**The longitudinal relationship between protean career orientation and job satisfaction,
organizational commitment, and intention-to-quit**

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Introduction

The changing nature of both work and people's attitude to it has driven a need for a better understanding of the connection between employees and their place of employment (Weng & McElroy, 2012; Weng, McElroy, Morrow, & Liu, 2010). Changes in the structure of work, which have meant major adjustments for many employees, have been driven by the pressures of globalization, technological advances, and the communication revolution (Burke & Ng, 2006). Alongside these structural labour market changes, and interacting with them, have been changes in the attitudes of many individuals, who, in the late 20th and early 21st century, seek to take more control of their own career progress (DiRenzo & Greenhaus, 2011) and derive benefits and satisfaction set by themselves rather than by their employer (Weng & McElroy, 2012; Weng et al., 2010). Of the many recently proposed new career models, the two most widely cited (Gubler, Arnold, & Coombs, 2014) are the overlapping protean (Hall, 1996) and boundaryless career theories (Arthur & Rousseau, 1996). There has been considerable research focusing on the boundaryless career, but much less on the protean career (Gubler et al., 2014). Additionally, much of this research has been cross-sectional rather than longitudinal (De Vos & Soens, 2008; Sullivan & Baruch, 2009) and there has been little undertaken in non-Western cultures (Sullivan & Baruch, 2009; Thomas & Inkson, 2007). We contribute to the literature on the protean career by testing the longitudinal relationship between protean career orientation and several important outcomes (job satisfaction, organizational commitment, and intention-to-quit), and test our model using a sample from a collectivist culture (Indonesia).

The Protean Career

The protean career reflects a particular mind-set about the individual's connection with the world of work: one that emphasizes a career that is self-driven, rather than driven by organizational demands and constraints (Hall, 1996; Hall, Briscoe, & Kram, 1997). This mind-set is comprised of multiple components, including cognitive (e.g., specific work and life values), evaluative (e.g., desirable work and life goals), and behavioural domains (e.g., acting in ways consistent with values and goals; Briscoe & Hall, 2006). Thus, those with a protean career mind-set seek to drive their own life and career development and progress. They appreciate autonomy, value continuous learning, are interested in their own identity growth, accept personal responsibility for their lives, and set their own goals and criteria for success (Hall, 1996). The protean career differs from the boundaryless career construct in terms of emphasis, rather than in substance (Gubler et al., 2014). The protean career model stresses individual motives as being drivers for the individual's career direction; whereas, the boundaryless model seeks to explain how individuals manage their career progress across multiple organizational structures. Both of these contemporary career models are contrasted with the traditional career model, where the individual is considered dependent on the work organization, accepts the conditions and opportunities provided by the organization (Larsen, 2004), gives emotional and time commitment to the same employer, seeks vertical advancement and objective rewards (MacDermid, Lee, Buck, & Williams, 2001), and gives responsibility to the employer for their career development, management, and progress (De Vos & Soens, 2008).

Correlates of Protean Career Orientation

A protean career orientation refers to the attitudes, values, and competencies that operationalize the protean career construct for the individual (DiRenzo & Greenhaus, 2011; Gubler et al., 2014). This orientation has been distilled into two broad, defining themes of individuals being values-driven and self-directed (Briscoe & Hall, 2006). These themes have

been measured primarily, but not exclusively (e.g., Baruch & Quick, 2007), using scales that assess values-driven and self-directed attitudes (cf. Briscoe, Hall, & DeMuth, 2006), with the two constructs assessed either individually (Briscoe et al., 2006) or combined as a single measure (Creed, Macpherson, & Hood, 2011). Two recent reviews have summarized studies that assessed the correlates of protean career orientation. These reviews also considered variables that affected (i.e., moderated) or otherwise intervened in the relationships (e.g., mediated), and examined protean career orientation itself as a moderator and mediator. First, Sullivan and Baruch (2009) reviewed the period from 1999 to 2009, while Gubler et al. (2014) covered the period from 2006 to 2013. These reviews concluded that research investigating the correlates of a protean career orientation drew mainly on cross-sectional studies, were conducted predominantly with Western samples, and mostly utilized business or management tertiary students or managerial professionals.

Protean career focused studies have examined a wide range of cross-sectional relationships with important work- and career-related variables, such as satisfaction (Gasteiger, 2007), adaptability, identity awareness, performance, active coping, success, psychological well-being (Briscoe, Henagan, Burton, & Murphy, 2012), proactivity in career management (Baruch & Quick, 2007), organizational commitment (Briscoe & Finkelstein, 2009), career authenticity, and job change (Briscoe et al., 2006). These studies have supported the broad thrust of the protean career construct by demonstrating that protean career orientation is associated positively with, for example, career authenticity (i.e., reflecting being values driven) and proactive personality (i.e., reflecting self-directedness), and is unrelated to organizational commitment (i.e., reflecting lack of connection with an organizational career structure; for a review see Sullivan & Baruch, 2009).

