Furthermore, researchers brought empirical evidence supporting that protean and boundaryless careers are related, but independent constructs (Briscoe, et al., 2006). In that sense, they argue that a person may enact a career, by taking active responsibility for his or her development, and yet not being inclined at crossing subjective or objective boundaries. At the same time, an individual may display boundaryless attitudes without being internally driven or self-directed. Research found that there was a moderate positive correlation ($r = .34, p < .01$) between the boundaryless mindset and the protean orientation, suggesting that they are related, but separate, constructs (Hall, 2004). Moreover, Briscoe and Hall (2006) argued that greater conceptual precision is needed for producing more effective theory and research and by linking the protean and boundaryless perspective, they proposed eight career profiles (see Briscoe and Hall, 2006 for a detailed explanation of each career profile) based upon the combination of protean and boundaryless career delineations: self-direction in career management, values-driven predispositions, boundaryless mindset and organizational mobility preference (see Table 1).

Table 1
Career profiles

SD	VD	BM	OMP	Hybrid category/archetypes
Low	Low	Low	Low	"Lost" or "Trapped"
Low	High	Low	Low	"Fortressed"
Low	Low	Low	High	"Wanderer"
Low	High	High	Low	"Idealist"
High	Low	High	Low	"Organization man/woman"
High	High	High	Low	"Solid Citizen"
High	Low	High	High	"Hired Gun/hired hand"
High	High	High	High	"Protean Career Architect"

Source: Briscoe et al. (2006)

At the same time, the protean and boundaryless career attitudes identified are individual career perceptions that can involve a greater or a lesser extent of adopting these new career orientations. Moreover, all these constructs display a structural similarity to what is commonly understood as an attitude: a person's internal state preceding and guiding action, comprising feelings, beliefs and behavioral inclinations (Ajzen, 2001). Thus, these attitudes toward the career could be interpreted as mindsets, reflecting self-direction, predisposition to make choices based on personal values, openness to the exterior and respectively, individual inclination to organizational embeddedness. Hence, we are raising the question of whether these career mindsets might have any kind of relationships with the different organizational commitment mindsets identified in the multidimensional model of Meyer and Allen (1991), and therefore, behavioral implications.

2.2. Organizational commitment

Organizational commitment has been defined as "a force that binds an individual to a course of action that is of relevance to one or more targets" (Meyer & Herscovitch, 2001:301). It has been argued that this force is experienced as a mindset that can take different forms, thus reflecting distinguishable components of the underlying commitment construct. Meyer and Allen (1991) developed a multidimensional model of organizational commitment, including three different mindsets: desire to remain in the organization (affective commitment), obligation to remain (normative commitment) and perceived cost of leaving (continuance commitment). This model has been subjected to the greatest empirical scrutiny and has arguably received greatest support (see Meyer et al. (1997) and Meyer et al. (2002) for reviews). From among these components, affective commitment (AC) and continuance commitment (CC) were chosen as the focus of this study because they are most distinguishable from each other (Meyer, et al., 2002). Normative commitment (NC) has been left aside because affective and normative commitments have not been as empirically differentiated as theoretically expected (Bergman, 2006). Meyer et al.'s (2002) analysis found that affective and normative commitment are so highly correlated that their distinguishability is in question. Therefore, further normative commitment conceptualization and scale development and validation are needed (Bergman, 2006).

Both Mathieu and Zajac (1990)'s meta-analysis and Meyer et al. (2002)'s subsequent research examined

the most significant extant empirical research that explored and tested the consequences of organizational commitment. Among these consequences, it is important to highlight the extant literature related to employees' turnover (Gellatly, Meyer, & Luchak, 2006; Luchak & Gellatly, 2007; Mowday, et al., 1982) and/or turnover cognitions/intention to leave, which has been analyzed as a proxy. Moreover, absenteeism (Mowday, et al., 1982), job performance (Becker, Billings, Eveleth, & Gilbert, 1996; Meyer, et al., 1989; Somers & Birnbaum, 1998), organizational citizenship behavior (Gellatly, et al., 2006; Shore & Wayne, 1993), employee's health and well-being (Begley & Czajka, 1993; Reilly, 1994; Siu, 2003), or employee lateness (Koslowsky, Sagie, Krausz, & Singer, 1997) have also been identified as salient consequences of employees' organizational commitment.

2.3. Relationships between career profiles and organizational commitment

Drawing on the regulatory focus theory, this section attempts to tackle the existence of a potential relationship between boundaryless and protean career profiles and organizational commitment, implying that a certain career profile, based on the combination of the protean and boundaryless deliniations, would tend to exhibit in greater or lesser extent affective and/or continuance commitment. Based on self-determination theory (e.g. Ryan & Deci, 2000) and regulatory focus theory (Higgins, 1998), Meyer, Becker and Vandenberghe (2004) asserted that the nature of an individual's motivational mindset depends on the extent to which the behavior is perceived to be internally driven rather than externally controlled and on whether the behavior is concerned with advancements, growth and accomplishments (promotion focus) rather than security, safety and responsibility (prevention focus) (Luchak & Gellatly, 2007). Meyer et al. (2004) proposed that individuals who are affectively committed experience more autonomous forms of regulation and a stronger promotion focus in the pursuit of goals. On the contrary, individuals with who are trying to avoid losses (i.e. employees with a strong continuance commitment) experience greater external regulation and a stronger prevention focus.

Similarly protean career orientations can be reflected as mindsets through the lens of self-regulation and regulatory focus theory. Depending on the extent to which a person is values-driven or self-directed in career management, Briscoe and Hall (2006) identify four primary categories of protean

careers, namely dependent, reactive, rigid and protean. According to the authors, a person is considered “dependent” when he or she is neither values driven, nor self directed. Those who are encompassed within the “reactive category” embrace self-directed attitudes in career management, but as they do not hold values-driven predispositions, they lack the ability of sufficiently guiding their career. Those encompassed within the third category, the so-called “rigid” are the opposite of “reactive” as they hold values-driven predispositions, and yet they do not take a proactive attitude in career management. Finally, those with a “protean” career orientation are both self-directed in career management and values-driven in defining their career priorities and making choices on their own personal values, thus preserving inner identity.

Based on these considerations, it could be argued that individuals who are self-directed in adapting to the performance and learning demands of their careers perceive their behavior as internally driven, reflecting “the inherent tendency to seek out novelty and challenges, to extend and exercise their capacities, to explore and to learn” (Ryan & Deci, 2000:70). Moreover, they are expected to exhibit a promotion focus, as they proactively manage their career development and thus see themselves as working toward the attainment of their ideals. Therefore, a self-directed attitude in career management is expected to be positively related with high levels of affective commitment. As far as values-driven predispositions are concerned, we expect that a person who is not very clear on his or her values is more inclined to accept and adopt organizational values and for this reason he or she might be likely to develop affective bonds with the employing organization or in other words, he or she is expected to experience moderated to high levels of affective commitment. Nevertheless, given the situation of an individual high on values-driven predispositions, we argue that the degree in which he or she experiences affective commitment depends on the extent to which his or her personal values match organizational values. Therefore, a values-driven mindset *per se* cannot be directly correlated with affective commitment, as this relationship depends upon situational/contingent factors and various career attitudes combinations. However, we anticipate that a values-driven individual who finds his or her ideal place in which to fulfill those values is likely to develop a strong sense of “belonging” to the organization, and therefore, is expected to have a high affective commitment.