However, not all findings from these studies were in the expected direction, and some found inconsistent results. Briscoe et al. (2012), for example, found no association between

protean orientation and performance, job search behaviour, or well-being, which is expected according to the protean model. Regarding inconsistent results, Volmer and Spurk (2011) found a positive association with salary, whereas Baruch, Wordsworth, Wright, and Mills (2012; cited in Gubler et al., 2014) did not, and gender differences have been found in some studies, but not in others (cf. Gubler, 2014). Additional to these inconsistencies, little is known about the relationship with some important variables. Most studies, for example, have focused on mid-career adults, meaning that little is known about how protean orientation differs at different career stages (Sargent & Domberger, 2007), and there have been few cross-cultural studies, indicating little is known about the influences of ethnicity and cultural background (Gubler et al., 2014; Sullivan & Baruch, 2009). This suggests that further studies are required, as suggested by Gubler et al. (2014), first, to clarify the currently identified relationships, and, second, to assess the conditions under which protean career orientation is related to the expected outcomes.

The Current Study

We assessed the association between protean career orientation and the three organization-related variables of organizational commitment, job satisfaction, and intention-to-quit. While there are no formal propositions associated with the protean career theory, Hall and Mirvis (1996) suggested that in the protean career, the person pursues their personal aspirations in the context of the organization (rather than being embedded within the organization), and is thus more likely to form transactional, rather than relational, connections with it (Maguire, 2002; Yan, Zhu, & Hall, 2002). From this perspective, a protean career orientation, which reflects low levels of loyalty and commitment to a particular organization, was expected to have a negative relationship with organizational commitment, as the focus for individuals is on developing and expressing their own values, rather than prioritising organizational values and outcomes. Studies have supported this contention using both global (Rowe, 2013) and

multidimensional measures of commitment (Gabriel & Nasina, 2012), although a negative finding is not universal, as some studies have found positive (Grimland, Vigoda-Gadot, & Baruch, 2012) and null relationships (Briscoe & Finkelstein, 2009).

The most often researched correlate of protean career orientation is subjective career success. This is because expressing one's values and optimising one's satisfaction are core constructs in this orientation (Gubler et al., 2014). Subjective career success has been operationalized using measures such as job and career satisfaction, with positive associations typically found. For example, same-time positive associations have been found with career satisfaction and professional vitality (Grimland et al., 2012), and with job satisfaction and length of tenure (Cerdin & Le Pargneux, 2014). These results make sense, as having a protean career orientation reflects an interest in achieving self-set goals and applying one's capacity to do so (Hall, 1996). However, contextual variables are likely to influence how much self-satisfaction can be achieved. In collectivist cultures, where group norms are influential and authority figures are respected (Hofstede & Hofstede, 2005), the capacity to pursue individual goals over organizational goals is limited. Evidence for this contention is found in studies examining the protean career construct in collectivist cultures. Chay and Aryee (1999), for example, found a negative relationship between protean career orientation (operationalized as a careerist orientation vis-à-vis an organizational career) and job involvement and job utility in a sample of Singaporean employees. Thus, we expected that a protean career orientation would find less expression in collectivist cultures and lead to a reduction in satisfaction over time.

Another construct situated at the core of the protean career orientation construct is the intention to remain within the traditional organizational structure. Previous studies have shown positive associations with a desire to change jobs and career advancement (Feldman & Weitz, 1991), especially where the organization does not support personal goal attainment

(Briscoe & Finkelstein, 2009). Consistent with this, intention-to-quit the organization has been found to be associated positively with a protean career orientation (Cerdin & Le Pargneux, 2014; Rowe, 2013), including in a collectivist culture (Chay & Aryee, 1999). We also expected a positive relationship.

To summarize, we hypothesized that a protean career orientation would be associated negatively with job satisfaction and organizational commitment, and positively with intention-to-quit. While these are plausible relationships based on the protean career model and largely consistent with empirical findings, there has been little longitudinal research assessing the causal direction of the relationships, despite calls for this to happen (Gubler et al., 2014; Sullivan & Baruch, 2009). Only a few studies have examined the correlates of a protean career orientation using a longitudinal design (Gubler et al., 2014), and these focused on changes in attitudes over time for unemployed individuals and the associated changes in job-search behaviour and well-being (McArdle, Waters, Briscoe, & Hall, 2007; Waters, Briscoe, Hall, & Wang, 2014). We found no studies that assessed longitudinal relationships between protean career orientation and organizational-related variables. Clearly, longitudinal studies are required to assess changes in protean attitude over time and to assess the effects of this on organizational attitudes and behaviours in employed individuals. Additionally, only longitudinal studies that include measures of all variables at all times can assess which relationship is causally dominant: (a) the standard, or expected, lagged effects of protean career orientation on the outcome variables, (b) the reverse, lagged effects of the outcome variables on protean career orientation, or (c) the reciprocal, lagged effects of protean career orientation on the outcome variables at the same time as the outcome variables have lagged effects on protean career orientation; Byrne, 2010).

We address this gap regarding the lack of longitudinal studies by testing a comprehensive, cross-lagged, longitudinal model across two points in time. Longitudinal designs cannot

“prove” causality (Burkholder & Harlow, 2003), but they do allow for a clearer picture of the effects of change in attitudes (protean career orientation) on changes in the outcome variables (organizational commitment, job satisfaction, and intention-to-quit) over time. To tease out these relationships, we tested a standard causal model (i.e., whether protean career orientation influences job satisfaction, organizational commitment, and intention-to-quit over time), a reverse causal model (i.e., whether job satisfaction, organizational commitment, and intention-to-quit influence protean career orientation over time), and a reciprocal causal model (i.e., whether protean career orientation, job satisfaction, organizational commitment, and intention-to-quit reciprocally influence one another; de Lange, Taris, Kompier, Houtman, & Bongers, 2004).

Research to date that has examined the protean career orientation has been conducted mainly in Western cultures – the protean career orientation construct is a US development – and there has been little research carried out in other cultures (Gubler et al., 2014; Sullivan & Baruch, 2009; Thomas & Inkson, 2007). Although culture is not the primary focus of this study, it is useful to explore whether the protean career concept is applicable and generalizable to a country with a more collectivist culture (we assess our model using Indonesian employees). Autonomy-related values and self-directedness have less of an expression in collectivist cultures, where fitting-in with one’s group is an important consideration (Cross & Markus, 1999). Indonesia also has a large power distance index, meaning that an unequal distribution of power is more accepted, and obedience to authority figures is expected (Hofstede & Hofstede, 2005). The individualist values and agency inherent in the protean career orientation construct might not be a straightforward transfer into a collectivist culture. We explore two preliminary questions related to the protean career orientation and collectivist cultures. First, is the protean career orientation construct (operationalized as the Protean Career Attitude Scale; Briscoe et al., 2006) normally

distributed in a sample of collectivist employees, as has been found in samples from Western cultures, and, second, do the relationships (i.e., between protean career orientation and the three outcome variables) mirror the correlations found in individualistic countries? Answers to these questions will provide a better understanding of how this important construct applies cross-culturally.

Method

Participants

Participants were 168 young adults (Mean age = 23.6 years, $SD = 1.9$; Range = 18 to 26 years; 82.7% male) who worked for a large-scale, electronics manufacturing company in Indonesia. They were surveyed at T1 ($N = 225$; response rate = 91%) and then again at T2, approximately six months later (response rate = 75%). At T1, 136 (81.0%) were employed as machine operators, 23 (13.7%) as section leaders, and seven (4.2%) in a managerial role (two did not answer this question). Participants were recent appointees to the company (average tenure in current job = 33 months, $SD = 23.5$; average tenure with company = 38.3 months, $SD = 24.1$), and all but two were employed in a full-time capacity (> 30 hours per week; three did not answer this question). Sixty-eight (40.5%) held a bachelor degree, 18 (10.7%) had post-school qualifications (mainly technical college), and 82 (48.8%) were high school graduates. Twenty-six (15.5%) were married.

We assessed whether drop-outs (i.e., completed T1 questionnaire only) differed from stayers (i.e., completed T1 and T2 questionnaires) on the T1 demographic and study variables. There were no differences on age, $t(223) = -1.64, p = .10$, gender, $\chi^2(1) = 1.36, p = .24$, job level, $\chi^2(2) = .14, p = .93$, marital status, $\chi^2(1) = 1.55, p = .21$, time working in job, $t(221) = -.54, p = .11$, and time working for company, $t(221) = -.61, p = .13$, although stayers were better educated, $\chi^2(2) = 9.36, p = .009$. In relation to the study variables, there were no differences for protean career orientation, $t(223) = .17, p = .77$, organizational commitment,

$t(223) = -1.65, p = .10$, job satisfaction, $t(222) = -.65, p = .52$, and intention-to-quit, $t(222) = 1.16, p = .30$. Overall, the analyses suggested little bias relating to loss of participants from T1 to T2.

Procedure

Permission was obtained from the participating company to carry out the study, and the company arranged for the surveys to be distributed to participants via supervisors and section heads. A cover letter to the questionnaire made it clear that the survey was voluntary and confidential, and that no individual results would be made available to the company. To ensure confidentiality, all questionnaires were returned to the first author in a sealed envelope. T1 and T2 surveys were matched using a code provided by the participant (participant date of birth and mother's name). No individual incentives were offered, but we did provide a report to the company summarising the aggregated results. All scales were translated into the Indonesian language using a translation-back-translation procedure (Brislin, 1970). A bilingual native Indonesian translated the English items into Indonesian, and a second bilingual native Indonesian re-translated this version into English. Finally, the two English versions were compared to verify that the meaning of each item was retained, and any necessary corrections were made. The six month time lag was considered sufficient to allow for changes to take place within the person and the organization. Ethical approval was granted by the authors' university ethics committee. Part of the T1 data used in this study has been published previously in a scale development exercise (Supeli & Creed, 2013).

Measures

Except where otherwise indicated, participants responded to items using a 6-point, Likert-like response format with end-points of 1 = *strongly disagree* and 6 = *strongly agree*. The recommended number of response options is five to seven, with higher reliability and better validity resulting when more options are used (e.g., fewer options result in loss of

information and attenuation of relationships among items). We used a 6-point option as we considered adult participants could discriminate at this level, and chose an even number of options to avoid participant tendency to select a middle option (cf. Lozano, García-Cueto, & Muñiz, 2008). Individual items within a scale were summed to produce a total score, with higher scores representing higher levels of a construct.