Focusing on boundaryless career attitudes, it has been argued that individuals experiencing organizational mobility preference (i.e. the inclination towards physically crossing organizational boundaries in employment mobility) are not inclined towards the predictability that comes with working continuously for the same organization and do not prefer to stay in a company they are familiar with instead of looking for employment opportunities elsewhere (Briscoe, et al., 2006). Therefore, they are not expected to experience continuance commitment that primarily rises out of necessity, due to side-bets or to the perceived scarcity of available opportunities elsewhere. Similarly, individuals with a low preference towards organizational mobility are more risk-averse and likely to experience a strong prevention focus, focused on security and safety, which is positively related with low continuance commitment (Meyer, et al., 2004). As far as the psychological boundarylessness is concerned (the so-called boundaryless mindset), we believe that the expected level of the individual’s affective and/or continuance commitment to his or her employing organization, depends both upon the protean career orientations the individual adopts and his or her preference towards physically crossing organizational boundaries. In other words, we may encounter different relationships between this career attitude and affective and continuance commitment, depending on the specific career profile, involving psychological boundarylessness.

Building on the knowledge gleaned on the review of the extant literature, the next section presents an empirical study, which is aimed at analyzing career profiles as sufficient conditions for experiencing organizational commitment, and examining necessary variables that induce certain levels of affective and continuance commitment.

3. Method

3.1. Sample / Participants

The data of this study was collected using web-based survey. The questionnaire was sent to 434 Spanish graduate and post-graduate distance learning students and after 6 weeks 157 surveys were submitted by the respondents, representing a response rate of 33.19%. After handling the missing data, 134 usable entries had been obtained. The respondents (49.25% women and 50.75 % men) were anonymous and they should have been working. The questionnaire’s items were related to the participants’ cur-

rent employment experience. The respondents were assured that their individual responses would remain confidential and that only a composite summary based on their responses would be utilized. The average age of the respondents was 29.91 years old. As regards the organizational size, the majority of them were working for large companies (47.76%), whereas a significant percentage (37.31%) were employees of small companies and only a 14.93% were working in middle size companies. The average professional experience was 8.71 years, with an average organizational tenure of 4.39 years. Industries most frequently reported by respondents were: pharmaceuticals and health care (18%), education (16%), banking and consulting (12%) and marketing (10%). As regards the job level, the respondents identified themselves as senior management level (18%), the middle management level (12%), and lower management level (16%). Moreover, the respondents reported themselves as professional staff (25%), technical staff (19%) and administrative /support staff (10%). The sample was heterogeneous in terms of education level, as 42.54% had elementary studies, 29.85% held a university degree, 23.88% held a bachelor degree and a smaller percentage 3.73 % held a PhD.

3.2. Measures

Protean career attitudes (self-direction in career management and values-driven predispositions) were measured using Briscoe et al. (2006)'s 8-item scale (sample item: "I am responsible for my success or failure in my career") and 6-item scale respectively (sample item: "I navigate my own career based on my personal priorities, as opposed to my employer's priorities"). Alpha coefficients for these measures were: 0.733 (self-directed - SD) and 0.821 (values-driven - VD). As far as boundaryless career attitudes are concerned, they were also assessed based on Briscoe et al. (2006)

's measures, as follows: an 8-item scale was used to assess boundaryless mindset (BM), or psychological boundarylessness α : 0.830 and sample item: "I seek job assignments that allow me to learn something new") and a 5-item scale to measure organizational mobility preference (OMP), or physical mobility (α : 0.818, sample item: "I like the predictability that comes from working continuously for the same organization"). The two organizational commitment mindsets that were chosen as the focus of this study were measured using Meyer, Allen and Smith (1993)'s 6-items affective commitment (α : 0.904; sample item:

"This organization has a great deal of personal meaning for me") and respectively continuance commitment scales (α : 0.809; sample item: "Right now, staying with my organization is a matter of necessity as much as desire").

Data of this research was collected by means of a questionnaire sent to the sample study. As mentioned above, the original questionnaire items were constructed in English. Because the general language of the target population was Spanish, the questionnaire had to be translated into this language. To ensure the accuracy of the translation, we followed a translation – back translation procedure (Nunnally and Bernstein, 1994). More specifically, the scales originally constructed in English were translated into Spanish by a native Spanish speaker, proficient in English. Then, an English native speaker, proficient in Spanish, translated again this new version into English (back-translation). Finally, the two versions were compared to check for the equivalence in meaning in both languages. Moreover, five cognitive interviews were conducted in order to ensure an accurate interpretation of the questionnaire items, as this technique allows understanding how respondents perceive and interpret questions, and to identify potential problems that may arise in prospective survey questionnaires (Drennan, 2003). Cognitive interviews permitted us interpreting which items are beyond the theoretical framework of the constructs to be analyzed (Collins, 2003; Jobe and Mingway, 1989). By means of verbal probing and thinking aloud (Drennan, 2003; Williamson et al., 2000) participants were asked to verbalize their interpretation of items and to paraphrase and/or comment on the wording of items in an effort to identify ambiguous or poorly worded questions. Once collected the data, they were processed following Miles and Huberman (1994)'s suggestions. More specifically, the interviewees were asked to comment on the clarity and readability of the each item by asserting why they assessed it with a certain punctuation, and which parts of the items they found difficult to answer or interpret. Based on their comments minor stylistic and semantic changes were made.

3.3. Methodology

Distinct career attitudes combine rather than compete to produce the same optimal outcome and given the complexity of this relationship, that implies equifinality, we have chosen to approach it using a fuzzy-set QCA methodology, instead of a traditional statistic method, that is based on a correlational

approach and examines singular causation and linear relationships.

If we compare the traditional variable-oriented methods and the QCA methods, we can find more differences than similarities (Fiss, 2007). On the one hand, the variable-oriented approach assumes that a social phenomenon can be studied as linear, additive effects, and unifinality. On the other hand, the set-theoretic approach emphasizes the nonlinearity, synergistic effects, and equifinality of these phenomena. These methods allow studying how different elements combine rather than compete to produce an outcome. Furthermore, the correlational approach cannot evaluate the causal relationships, in other words, it cannot assess the necessary and sufficient conditions of an outcome, due to the fact that the correlations are bidirectional (Fernandez & Enache, 2008).

The QCA methods consider equifinality systems where it is possible reach a final state from different initial conditions and by a variety of different paths (Katz & Khan, 1978). In other words, they propose that different combinations of causes can reach the same optimal outcome. Meanwhile, the traditional multivariate methods, as the multivariate regression analysis, suggest unifinal systems where there is just a single way to obtain a given outcome for all cases. For example, the correlational techniques are not able to identify configurations that are unusual; meanwhile, the techniques based on set-theoretic approach allow us identifying them and assessing their importance in the global model (Fernandez & Enache, 2008).

The extant literature reveals the existence of two versions of QCA methods: the crisp-set version (cs/QCA) (Ragin, 1987) and the fuzzy-set version (fs/QCA) (Ragin, 2000). The cs/QCA methods use binary values (membership/non-membership). This approach has a wide variety of limitations due to the fact that many phenomena can stay in intermediate levels of membership. For this reason, we have chosen to use in this research a fs/QCA approach, which allows using memberships scores ranging from binary values to continuous scores (Ragin, 2000) in order to develop the constructs.