Protean career orientation. We used eight items from the 14-item Protean Career Attitude Scale (Briscoe et al., 2006), which tapped self-direction attitude (e.g., “I am in charge of my own career”) and values driven attitude (e.g., “It doesn’t matter much to me what other people think about the choices I make in my career”). Previous studies have used shortened versions of the full scale to reduce demand on recipients (see De Vos & Segers, 2013). We chose high loading items from the original scale development that were most suitable for young Indonesian adults (e.g., we omitted the item “Where my career is concerned, I am very much ‘my own person’”, as this would not be easily understood by our sample). De Vos and Segers (2013) reported an alpha of .83 for their 8-item scale with Belgium employees and found support for validity by finding a positive correlation with career self-management. Alphas for our 8-item scale were .72 (T1) and .75 (T2).

Organizational commitment. We assessed affective commitment, which has the strongest relationship with work-related variables (Maurer & Lippstreu, 2008), using four items from the 8-item Affective Commitment Scale (Allen & Meyer, 1990). Previous studies have used various short-form versions of the scale (e.g., Moideenkutty, Blau, Kumar, & Nalakath, 2001; Rhoades, Eisenberger, & Armeli, 2001). We used four items with the highest loadings reported by Allen and Meyer (1990). A sample item is “I enjoy discussing my organization with people outside it”). The scale developers reported sound reliability ($\alpha = .86$) for the eight items and supported validity by finding positive correlations with role clarity and peer cohesion. Rhoades et al. (2001) reported an alpha of .85 with six items with a

US university alumni sample, and Moideenkutty et al. (2001) reported an alpha of .86 for a 3-item version with English-speaking, Indian employees. Alphas for our 4-item scale were .71 (T1) and .70 (T2).

Intention-to-quit. We used the 3-item scale from the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkin Jr., & Klesh, 1983). A sample item is “I often think about quitting this job”. The developers reported an internal reliability of .83, and validity has been supported by finding negative relationships with organizational commitment (Bishop, Scott, & Burroughs, 2000). Our alphas were .86 (T1) and .88 (T2).

Job satisfaction. We used four items to assess job satisfaction: (a) the 3-item Michigan Organizational Assessment Questionnaire (Cammann et al., 1983; sample item = “In general, I like doing my job”), and (b) the “smiling faces” single item (response format = *three smiling, one neutral, and three frowning*) developed by Andrews and Withey (1976), where respondents select the face that indicates their level of job satisfaction. The four items loaded onto a single factor, and were thus used together. Alphas were .76 (T1) and .77 (T2).

Data Management

First, we created item-parcels to represent the latent variables (Landis, Beal, & Tesluk, 2000). To do this, each individual scale was subjected to an exploratory factor analysis, the items were ranked in order of their factor loadings, and then items were added to parcels using an item-to-construct balance approach (Hau & Marsh, 2004). Second, we assessed a measurement model (maximum likelihood estimation in AMOS 22) to confirm that the latent variables were independent of one another and that they could be represented by their parcels.

Third, we assessed the cross-lagged relationships in a structural model by testing a *baseline model* (with autoregressive paths only from T1 variables to corresponding T2 variables), a *standard causation model* (with added cross-lagged paths from T1 predictor to T2 outcome variables), a *reverse causation model* (cross-lagged paths added to the baseline

model from T1 outcome variables to T2 predictor), and a *reciprocal causation model* (cross-lagged paths from T1 predictor to T2 outcomes and T1 outcomes to T2 predictor; de Lange et al., 2004). The chi-squared difference test was used to assess differences among the competing nested models. When no difference was found, we used the Akaike Information Criterion (AIC) and selected the most parsimonious model (i.e., the model with the smallest AIC; Kline, 2011). In longitudinal models, measurement error covaries over time, so we allowed across-time error terms to correlate where indicated (Cole & Maxwell, 2003).

For a sample with < 250 participants with > 12 observed variables, we assessed model fit using chi-square (χ^2 ; significant p value expected), the normed chi-square ($\chi^2/df < 3.0$ suggests a good fit), the Comparative Fit Index (CFI > .95), and the Root Mean-Square Error of Approximation (RMSEA < .07; Hair, Black, Babin, & Anderson, 2010).

Results

Measurement model

The measurement model produced a good fit for the eight latent variables (four at T1 and four at T2): $\chi^2(132) = 211.83, p < .001, \chi^2/df = 1.61, GFI = .96$, and $RMSEA = .06$. The standardized beta weights on the latent variables were all significant ($p < .001$; range .52 to .93), supporting construct validity of the scales, and the correlations among the latent variables mirrored the bivariate correlations. See Table 1.

Cross-lagged models

As age, gender, and education level had trivial to weak correlations with the scale variables (absolute values ranged from $r = .01$ to $r = .20$) no covariates were included (see Table 1). Fit statistics for the baseline, standard, reverse, and reciprocal causation models are reported in Table 2. All models produced satisfactory fit statistics. The autoregressive paths from T1 to T2 were significant ($p < .001$; range $\beta = .68$ to .73 in the reported model; see Figure 1). The standard ($\Delta\chi^2 = 10.02, \Delta df = 3, p < .05$) and reciprocal ($\Delta\chi^2 = 13.68, \Delta df = 6, p$

< .05) models, but not the reverse ($\Delta\chi^2 = 3.91, \Delta df = 3, p > .05$), were significantly improved on the baseline model. There was no significant difference between the standard and reciprocal models ($\Delta\chi^2 = 3.66, \Delta df = 3, p > .05$). We accepted the standard causal model as the better fitting one as it was more parsimonious (i.e., simpler with fewer pathways) and had the lowest AIC of all the models tested (AIC = 355.59). In this accepted model, protean career orientation at T1 was associated with less organizational commitment ($\beta = -.15, p = .05$), less job satisfaction ($\beta = -.15, p = .04$), and more intention-to-quit ($\beta = .21, p = .002$) at T2. See Figure 1.