The methodology is structured in two steps. The first step is centered in establishing empirical indicators and analyzing scales reliability, calibrating the fuzzy set, and examining distinct profiles obtained from our sample, which will allow formulating hypotheses regarding the relationship between the identified career profiles and organizational commitment mind-

sets. The second step focuses on analyzing the necessary and sufficient conditions for each outcome, as well as its consistence and coverage (Ragin, 2006).

3. Obtaining profiles and hypotheses formulation

The first step of the methodology is centered on building the fuzzy set and involves two steps: establishing empirical indicators for the fuzzy set, and calibrating the fuzzy set (Kvist, 2007). The empirical indicators were measured using Briscoe et al. (2006)'s protean and boundaryless career attitudes scales and Meyer et al. (1993)'s affective and continuance commitment scales. Thus, the indicators were assessed for each construct and computed as the sum of the punctuation of each item.

The second step of the methodology, the fuzzy set calibration, consists in translating the empirical evidence into membership scores of the causal variables and the outcome variable (Verkuilen, 2005). This study used six variables, which have been developed based on calibration. In these cases, we used a continuum fuzzy-set, containing a full membership when the variable has its maximum value, a full non-membership when the value of the variable is minimum, and the point of maximum ambiguity is the centre value between the ends.

As a result, there have been obtained various career profiles, which are characterized by the degree (high or low) to which an individual's career orientation can be described in terms of protean and boundaryless dimensions (see Table 2). As reflected in Table 2, the selected sample displayed neither the idealist, nor the trapped/lost profile.

The cases encompassed within the fortress and wanderer profiles did not exceed a 3% of the total sample. At the same time, we found three profiles, which did not reach a 3% of the observations, and that were initially discarded by Briscoe and Hall (2006), as the researchers thought that these particular career profiles are not likely to be encountered in the contemporary career contexts. The last group of "undefined" career profiles represented a 2.98% of the sample and presented average values that cannot be precisely included in any career profile. Finally, we have obtained interesting results concerning the following profiles: organizational man/woman (N=17, 12.69%), solid citizen (N=31, 23.17%), hired gun / hired hand (N=24, 17.19%) and protean career architect (N=50, 37.31%).

Table 2
Career profiles based on the research sample

Name	SD	VD	BM	OMP	N	%
Trapped/ lost	Low	Low	Low	Low	0	0.00
Fortressed	Low	High	Low	Low	2	1.49
Wanderer	Low	Low	Low	High	1	0.75
Idealist	Low	High	High	Low	0	0.00
Org M/W	High	Low	High	Low	17	12.69
Solid citizen	High	High	High	Low	31	23.13
Hired gun	High	Low	High	High	24	17.91
Architect	High	High	High	High	50	37.31
Undefined	High	High	Low	High	3	2.24
Undefined	Low	Low	High	Low	1	0.75
Undefined	High	Low	Low	High	1	0.75
Undefined	Mod	Mod	Mod	Mod	4	2.98

Source: Own elaboration

In the subsequent empirical analysis (encompassed in the second step), we have discarded those profiles that did not reach a 10% of the total cases, based on the consideration that the number of cases selected is crucial when performing consistency analysis (Ragin, 2006). For example, when having only three cases with high affective commitment (as it occurs with some of the obtained profiles), in spite of the fact that the values obtained are consistent, they might well be happenstance (see also Dion, 1998; Ragin, 2000). Therefore, the empirical analysis developed in the second step uniquely considers profiles demonstrated in a number of cases that exceeds a 10% of the total sample. Based on this consideration, four career profiles have been discarded. Moreover, when analyzing these four discarded profiles, it can be noticed that they are not likely to occur in the natural environment of today's career actors, as for example, it is hardly to conceive a protean individual who lacks psychological boundarylessness, or the other way around (an individual high on boundaryless mindset, yet completely lacking both self-direction in career management and values-driven predispositions) (Briscoe & Hall, 2006). Furthermore, based on the extant theory, it can be argued that it is unlikely to encounter a career actor who is able to direct his or her career behavior (self-directed), and yet not able to recognize opportunities across psychological boundaries (boundaryless mindset). The first four profiles described by Briscoe and Hall (2006) (lost/trapped, fortressed, wanderer and idealist) cannot be analyzed, as they are not disclosed by a significant number of cases. However, Briscoe and Hall (2006) asserted that the likelihood of the occurrence of such career profiles is seemingly low in the cur-

rent business scenario in which careers are unfolding. Individuals are now a less malleable resource for the organization and more active investors of their personal human capital (Gratton & Ghoshal, 2003), for enhancing opportunities for continuous learning, that will further ensure their future marketability. They tend to take a proactive responsibility in managing their careers and development, instead of passively relying in the organizations to provide them a clear career path and therefore, it is reasonable to have obtained a reduced number of profiles, encompassing individuals who adopt a traditional approach in career management.

As justified in the theoretical framework, low levels of values driven predispositions seem to be a necessary, albeit not sufficient condition for obtaining a high affective commitment. At the same time, low values of organizational mobility preference theoretically result as a necessary condition for getting high levels of continuance commitment, whereas a high physical and psychological boundarylessness predicted low levels of the same outcome. Focusing exclusively and uniquely on the four selected career profiles (organizational man/woman, solid citizen, hired gun/hired hand, protean career architect) these observations lead us to predict:

H1a: Holding high self direction in career management is a necessary condition for experiencing high affective commitment.

H1b: A low inclination towards organizational mobility preference is a necessary condition for experiencing high continuance commitment.

H1c: A high inclination towards organizational mobility preference is a necessary condition for experiencing low continuance commitment.

The data obtained from our sample uniquely allows building hypotheses for the four career profiles identified: organizational man/woman, solid citizen, hired gun / hired hand, protean career architect. The previous observations based on the extant theory (Briscoe & Hall, 2006; Higgins, 1998; Meyer, et al., 2004; J. P. Meyer & Herscovitch, 2001; Ryan & Deci, 2000) lead us to predict:

H2a: Holding an organizational man/women career profile (high SD, low VD, high BM, and low OMP), or a hired gun/hired hand career profile (high SD, low VD, high BM, and high OMP), or a solid citizen career profile (high SD, high VD, high BM, and low OMP), is a sufficient condition for experiencing high affective commitment.

H2b: Holding a protean career architect profile (high SD, high VD, high BM, and high OMP) is not a sufficient condition for experiencing high affective commitment.

H2c: None of the four career profiles identified is a sufficient condition for experiencing low affective commitment.

Furthermore, focusing on continuance commitment, the following predictions can be made:

H3a: Holding an organizational man/women career profile (high SD, low VD, high BM, and low OMP), or a solid citizen career profile (high SD, high VD, high BM, and low OMP), is a sufficient condition for experiencing high continuance commitment.

H3b: Holding a hired gun/hired hand career profile (high SD, low VD, high BM, and high OMP) or a protean career architect profile (high SD, high VD, high BM, and high OMP), is a sufficient condition for experiencing low continuance commitment.

To summarize, when analyzing the last five hypotheses, it can be noticed that each one of the four career profiles presents a distinct commitment profile. In that sense, the organizational man/women career profile is expected to present both a high affective commitment and a high continuance commitment. Second, the solid citizen career profile is predicted to encompass a low affective commitment and a high continuance commitment, reflecting both the awareness of side-bets and the lack of opportunities beyond organizational boundaries. Third, the hired gun career profile is expected to hold a high affective

commitment and a low continuance commitment, and finally, in the case of the protean career architect profile, we expect to obtain a low continuance commitment, due to its high protean and boundaryless orientations. Nevertheless, the level of affective commitment is difficult to predict, as it might depend on the individual's perception of his career success.

4. Results

The research of causal complexity on social phenomena is centered mainly in the sufficient analysis, due to the fact that it is rare to find a single causal condition that can become necessary or sufficient condition (Ragin, 2000). A condition or a set of conditions is sufficient for an outcome when the condition or the set of conditions imply the outcome. In fs/QCA, a condition or a set of conditions is sufficient for an outcome if its score is consistently lower than or equal to the outcome. For evaluating the strength of the empirical support for these theoretical arguments describing set relations, Ragin (2006) proposes two descriptive measures: the consistency and the coverage.

In a sufficient conditions analysis, the consistency of a condition by an outcome assesses the degree to which the cases sharing a given condition or combination of conditions agree in displaying the outcome. In fs/QCA the evaluation of the consistency analysis is more complex than in cs/QCA analysis, due to the fact that the values of the conditions are not dichotomic. Consistency is assessed using the following measurement (Kosko, 1993; Ragin, 2006; Smithson & Verkuilen, 2006):

$$\text{Consistency } (x_i \leq y_i) = \frac{\Sigma(\min(x_i, y_i))}{\Sigma(x_i)}$$

where y_i represents the value of the outcome of the instance i and x_i represents the value of the causal condition of the instance i . With respect to the coverage of a causal condition by an outcome, Ragin (2006) defines it as a measure of the importance or relevance of this condition as a sufficient condition for the outcome. In other words, this measurement assesses the degree of explanation of the sufficient condition. To evaluate the coverage of a causal condition, we use the following formula proposed by Ragin (2006):

$$\text{Coverage } (x_i \leq y_i) = \frac{\Sigma(\min(x_i, y_i))}{\Sigma(x_i)}$$

where y_i represents the value of the outcome of the instance i and x_i represents the value of the causal condition of the instance i .

The results of the sufficiency conditions analysis (see Table 3) performed for affective commitment revealed that the following career profiles: organization man/woman and solid citizen represent sufficient conditions for experiencing high affective commitment, taking into consideration a consistency threshold of 0.9. Applying the *Quine-McCluskey* reduction method (McCluskey, 1956), we got one configuration: $SD \cdot BM \cdot \sim OMP$, which considers the combination of self-directed, boundaryless mindset and non presence of organizational mobility attitudes as a sufficient condition of a high affective commitment, excluding the value-driven attitude. As we have got just one configuration, the consistency and the coverage of this combination and of the global model have the same values. In this case, the global model has a high degree of consistency (0.921681) and a moderate degree of explained variability as shown by the global coverage (0.672351).

On the other hand, identifying the profiles and configurations that experience high affective commitment is as important as finding out the profiles and configurations that are associated with low affective commitment. In this line, our research findings did not identify any career profile representing a sufficient condition for experiencing low affective commitment if the consistency threshold is 0.90. Figure 1 show the

graphical representation of the global model for high affective commitment, and of a hypothetical global model for low affective commitment, where the four profiles are considered. Graphically, we consider a perfect sufficient condition (maximum consistency) when all instances are located in the upper-triangle plot. From the graphical results, we check that the global model for high affective commitment has the majority of instances located in the upper-triangle plot, while the global model for low affective commitment does not.

As regards continuance commitment, our research results highlighted one profile that lead to a high outcome, namely the organization man/woman career profile. Defining a consistency threshold of 0.90, the reduction method identified one configuration ($SD \cdot \sim VD \cdot BM \cdot \sim OMP$) for experiencing high continuance commitment. In this case, the configuration is made up by self-directed, not value driven, boundaryless mindset and not organizational mobility preference attitudes. We check that the global model for high continuance commitment has similar degrees of consistency and coverage as the global model for high affective commitment. Finally, we have obtained results from the low continuance commitment model. In this case, we have identified two profiles with a consistency higher than 0.90: hired gun / hired hand and architect associated with low continuance commitment. The reduction process revealed just one

Table 3
Sufficient condition analysis on affective commitment (high and low)

Configuration	Consistency	Coverage
AC		
Organizational M/W	0.947770	0.513593
Solid citizen	0.919565	0.627011
Hired gun*	0.883668	0.570933
Architect*	0.764580	0.707809
$SD \cdot BM \cdot \sim OMP$	0.921681	0.672351
Global	0.921681	0.672351
$\sim AC$		
Organizational M/W*	0.802730	0.489623
Solid citizen*	0.768041	0.589458
Hired gun*	0.830137	0.603701
Architect*	0.807173	0.841077
Global (without threshold)	0.635514	0.930939

Source: Own elaboration

Table 4
Sufficient condition analysis on continuance commitment (high and low)

Configuration	Consistency	Coverage
CC		
Organizational M/W	0.904596	0.673556
Solid citizen*	0.838787	0.803630
Hired gun*	0.753340	0.683910
Architect*	0.603469	0.784983
$SD \cdot \sim VD \cdot BM \cdot \sim OMP$	0.904596	0.673556
Global	0.904596	0.673556
$\sim CC$		
Organizational M/W*	0.894558	0.421157
Solid citizen*	0.892481	0.517140
Hired gun	0.957466	0.525698
Architect	0.964511	0.758782
$SD \cdot BM \cdot OMP$	0.926338	0.828018
Global	0.926338	0.828018

Note: *not considered as high in the reduction by Quine-McCluskey method

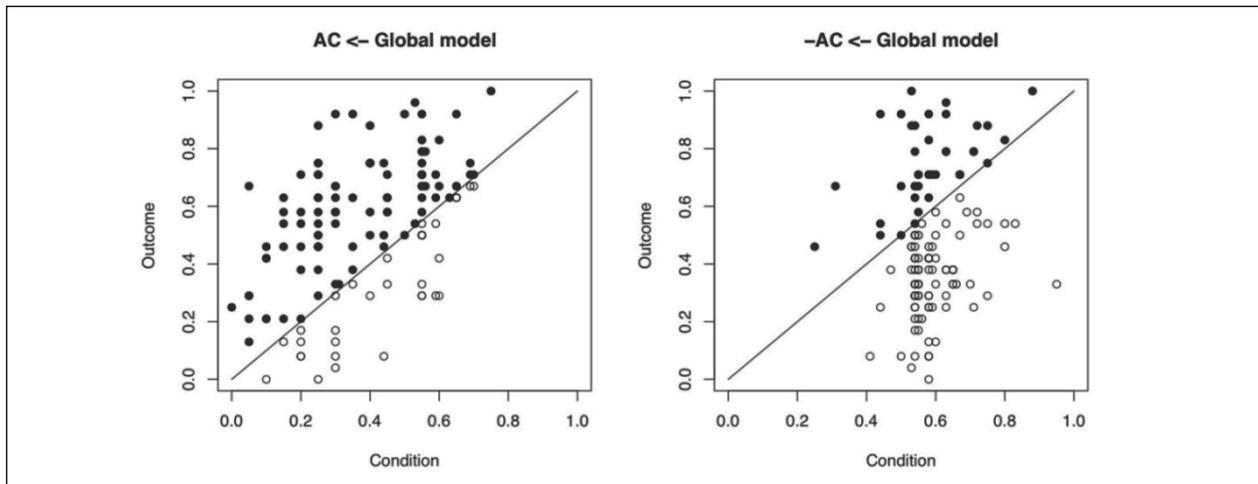
configuration: SD·BM·OMP, which considers the combination of self-directed, boundaryless mindset and organizational mobility preference attitudes as a sufficient condition for low continuance commitment, excluding the value-driven attitude. The global model has a high consistency (0.926338) and a moderate high to coverage (0.8280); therefore we consider that these results represent sufficient conditions for experiencing low continuance commitment.