Discussion

We assessed the across-time correlates of protean career orientation, expecting that a protean career orientation would be associated negatively with later organizational commitment and job satisfaction, and positively with later intention-to-quit. Across-time relationships between protean career orientation and organizational-related variables have not been tested previously. We assessed our model in a diverse sample of young adult employees working in an electronics manufacturing company in Indonesia who were recent appointees to their job. We found support for a standard causal model, where protean career orientation at T1 was related to less organizational commitment, less job satisfaction, and stronger intention-to-quit at T2.

First, as there have been few studies examining protean career orientation in non-Western contexts (Gubler et al., 2014; Sullivan & Baruch, 2009), we include a note about the distribution of protean career orientation in this Indonesian sample. We found this variable to be relatively normally distributed (skewness statistic = -.26, SE = .19; kurtosis statistic .59, SE = .37), suggesting that, in this sample of young collectivist adults, this orientation is distributed in much the same way as is found in studies testing samples from Western countries. This result needs to be confirmed in other non-Western cultures, and in different

samples (e.g., by age), but at least for these young Indonesian employees, we see variability regarding the expression of protean attitudes and values and the orientation to being self-directed in one's career. With the rapid growth in communication technologies, a world-wide burgeoning middle-class, and relatively cheap international travel, Western attitudes are likely to find wider expression, especially with younger people (Moore, 2005). However, whether these results reflect recent developments or more long-standing cultural attitudes is yet to be determined.

These results have implications for organizations in collectivist countries, when, for example, they seek to recruit and meet the needs of their younger generation. Human resources practices most affected by cultural imperatives relate to employment tenure and security, handling status distinctions, training and development strategies, hiring criteria, and performance appraisal (Kats, van Emmerik, Blenkinsopp, & Khapova, 2010). These practices require different approaches depending on the needs of the individual as well as on the needs of the organization. For example, management practices that base pay and promotion on group performance and expect directions to be accepted uncritically might work well with older workers who have a more traditional, and culturally consistent, connection with their organization, but might not work so well with younger workers who hold different values and who are more self-driven regarding their career. The conclusion here is that business organizations in collectivist countries might need to be alert to the needs of their younger employees, especially those with more individualistic orientations.

Second, regarding the standard causal effects (i.e., higher protean career orientation predicts later reduced job satisfaction and organizational commitment and stronger intention-to-quit), these were as hypothesized and largely consistent with relationships found in Western-based studies. They also were consistent with the protean career model expectations that having goals informed by self-values and attitudes, rather than organizational needs,

should be associated with a decline in satisfaction and commitment to the organization and an increased desire to leave. Such outcomes are especially likely if organizational practices reflect cultural attitudes (e.g., giving priority to in-group allegiances and deference to authority; Cross & Markus, 1999; Hofstede & Hofstede, 2005) and do not meet the needs of the individual (i.e., in relation to expression of values and career self-directedness; Granrose & Baccili, 2006).

In our study, protean career orientation was associated with reduced job satisfaction later on. While the associations with job satisfaction in Western studies are largely positive, we accounted for our hypothesis and results regarding this relationship by drawing on cultural values. A negative relationship between these two variables is consistent with the negative relationship with organizational commitment and the positive relationship with intention-to-quit. The plausible explanation here is that young adults with higher levels of protean career orientation, who are not having their needs met and not given the opportunity to operationalize their values in the workplace, experience a decline in job satisfaction, see the organization as less relevant to them, reduce their commitment to the organization, and increase their interest in leaving it.

Third, our data did not support reverse or reciprocal causal effects (i.e., T1 outcome variables predicting T2 protean career orientation). Cross-sectional studies have tested antecedents to protean career orientation, suggesting that both organizational variables (e.g., organizational learning orientation and mentoring support; Okurame & Fabunmi, 2014; Park, 2009) and person variables (e.g., calling work orientation, proactive disposition, and self-regulatory strategies; Creed et al., 2011; Okurame & Fabunmi, 2014; Park, 2009) might predict protean career orientation. However, no longitudinal studies were identified that examined antecedents. Researchers do need to clarify what might foster a protean career orientation, as self-reliance is likely to become increasingly important in labour markets of

the 21st Century, and might be particularly important in collectivist cultures as both individual values and organizational practices become increasingly influenced by Western labour market practices (Kats et al., 2010).

Our results have practical implications for both individuals and organizations. For individuals, developing a better understanding of their own occupational values and goals might allow them to be more selective in their occupational pathways and to understand why they might become dissatisfied in organizations that do not have values consistent with their own. Organizational fit has been shown to affect career satisfaction and success (Judge & Cable, 1997), and mis-fit for protean values, attitudes, and behaviours is likely to have negative consequences for employees, both within their organization and more broadly for their careers. For organizations, there are considerations for their human resource management processes. For example, recruiting employees with high levels of protean career orientation into organizations that might not be individual-focused can result in a mis-fit for the organization. Orientation and training protocols might ameliorate some of this if it is addressed directly, and if organizations can be responsive to individual needs and allow them to be expressed, but poor matches between organizations and individuals can be costly for the business bottom line (Kristof-Brown, Zimmerman, & Johnson, 2005).