Figure 2 shows the graphical representation of the global model for high and respectively low continuance commitment. We observe that in the low continuance model, a greater number of instances are located in the upper-triangle plot as compared to the

high continuance commitment model. Moreover, we can also observe that the instances are closer to the diagonal in the low continuance commitment model than in the high continuance commitment model, as shown by their coverage.

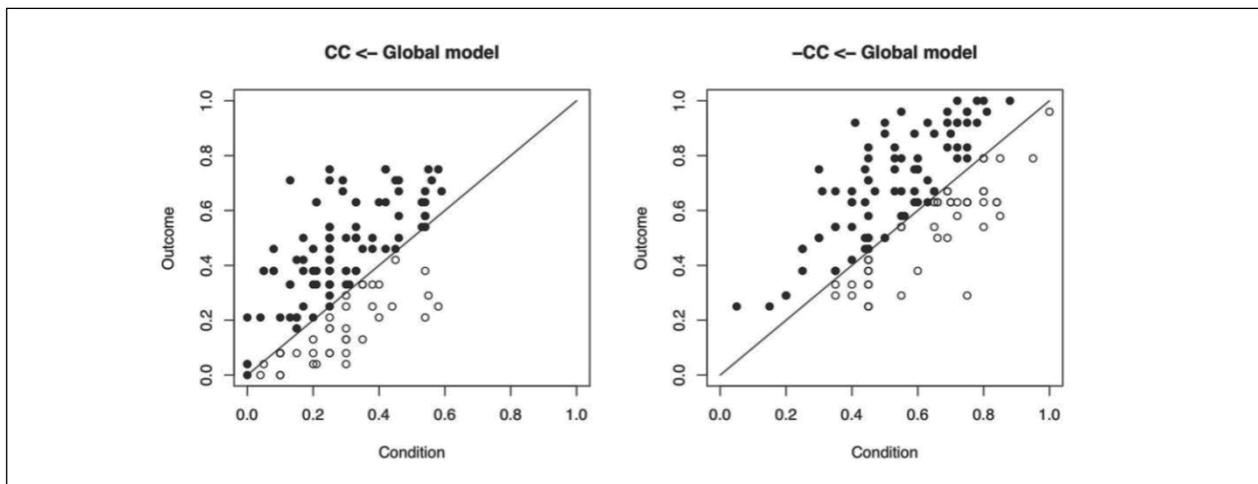
Furthermore, we checked the validity of the theoretical predictions previously formulated, regarding the likelihood of considering each career mindset separately as a necessary, yet not sufficient condition to achieve a certain outcome. In this case, we must redefine the definitions of consistency and coverage of the causal conditions. The consistency of a condition by an outcome assesses the degree to which the instances of an outcome agree in displaying the causal

Figure 1
Sufficient conditions analysis for the global models of affective commitment



Source: Own elaboration

Figure 2
Sufficient condition configurations of continuance commitment



Source: Own elaboration

condition thought to be necessary. For calculating the consistency of a causal condition in a necessary analysis, we use the following formula proposed by Ragin (2006):

$$\text{Consistency } (y_i \leq x_i) = \frac{\sum(\min(x_i, y_i))}{\sum(y_i)}$$

where y_i represents the value of the outcome of the instance i and x_i represents the value of the causal condition of the instance i . In necessary conditions analysis, the coverage of a causal condition by an outcome is a measure of the importance or relevance of this condition as a necessary condition for the outcome. In other words, the coverage measure is fairly comparable to the level of explained variance (R^2) in statistics. Coverage of a causal condition is assessed using the following measurement (Ragin, 2006):

$$\text{Coverage } (y_i \leq x_i) = \frac{\sum(\min(x_i, y_i))}{\sum(x_i)}$$

where y_i represents the value of the outcome of the instance i and x_i represents the value of the causal condition of the instance i . We notice that the formula of consistency of a necessary condition has the same structure as the measurement of coverage of a sufficient condition, and the formula of consistency of a sufficient condition has the same structure as the coverage measurement of a necessary condition.

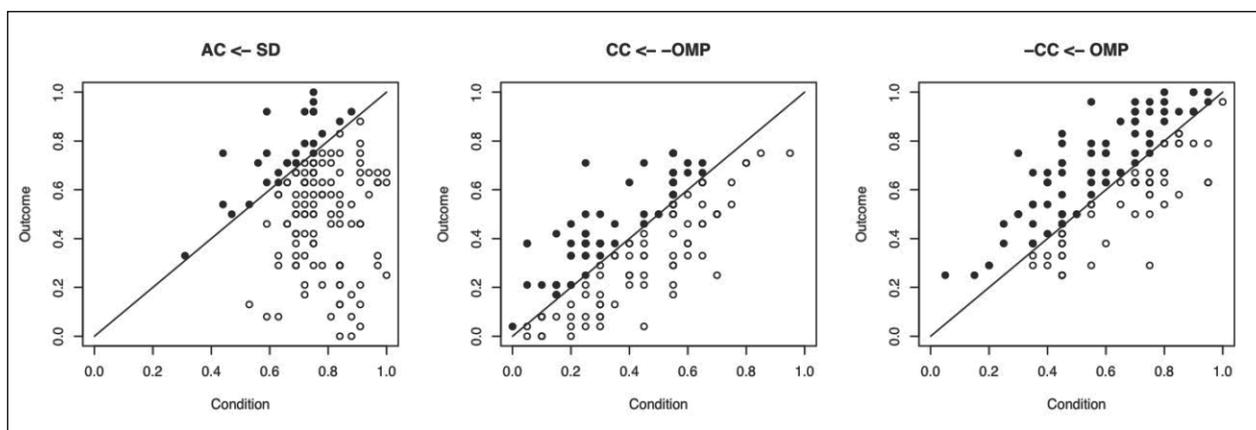
Drawing on the results of sufficient conditions analysis, we decided to analyze the relationships between two career attitudes: self-direction, and the two forms

of organizational mobility preference (low and high) and high affective commitment, high continuance commitment, and low continuance commitment, respectively. In the first case, we observed a high consistency (0.963160), yet a low coverage (0.671458). Similarly, when focusing on the relationship between low physical mobility (organizational mobility preference) and high continuance commitment, sufficient analysis reveals both moderate consistency (0.867992) and coverage (0.812476). Finally, when exploring whether organizational mobility is a necessary condition for experiencing low continuance commitment, the results display a moderate consistency (0.878840) and a high coverage (0.916723). The figure 3 shows the three graphical representations of the necessary conditions analysis.

5. Discussion and conclusions

The first methodological step consisted in calibrating the scales for determining various career profiles. One limitation is that we did not obtain a sufficient number of cases to enable analyzing all career profiles described and proposed by Briscoe et al. (2006), although the sample was relatively heterogeneous with respect to age, gender, education, professional experience, organizational size, and all respondents were distance learning graduate and post-graduate students. Most of them enrolled at the university on their own initiative, pursuing learning opportunities to enhance their future marketability, which may explain the lack of traditional career profiles. Given today's more volatile and unstable organizational context (Eby, et al., 2003) individuals are more independent than in the past from organizational ca-

Figure 3
Necessary conditions analysis



Source: Own elaboration

reer management systems and rely more on themselves, taking proactive attitudes for managing their careers and vocational destinies (Seibert, Kraimer, & Crant, 2001). In this context, the traditional career model, with its assumption of predictable and upward mobility to climb the corporate ladder has become less common (Tolbert, 1996) and represents a declining proportion of the workforce (Cappelli, 1999) as they are not able to capture the increasing range of labor experiences people nowadays embrace. Therefore, other limitation is related to the limited range of career profiles obtained. Future research might examine even more heterogeneous samples and identify the relationship between those career profiles and organizational commitment.

Certain career profiles (the fortress and the wanderer) were not considered in the fuzzy set analysis as they did not exceed a 3% of the observations. We also found four "undefined" career profiles that represented a 2.98% of the sample and presented average values, which cannot be precisely included in any career profile. Future research is encouraged in exploring these career profiles using qualitative techniques, as for instance, cognitive interviews (Desimone & Le Floch, 2004; Ericsson & Simon, 1980) in order to advance the understanding of these possible profiles and assess the likelihood of encountering them in the contemporary context in which careers unfold.

An unexpected finding was associated to the "protean architect career profile", which encompassed the larger number of cases (33.31%). According to Briscoe et al. (2006), this profile that combines all the potential of both protean and boundaryless career perspectives does not apply to many people. We believe that the relatively high percentage of cases included within the protean career architect has two possible explanations that nevertheless deserve future research. On the one hand, we argue that this might be due to the challenges raised by contemporary career context that require career actors to develop and enhance their protean and boundaryless career attitudes or to the bias of our sample. On the other hand, we believe that the protean career attitude scale may lead to high assessments, as when respondents are asked about their perceptions regarding the clearness of their values or their ability for career management they are likely to perceive themselves as being driven by personal values in their quest to define meaning and success throughout their careers (excepting those with concrete experiences regarding those factors). These idealized perceptions of the self, complemented by the job insecurity and

high mobility characterizing the contemporary career context might have lead to a generating a large number of high protean individuals, than those predicted by Briscoe et al. (2006).

The second step of the methodology was focused on testing the hypotheses formulated in terms of relationships between career profiles and the two dimensions of organizational commitment selected (affective and continuance commitment). Drawing on a fs/QCA methodology (Ragin, 2000; Ragin, 2006; Ragin & Pennings, 2005; Ragin & Rihoux, 2004), we analyzed those career profiles which constitute sufficient conditions for experiencing high or low affective and/or continuance commitment. Hypothesis 2a was partially supported, as research results reported high consistency, yet moderated coverage, and thus it could be asserted that the organizational man / woman, solid citizen career profiles and, to a lesser extent, hired hand / hired gun are sufficient conditions for achieving affective commitment. Our findings are partially consistent with previous research (Fernandez & Enache, 2008) which has found that individuals high on protean attitudes (values-driven predispositions and self-directed attitudes) exhibit high levels of affective commitment, while they are not inclined towards organizational mobility (e.g. solid citizen career profile). Moreover, individuals high on boundaryless attitudes (organizational mobility preference and boundaryless mindset) and who are self-directed in managing their careers and development also experience high levels of attachment and involvement with the organization, with the condition of not holding values-driven predispositions (e.g. hired gun / hired hand). Drawing on a smaller and more homogenous sample, the research findings revealed that the organizational man / woman and hired gun/hired hand are sufficient conditions for achieving high affective commitment. Nevertheless, our research results illustrate that when considering a consistency threshold of 0.9, the hired gun/hired hand career profile can no longer be considered sufficient condition for experiencing high affective commitment, and therefore, there is only one career profile that coincides with previous research (i.e. organizational man / woman). However, if we had considered a less strict consistency threshold (e.g. 0.88), we would have accepted the hired gun/hired hand career profile as a sufficient condition for high affective commitment. Therefore, future research that deeper analyze this career profile in relationship with affective commitment is encouraged.

On the contrary, the protean career architect, which was found as the maximum exponent of the con-

temporary career profile based on the results derived from our sample, was not a sufficient condition for generating high affective commitment, and therefore hypothesis 2b was fully confirmed. These findings suggest that other variables must be taken into account when attempting to explain the desired outcome (high affective commitment). Finally, as initially predicted, we did not find any career profile, among the four analyzed, with a sufficient consistency for assuring low affective commitment. Therefore, hypothesis 2c was fully supported.

When focusing on continuance commitment, research findings reflect that the organizational man/women career profile does constitute a sufficient condition for experiencing high continuance commitment, whereas when applying a consistency threshold of 0.9 the solid citizen career profile does not, in spite of having a higher consistency as compared with the other two career profiles considered (see Table 3). Therefore, hypothesis 3a was partially supported. Nevertheless, future research drawing on larger samples is needed for examining in depth whether the solid citizen career profile is a sufficient condition for experiencing low affective commitment. Moreover, hypothesis 3b was fully supported, as research findings highlighted that the hired gun / hired hand and the protean career architect are sufficient conditions for generating low continuance commitment. These findings reveal that career profiles with a stronger promotion focus tend to generate low continuance commitment.

Summarizing these findings related to career profiles and organizational commitment, it can be asserted that organizational man/woman is a sufficient condition for experiencing high levels of both affective and continuance commitment. Furthermore, it can be asserted that the solid citizen career profile constitutes a sufficient condition for experiencing positive emotional attachment with the employing organization (affective commitment), and future research is needed for further examining the relationship between this career profile and continuance commitment. Moreover, the hired hand / hired gun individuals are likely to disclose low continuance commitment, and higher affective commitment than protean career architects. Finally, the protean career architects represent dynamic and proactive individuals, who are more difficult to organizationally commit. Proactive individuals are likely to stay in an organization as long as that fulfils the transactional psychological contract conditions, offering opportunities for continuous growth and development and for acquiring transferable knowing how for enhancing their future employability.

It has been suggested that the protean career orientation is similar to an attitude, and does not imply particular behavior, but rather is a mindset about the career, reflecting freedom, self-direction and making choices based on one's personal values (Briscoe & Hall, 2006; Briscoe, et al., 2006). However, our findings illustrate that certain career profiles are sufficient for experiencing high or low levels of continuance and / or affective commitment and therefore it can be argued that those career profiles do have behavioral implications. This is due to the fact that organizational commitment has been directly related to various focal and discretionary behaviors, such as turnover, organizational citizenship behavior, performance or attendance (Mathieu & Zajac, 1990; Meyer, et al., 2002).