As far as we can tell, our study was the first to assess the longitudinal relationships between protean career orientation and organizational variables. We also contributed to the literature by testing the model in a collectivist environment. However, the results need to be interpreted in the context of the limitations of the study. Our findings are based on a relatively small sample of young adults, predominantly male, from a single organization in one country, who were relatively newly employed to the organization. These relationships need to be tested in other contexts (e.g., with different age groups and in different cultural settings, including Western settings). We assessed a 6-month time lag, and the relationships

among variables might differ for different time lags, so other time lags should be evaluated. Other correlates pertinent to the protean career orientation need to be assessed across time, and additional waves of data need to be collected so as to gain a better understanding of the development of protean career orientation in adults and how changes in the construct might affect the relationship with other work variables. Additionally, we know very little about the development of a protean career orientation in young people before they enter the workforce, and across-time studies are needed here. Creed et al. (2011) found cross-sectional predictors for a protean attitude in late adolescents, and studies with earlier age groups might also be required. Research reports consistently suggest that labour market and organizations will continue to change in response to globalization and other forces (e.g., Burke & Ng, 2006). Having robust models of career development to call on will be essential to explain the inter-connections between individuals and organizations in the new millennium.

References

- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: Americans' perceptions of life quality*. New York, NY: Plenum Press.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18. doi:10.1111/j.2044-8325.1990.tb00506.x
- Arthur, M. B., & Rousseau, D. M. (Eds.). (1996). *The boundaryless career: A new employment principle for a new organizational era*. New York, NY: Oxford University Press.
- Baruch, Y., & Quick, J. C. (2007). Understanding second careers: Lessons from a study of U.S. navy admirals. *Human Resource Management*, 46, 471-491. doi:10.1002/hrm.20178
- Baruch, Y., Wordsworth, R., Wright, S., & Mills, C. (2012). *Career attitudes and outcomes of blue-collar workers: The impact of chance events*. Paper presented at the 72nd Annual Meeting of the Academy of Management, Boston.
- Bishop, J. W., Scott, K. D., & Burroughs, S. M. (2000). Support, commitment, and employee outcomes in a team environment. *Journal of Management*, 26, 1113-1132. doi:10.1016/S0149-2063(00)00083-0
- Briscoe, J. P., & Finkelstein, L. M. (2009). The "new career" and organizational commitment: Do boundaryless and protean attitudes make a difference? *Career Development International*, 14, 242-260. doi:10.1108/13620430910966424
- Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, 69, 4-18. doi:10.1016/j.jvb.2005.09.002

- Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior*, 69, 30-47.
doi:10.1016/j.jvb.2005.09.003
- Briscoe, J. P., Henagan, S. C., Burton, J. P., & Murphy, W. M. (2012). Coping with an insecure employment environment: The differing roles of protean and boundaryless career orientations. *Journal of Vocational Behavior*, 80, 308-316. doi:10.1016/j.jvb.2011.12.008
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1, 185-216. doi:10.1177/135910457000100301
- Burke, R. J., & Ng, E. (2006). The changing nature of work and organizations: Implications for human resource management. *Human Resource Management Review*, 16, 86-94.
doi:10.1016/j.hrmr.2006.03.006
- Burkholder, G. J., & Harlow, L. L. (2003). An illustration of a longitudinal cross-lagged design for larger structural equation models. *Structural Equation Modeling Journal*, 10, 465-486. doi:10.1207/S15328007SEM1003_8
- Byrne, B. M. (2010). Structural equation modeling with AMOS (2nd ed). Mahwah, NJ: Lawrence Erlbaum.
- Cammann, C., Fichman, M., Jenkins Jr., G. D., & Klesh, J. R. (1983). Assessing the attitudes and perceptions of organizational members. In S. E. Seashore, E. E. Lawler III, P. H. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures, and practices* (pp. 71-138). New York, NY: Wiley-Interscience.
- Cerdin, J.-L., & Le Pargneux, M. (2014). The impact of expatriates' career characteristics on career and job satisfaction, and intention to leave: An objective and subjective fit approach. *The International Journal of Human Resource Management*, 1-17.
doi:10.1080/09585192.2013.870291

- Chay, Y. W., & Aryee, S. (1999). Potential moderating influence of career growth opportunities on careerist orientation and work attitudes: Evidence of the protean career era in Singapore. *Journal of Organizational Behavior*, 20, 613-623. doi:10.1002/(SICI)1099-1379(199909)20:5%3C613::AID-JOB979%3E3.0.CO;2-A
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112, 558-577. doi:10.1037/0021-843X.112.4.558
- Creed, P., Macpherson, J., & Hood, M. (2011). Predictors of “new economy” career orientation in an Australian sample of late adolescents. *Journal of Career Development*, 38, 369-389. doi:10.1177/0894845310378504
- Cross, S. E. & Markus, H. R. (1999). The cultural constitution of personality. In L. Pervin & O. John (Eds.), *Handbook of personality* (2nd ed., pp. 378-396). New York, NY: Guilford Press.
- de Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2004). The relationships between work characteristics and mental health: Examining normal, reversed and reciprocal relationships in a 4-wave study. *Work & Stress*, 18, 149-166. doi:10.1080/02678370412331270860
- De Vos, A., & Segers, J. (2013). Self-directed career attitude and retirement intentions. *Career Development International*, 18, 155-172. doi:10.1108/CDI-04-2012-0041
- De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior*, 73, 449-456. doi:10.1016/j.jvb.2008.08.007
- DiRenzo, M., & Greenhaus, J. H. (2011). Job search and voluntary turnover in a boundaryless world: A control theory perspective. *Academy of Management Review*, 36, 567-589. doi:10.5465/AMR.2011.61031812

- Feldman, D. C., & Weitz, B. A. (1991). From the invisible hand to the gladhand: Understanding a careerist orientation to work. *Human Resource Management, 30*, 237-257. doi:10.1002/hrm.3930300206
- Gabriel, G. C. W., & Nasina, M. D. (2012). The boundaryless career attitude and organisational commitment among public accountants in Penang, Malaysia. *Journal of Social & Development Sciences, 3*, 304-312. Retrieved from [www.ifrnd.org/Research%20Papers/S3\(9\)1.pdf](http://www.ifrnd.org/Research%20Papers/S3(9)1.pdf)
- Gasteiger, R. M. (2007, June). *Self-directed career management: The protean approach to career success*. Paper presented at QMSS Conference, Prague. Retrieved from http://www.s3ri.soton.ac.uk/qmss/conf07/presentations/Gasteiger_presentation.pdf
- Granrose, C. S., & Baccili, P. A. (2006). Do psychological contracts include boundaryless or protean careers?. *Career Development International, 11*, 163-182. doi:10.1108/13620430610651903
- Grimland, S., Vigoda-Gadot, E., & Baruch, Y. (2012). Career attitudes and success of managers: The impact of chance event, protean, and traditional careers. *The International Journal of Human Resource Management, 23*, 1074-1094. doi:10.1080/09585192.2011.560884
- Gubler, M., Arnold, J., & Coombs, C. (2014). Reassessing the protean career concept: Empirical findings, conceptual components, and measurement. *Journal of Organizational Behavior, 35*, s23-s40. doi:10.1002/job.1908
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Upper Saddle River, NJ: Pearson Education.
- Hall, D. T. (1996). Protean careers of the 21st century. *Academy of Management Executive, 10*, 8-16. Retrieved from <http://www.jstor.org>

- Hall, D. T., & Mirvis, P. H. (1996). The new protean career: Psychological success and the path with a heart. In D. T. Hall and Associates, *The career is dead - long live the career: A relational approach to careers* (pp. 15–45). San Francisco, CA: Jossey-Bass.
- Hau, K.-T., & Marsh, H. W. (2004). The use of item parcels in structural equation modelling: Non-normal data and small sample sizes. *British Journal of Mathematical and Statistical Psychology*, 57, 327-351. doi:10.1111/j.2044-8317.2004.tb00142.x
- Hofstede, G., & Hofstede, G. J. (2005). *Cultures and organizations. Software of the mind*. (2nd ed). New York: McGraw-Hill.
- Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. *Personnel Psychology*, 50, 359-394. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1744-6570](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1744-6570)
- Kats, M. M., van Emmerik, I. H., Blenkinsopp, J., & Khapova, S. N. (2010). Exploring the associations of culture with careers and the mediating role of HR practices: A conceptual model. *Career Development International*, 15, 401-418. doi:10.1108/13620431011066268
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: The Guilford Press.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individual s' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel psychology*, 58, 281-342. doi:10.1111/j.1744-6570.2005.00672.x
- Landis, R. S., Beal, D. J., & Tesluk, P. E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods*, 3, 186-207. doi:10.1177/109442810032003

Larsen, H. H. (2004). Global career as dual dependency between the organization and the individual. *Journal of Management Development*, 23, 860-869.

doi:10.1108/02621710410558468

Lozano, L. M., García-Cueto, E., & Muñiz, J. (2008). Effect of the number of response categories on the reliability and validity of rating scales. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 4, 73-79. doi:10.1027/1614-2241.4.2.73

MacDermid, S. M., Lee, M. D., Buck, M., & Williams, M. L. (2001). Alternative work arrangements among professionals and managers: Rethinking career development and success. *Journal of Management Development*, 20, 305-317.

doi:10.1108/02621710110388965

Maguire, H. (2002). Psychological contracts: Are they still relevant? *Career Development International*, 7, 167-180. doi:10.1108/13620430210414856

Maurer, T. J., & Lippstreu, M. (2008). Who will be committed to an organization that provides support for employee development? *Journal of Management Development*, 27, 328-347. doi:10.1108/02621710810858632

McArdle, S., Waters, L., Briscoe, J. P., & Hall, D. T. T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, 71, 247-264. doi:10.1016/j.jvb.2007.06.003

Moideenkutty, U., Blau, G., Kumar, R., & Nalakath, A. (2001). Perceived organisational support as a mediator of the relationship of perceived situational factors to affective organisational commitment. *Applied Psychology*, 50, 615-634. doi: 10.1111/1464-0597.00076