It should also be mentioned that certain attitudes, such as for instance self-directedness (SD) represent a common denominator in all career profiles, which were found to be a necessary condition for generating high affective commitment. Nevertheless, the results of necessary analysis of self-direction reveal high consistency, yet moderate coverage and therefore hypothesis 1a was not fully supported. In that sense, this prediction should be taken with caution, as future research is needed in order to fully confirm it. However, it seems that organizations should develop policies oriented at encouraging and enhancing self-management activities and proactive behaviors for helping individuals to develop self-directed career attitudes, as this protean career dimension resulted being a necessary, yet not sufficient condition for counting on high affectively committed employees. At a practical level, organizations and career counselors should foster more self-directed career management among their employees, by providing workshops addressing the importance of pursuing self-set goals, anticipating problems and opportunities, persisting in reaching one's goal, short- and long-term planning, and developing skills in the current job (Agut et al., 2009). Moreover, fostering a learning culture, creating self-organizing teams, promoting job redesign, are specific strategies that have the effect of making employees more active regarding their work situation (Frese & Fay, 2001). Hypothesis 1b has received full support, revealing that low inclination towards organizational mobility preference is a necessary condition for generating high continuance commitment. Contrary to our expectations, high organizational mobility preference does not constitute a necessary condition for assuring low continuance commitment, and this finding illustrates that hypothesis 1c was not supported. Hence, employees with low continuance commitment are not only inclined

towards organizational mobility, but they should also experience a strong promotion focus, which is derived from a high self-direction in career management that reasserts and enhances self-confidence and high psychological mobility, which strengthens physical mobility, providing the individual with opportunities of seeing and taking advantage of opportunities across boundaries.

Finally, the present study opens the way to future research lines centered on the relationship between various career profiles and focal and discretionary behaviors, such as organizational citizenship behavior; turnover; performance and attendance. In other words, our research findings indirectly forecast / predict that certain career profiles have organizational-related behavioral consequences, as highlighted and empirically proved by the extant theory on organizational commitment (Mathieu & Zajac, 1990; Meyer, et al., 2002).

References

- AGUT, S., PEIRO, J.M., y GRAU, R. (2009). *The Effect of Overeducation on Job Content Innovation and Career-Enhancing Strategies among Young Spanish Employees*. Journal of Career Development, 36(2), 159-182.
- AJZEN, I. (2001). *Nature and operation of attitudes*. Annual Review of Psychology, 52, 27-58.
- ARTHUR, M. B., y ROUSSEAU, D. M. (1996). *The boundaryless career: A new employment principle for a new organizational era*. New York: Oxford University Press.
- BECKER, T. E., BILLINGS, R. S., EVELETH, D. M., y GILBERT, N. L. (1996). *Foci and bases of employee commitment: Implications for job performance*. Academy of Management Journal, 39(2), 464-482.
- BEGLEY, T. M., y CZAJKA, J. M. (1993). *Panel analysis of the moderating effects of commitment on job-satisfaction, intent to quit, and health following organizational-change*. Journal of Applied Psychology, 78(4), 552-556.
- BERGMAN, M. E. (2006). *The relationship between affective and normative commitment: review and research agenda*. Journal of Organizational Behavior, 27(5), 645-663.
- BRISCOE, J. P., y HALL, D.T. (2006). *The interplay of boundaryless and protean careers: Combinations and implications*. Journal of Vocational Behavior, 69(1), 4-18.
- BRISCOE, J. P., HALL, D.T., y DEMUTH, R. L. F. (2006). *Protean and boundaryless careers: An empirical exploration*. Journal of Vocational Behavior, 69(1), 30-47.
- CAPPELLI, P. (1999). *Career jobs are dead*. California Management Review, 42(1), 146-+
- COLLINS, D. (2003). *Pretesting survey instruments: An overview of cognitive methods*. Quality of Life Research, 12 (3), 229-238.
- DANY, F. (2003). *Free Actors" and Organizations: Critical Remarks about the New Career Literature, Based on French Insights*. International Journal of Human Resource Management, 14, 821-38.
- DEFILLIPPI, R. J., y ARTHUR, M. B. (1994). *The boundaryless career - a competence-based perspective*. Journal of Organizational Behavior, 15(4), 307-324.
- DESIMONE, L. M., y LE FLOCH, K. C. (2004). *Are we asking the right questions? Using cognitive interviews to improve surveys in education research*. Educational Evaluation and Policy Analysis, 26(1), 1-22.
- DION, D. (1998). *Evidence and inference in the comparative case study*. Comparative Politics, 30(2), 127-145.
- DRENNAN, J. (2003). *Cognitive interviewing: verbal data in the design and pretesting of questionnaires*. Journal of Advanced Nursing, 42 (1), 57-63.
- EBY, L. T., BUTTS, M., y LOCKWOOD, A. (2003). *Predictors of success in the era of the boundaryless career*. Journal of Organizational Behavior, 24(6), 689-708.
- ERICSSON, K., y SIMON, H. (1980). *Verbal reports as data*. Psychological Review, 87(3), 215-251.
- FELDMAN, D. C., y NG, T.W. H. (2007). *Careers: Mobility, embeddedness, and success*. Journal of Management, 33(3), 350-377.
- FERNANDEZ, V., y ENACHE, M. (2008). *Exploring the relationship between protean and boundaryless career attitudes and affective commitment through the lens of a fuzzy set QCA methodology*. Intangible capital, 4(1), 31-66.
- FISS, P. C. (2007). *A set-theoretic approach to organizational configurations*. Academy of Management Review, 32(4), 1180-1198.
- FRESE, M. y FAY, D. (2001). *Personal initiative (PI): An active performance concept for work in the 21st century*. In Staw. B. M, & Sutton. R. M (Eds.), *Research in organizational behavior* (pp. 133-187). Amsterdam: Elsevier Science
- GELLATLY, I. R., MEYER, J. P., & LUCHAK, A. A. (2006). *Combined effects of the three commitment components on focal and discretionary behaviors: A test of Meyer and Herscovitch's propositions*. Journal of Vocational Behavior, 69(2), 331-345.