Moore, R. L. (2005). Generation Ku: Individualism and China's millennial youth. *Ethnology*, 44, 357-376. doi:10.2307/3774095

- Okurame, D. E., & Fabunmi, R. (2014). Protean and boundaryless careers: Exploring the role of mentoring and gender in the context of a major African country. *Career Development International*, 19, 73-100. doi:10.1108/CDI-03-2013-0033
- Park, Y. (2009). Factors influencing self-directed career management: An integrative investigation. *Journal of European Industrial Training*, 33, 578-593. doi:10.1108/03090590910985363
- Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology*, 86, 825-836. doi:10.1037/0021-9010.86.5.825
- Rowe, K. (2013). *Psychological capital and employee loyalty: The mediating role of protean career orientation*. Unpublished manuscript, University of Canterbury, Christchurch, New Zealand. Retrieved from http://ir.canterbury.ac.nz/bitstream/10092/7621/1/thesis_fulltext.pdf
- Sargent, L. D., & Domberger, S. R. (2007). Exploring the development of a protean career orientation: Values and image violations. *Career Development International*, 12, 545-564. doi:10.1108/13620430710822010
- Sullivan, S. E., & Baruch, Y. (2009). Advances in career theory and research: a critical review and agenda for future exploration. *Journal of management*, 35, 1542-1571. doi:10.1177/0149206309350082
- Supeli, A., & Creed, P. A. (2013). The incremental validity of perceived goal congruence: The assessment of person-organisation fit. *Journal of Career Assessment*, 22, 28-42. doi:10.1177/1069072713487849
- Thomas, D. C., & Inkson, K. (2007). Careers across cultures. In H. Gunz & M. Peiperl, *Handbook of career studies* (pp. 451-470). Los Angeles, CA: Sage.

- Volmer, J., & Spurk, D. (2011). Protean and boundaryless career attitudes: Relationships with subjective and objective career success. *Zeitschrift für Arbeitsmarktforschung*, 43, 207-218. doi:10.1007/s12651-010-0037-3
- Waters, L., Briscoe, J. P., Hall, D. T., & Wang, L. (2014). Protean career attitudes during unemployment and reemployment: A longitudinal perspective. *Journal of Vocational Behavior*, 84, 405-419. doi:10.1016/j.jvb.2014.03.003
- Weng, Q., & McElroy, J. C. (2012). Organizational career growth, affective occupational commitment and turnover intentions. *Journal of Vocational Behavior*, 80, 256-265. doi:10.1016/j.jvb.2012.01.014
- Weng, Q., McElroy, J. C., Morrow, P. C., & Liu, R. (2010). The relationship between career growth and organizational commitment. *Journal of Vocational Behavior*, 77, 391-400. doi:10.1016/j.jvb.2010.05.003
- Yan, A., Zhu, G., & Hall, D. T. (2002). International assignments for career building: A model of agency relationships and psychological contracts. *Academy of Management Review*, 27, 373-391. doi:10.5465/AMR.2002.7389910

Table 1

Means, Standard Deviations, and Bivariate Correlations Among all Variables at T1 and T2 (N = 168)

Variables	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5	6	7	8
1. Protean career orientation T1	37.02	4.38	21-48	1	-.02	-.11	.27**	.66***	-.16	-.23*	.37***
2. Organizational commitment T1	17.74	3.02	9-24	-.02	1	.86***	-.73***	.01	.74***	.62***	-.44***
3. Job satisfaction T1	17.31	2.91	8-24	-.09	.64***	1	-.80***	.01	.56***	.71***	-.54***
4. Intention-to-quit T1	12.67	4.32	4-24	.25**	-.58***	-.64***	1	.22**	-.49***	-.56***	.71***
5. Protean career orientation T2	35.76	4.83	20-48	.56***	.02	.04	.20**	1	-.11	.05	.34***
6. Organizational commitment T2	17.22	2.95	6-24	-.11	.61***	.43***	-.43***	-.08	1	.76***	-.66***
7. Job satisfaction T2	16.85	2.87	8-23	-.16*	.47***	.61***	-.48***	.05	.56***	1	-.71***
8. Intention-to-quit T2	13.12	4.36	5-24	.32***	-.35***	-.40***	.68***	.29***	-.56***	-.59***	1
9. Age	23.6	1.90	18-26	.01	-.10	-.14	.01	-.08	-.08	-.07	.01
10. Education	-	-	-	-.01	.04	.01	.01	.05	-.04	-.08	.11
11. Gender	-	-	-	.09	-.04	-.05	.18*	.08	-.06	-.12	.20**

Note. Zero-order correlations below diagonal and correlations among latent variables above diagonal. * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2

Fit Statistics for the Four Cross-Lagged Structural Models (N = 168)

Model	$\chi^2, ^a$	df	χ^2/df	CFI	RMSEA	AIC
Baseline model	231.61***	146	1.59	.95	.06	359.61
Standard causal model	221.59***	143	1.55	.96	.06	355.59
Reverse causal model	227.70***	143	1.59	.95	.06	361.70
Reciprocal causal model	217.93***	140	1.56	.96	.06	357.93

Figure 1. Best-fitting, standard causal relationships: dotted lines are autoregressive paths and solid lines are direct relationships between T1 and T2. Standardized beta weights are reported. * $p < .05$; ** $p < .01$; *** $p < .001$.