- GRATTON, L., & GHOSHAL, S. (2003). Managing Personal Human Capital: New Ethos for the 'Volunteer' Employee. *European Management Journal*, 21(1), 1-10.
- HALL, D.T. (1976). *Careers in organizations*. Thousand Oaks: CA: Sage.
- HALL, D.T. (2002). *Protean careers in and out of organizations*. Thousand Oaks: CA: Sage.
- HALL, D.T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior*, 65(1), 1-13.
- HALL, D.T., y CHANDLER, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior*, 26(2), 155-176.
- HALL, D.T., GARDNER, W., y BAUGH, S.G. (2008). The questions we ask about authenticity and attainability: How do values and beliefs influence our career decisions? Career division theme session panel discussion presented at the Academy of Management, Anaheim, CA.
- HIGGINS, E.T. (1998). Promotion and prevention: regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 1-46). New York: Academic Press.
- HILTROP, J. M. (1999). The quest for the best: human resource practices to attract and retain talent. *European Management Journal*, 17(4), 422-430.
- ITUMA, A. y SIMPSON, R. (2009). The 'boundaryless' career and career boundaries: Applying an institutionalist perspective to ICT workers in the context of Nigeria. *Human Relations*, 62, 727-61
- JOBE, J.B., y MINGAY, D.J. (1989). Cognitive research improves questionnaires. *American Journal of Public Health*, 79 (8), 1053-1055.
- KATZ, D., y KHAN, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.
- KOSKO, B. (1993). <<Fuzzy thinking: The new science of fuzzy logic>>. New York: Hyperion.
- KOSLOWSKY, M., SAGIE, A., KRAUSZ, M., y SINGER, A. D. (1997). Correlates of employee lateness: Some theoretical considerations. *Journal of Applied Psychology*, 82(1), 79-88.
- KVIST, J. (2007). Fuzzy set ideal type analysis. *Journal of Business Research*, 60(5), 474-481.
- LEVINSON, D. (1978). *The seasons of a man's life*. New York: Knopf.
- LUCHAK, A. A., y GELLATLY, I. R. (2007). A comparison of linear and nonlinear relations between organizational commitment and work outcomes. *Journal of Applied Psychology*, 92(3), 786-793.
- MATHIEU, J. E., y ZAJAC, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171-194.
- MCARDLE, S., LEA, W., BRISCOE, J. P., y HALL, D.T.T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, 71(2), 247-264.
- MCCLUSKEY, E. J. (1956). Minimization of boolean functions. *Bell System Technical Journal*, 35(5), 1417-1444.
- MEYER, J. P., y ALLEN, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-89.
- MEYER, J. P., y ALLEN, N. J. (1997). *Commitment in the workplace: Theory, research and application*. Thousand Oaks, CA: Sage.
- MEYER, J. P., y HERSCOVITCH, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11, 299-326.
- MEYER, J. P., ALLEN, N. J., y SMITH, C. A. (1993). Commitment to organizations and occupations - Extension and test of a 3-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
- MEYER, J. P., BECKER, T. E., y VANDENBERGHE, C. (2004). Employee commitment and motivation: a conceptual analysis and integrative model. *Journal of Applied Psychology*, 89(6), 991-1007.
- MEYER, J. P., PAUNONEN, S. V., GELLATLY, I. R., GOFFIN, R. D., y JACKSON, D. N. (1989). Organizational commitment and job-performance: It's the nature of the commitment that counts. *Journal of Applied Psychology*, 74(1), 152-156.
- MEYER, J. P., STANLEY, D. J., HERSCOVITCH, L., y TOPOLNYTSKY, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61(1), 20-52.
- MILES, M.B., y HUBERMAN, A. (1994). *Qualitative data analysis: an expanded sourcebook*. Newbury Park. CA: Sage Publications.
- MIRVIS, P. H., y HALL, D. T. (1994). Psychological success and the boundaryless career. *Journal of Organizational Behavior*, 15(4), 365-380.
- MOWDAY, R. T., PORTER, L. W., y STEERS, R. M. (1982). *Organizational linkages: The psychology of commitment, absenteeism, and turnover*. San Diego, CA: Academic Press.
- NUNNALLY, J. C., y BERNSTEIN, I. H. (1994). *Psychometric Theory* (3rd Edition). New York: McGraw Hill.

- PANG, M. (2003). Boundaryless Careers? The (In-)Voluntary (Re-) Actions of Some Chinese in Hong Kong and Britain. *International Journal of Human Resource Management*, 14, 809-20.
- PEEL, S., y INKSON, K. (2004). Contracting and careers: choosing between self and organizational employment. *Career Development International*, 9(6), 542-558.
- PFEFFER, J. (2001). Fighting the war for talent is hazardous to your organization's health. *Organizational Dynamics*, 29(4), 248-259.
- RAGIN, C. C. (1987). *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. Berkeley: University of California Press.
- RAGIN, C. C. (2000). *Fuzzy-Set: Social Science*. Chicago: The University of Chicago Press.
- RAGIN, C. C. (2006). Set relations in social research: Evaluating their consistency and coverage. *Political Analysis*, 14(3), 291-310.
- RAGIN, C. C., y PENNING, P. (2005). Fuzzy sets and social research. *Sociological Methods & Research*, 33(4), 423-430.
- RAGIN, C. C., y RIHOUX, B. (2004). Qualitative Comparative Analysis (QCA): State of the Art and Prospects. *Qualitative Methods*, 2(2), 3-13.
- REILLY, N. P. (1994). Exploring a paradox - Commitment as a moderator of the stressor burnout relationship. *Journal of Applied Social Psychology*, 24(5), 397-414.
- ROBBINS, S. P. (2005). *Organizational behavior* (11th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- RYAN, R. M., y DECI, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- SEGERS, J., INCEOGLU, I., VLOEBERGH, D., BARTRAM, D., y HENDERICKX, E. (2008). Protean and boundaryless careers: A study of potential motivators. *Journal of Vocational Behavior*, 73: 212-230.
- SEIBERT, S. E., KRAMER, M. L., y CRANT, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, 54(4), 845-874.
- SHORE, L. M., y WAYNE, S. J. (1993). Commitment and employee behavior - Comparison of affective commitment and continuance commitment with perceived organizational support. *Journal of Applied Psychology*, 78(5), 774-780.
- SIU, O. L. (2003). Job stress and job performance among employees in Hong Kong: The role of Chinese work values and organizational commitment. *International Journal of Psychology*, 38(6), 337-347.
- SMITHSON, M., y VERKUILEN, J. (2006). *Fuzzy set theory*. Thousand Oaks, CA: Sage.
- SOMERS, M. J., y BIRNBAUM, D. (1998). Work-related commitment and job performance: it's also the nature of the performance that counts. *Journal of Organizational Behavior*, 19(6), 621-634.
- SULLIVAN, S. E. (1999). The changing nature of careers: A review and research agenda. [Review]. *Journal of Management*, 25(3), 457-484.
- SULLIVAN, S. E., y ARTHUR, M. B. (2006). The evolution of the boundaryless career concept: Examining physical and psychological mobility. *Journal of Vocational Behavior*, 69(1), 19-29.
- SULLIVAN, S. E., y BARUCH, Y. (2009). Advances in Career Theory and Research: A Critical Review and Agenda for Future Exploration. *Journal of Management*, 35(6), 1542-1571.
- SUPER, D. (1957). *Psychology of careers*. New York: Harper & Brothers.
- THARENOU, P. (2009). Self-initiated international careers: Gender differences and career outcomes. In S.G. Baugh & S.E. Sullivan (Eds.), *Maintaining energy, focus and options over the career: Research in careers*, Volume 1 (pp. 197-226). Charlotte, NC: Information Age.
- TOLBERT, P. S. (1996). Occupations, organizations, and boundaryless careers. In B. M. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (pp. 331-349). New York: Oxford University Press.
- VALCOUR, M.; BAILYN, L., y QUIJADA, M. (2007). Customized careers. In M.A. Peiperl & H.P. Guntz (Eds.). *Handbook of career studies* (pp. 188-210). Thousand Oaks, C.A.: Sage.
- VERKUILEN, J. (2005). Assigning membership in a fuzzy set analysis. *Sociological Methods & Research*, 33(4), 462-496.
- WEICK, K. E. (1996). Enactment and the boundaryless career: Organizing as we work. In M. B. Arthur & D. M. Rousseau (Eds.), *The boundaryless career: A new employment principle for a new organizational era* (pp. 40-57). New York: Oxford University Press.
- WILLIAMSON, J., RANYARD, R., y CUTHBERT, L. (2000). A conversation-based process tracing method for use with naturalistic decisions: An evaluation study. *British Journal of Psychology*, 91, 203-221.
- ZEITZ, G., BLAU, G., y FERTIG, J. (2009). Boundaryless careers and institutional resource. *The International Journal of Human Resource Management*, 2009, 20, 372-98.