Predictors of "new economy" career orientation in an Australian sample of late adolescents

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Abstract

We surveyed 207 late adolescents on measures of new economy career orientation (protean and boundaryless career orientation), career adaptability (planning, self exploration, environmental exploration, decision-making and self-regulation), disposition (proactive disposition) and environmental support (social support), and hypothesised (a) that new economy career orientation would be associated with career adaptability, disposition and environmental support, and (b) that career adaptability would mediate the relationship between disposition and career orientation, and between environmental support and career orientation. The main predictor of new economy career orientation was self-regulation, which also mediated between proactive disposition and career orientation. Planning predicted one aspect of boundaryless career (mobility preference), while social support predicted a second (boundaryless mindset). Overall, the results suggest that adolescents with higher self-regulatory skills, social support, a tendency to not over-plan, and a disposition to be proactive, will be more positive towards changing work environments.

Keywords: new economy careers; protean careers; boundaryless careers; proactive disposition; career adaptability; self-regulation; social support

So-called “new economy” careers, characterised by temporary, part-time, portfolio and self-employed work, have emerged in response to economic and labour market changes brought about by rapid advances in technology, globalization and trade deregulation (Platman, 2004). These economic developments have forced changes to the structure of many workplaces (Feldman & Ng, 2007), and spawned new career models, such as the boundaryless (Arthur & Rousseau, 1996) and protean career (Hall & Mirvis, 1996). These new career models are replacing more traditional careers, which offered more stable and predictable employment patterns that were largely managed by the organisation (Baruch & Peiperl, 2000). Employees are adapting to these labour market changes by modifying their work values and behaviours, and no longer, for example, expect to have the same job for life (Hall, 2004). The current study assesses beliefs and values associated with a new economy career orientation, and examines disposition, environmental supports, and self-regulatory strategies as correlates of these beliefs and values. As young people are especially likely to be affected by these workplace changes, we assessed these correlates in a sample of late adolescents, who had some work experience, but who had not yet entered the full-time labour market.

New Economy Career Orientation

New economy career values, which are replacing values and beliefs associated with traditional, life-long employment contracts, are proposed to drive an employee’s capacity to maintain direction and a sense of purpose in an ever-changing career climate (Briscoe, Hall, & DeMuth, 2006). The boundaryless and protean careers are two distinct, yet related, representations of these new economy careers. Boundaryless careers were formulated to describe and understand how employees navigate and survive new organisational structures. They are career paths that criss-cross organisational boundaries, and involve a mindset that

accepts the need for job mobility, portable competencies and extensive personal and work networks that support and sustain the career (Briscoe et al., 2006). Protean careers, on the other hand, were proposed to account for the values and beliefs required for new economy careers. They are characterized by two dimensions: self-directedness, or the motivation and capacity to seek new opportunities and update skills, and values-driven attitudes, including the need for continuous learning, self-direction, personal responsibility, and autonomy (Hall, 2004). Empirical studies support these perspectives by showing, across diverse samples, that, for example, intrinsic career success is positively related to protean career orientation in employed adults (Baruch & Quick, 2007), that unemployed individuals with a protean career orientation are better able to cope with joblessness and are quicker at finding a new job (McArdle, Waters, Briscoe, & Hall, 2007), and that university undergraduates with a protean attitude report more career authenticity and have higher levels of mastery (Briscoe et al., 2006). In the current study, we viewed a new economy career orientation as an orientation to a protean/boundaryless career, and operationalised it using scales that tapped protean (self-directed career management, values-driven career orientation) and boundaryless orientations (boundaryless mindset, mobility preference; Briscoe et al., 2006).

Career Adaptability and New Economy Career Orientation

The competencies required to negotiate a new economy career pathway can be best summarised as career adaptability (Hall, 2004; Savickas, 1997). Being career adaptable refers to being able to deal with the unexpected and manage change. It involves the on-going learning of new skills and procedures, transferring skills from one context to another, dealing appropriately with ambiguity, treating new situations as opportunities rather than barriers, being self-aware, and reflecting on one's own actions. Career adaptability is central to achieving career effectiveness in a changing climate, and important in enabling

individuals to manage and cope with shifting environmental demands (Hall, 2004; Pulakos, Arad, Donovan, & Plamondon, 2000). Hall and Mirvis (1995) specifically argued that the ability to adapt to changing tasks, engage in continued self-learning and regulate one's career direction was critical for those transitioning to, or embarking on, a new economy career. Career adaptability also is reflected in the changing demands from employers, who are increasingly seeking an adaptable workforce (Pulakos et al., 2000).

While career adaptability is considered a multi-dimensional construct (Griffin & Hesketh, 2005), definitions vary, although they do share common elements, including career decision making (Duffy & Blustein, 2005), planning, outcome expectations (Kenny & Bledsoe, 2005), exploration (Zikic & Klehe, 2006), career self-directedness, information seeking, motivation, ability to cope with change (Dix & Savickas, 1995), being proactive (Fugate & Kinicki, 2008), and being flexible (Herr & Cramer, 1992). We adopted Savickas' (1997) definition of career adaptability as "the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions" (p. 254). We operationalised it in accordance with the dimensions proposed by Savickas of career planning, decision making, a willingness to explore one's self and the environment, and the capacity to regulate one's behaviour to facilitate progress towards achieving career goals. We expected that the capacity to be career adaptable was consistent with holding a new economy career orientation, and expected (Hypothesis 1) that career adaptability would be positively associated with new economy career values. See Figure 1.

Insert Figure 1 about here

Disposition and New Economy Career Orientation

Much research has demonstrated that disposition is associated with work values generally (Lindley & Borgen, 2000). Conscientiousness, for example, is associated with a preference for workplaces that are organised, predictable and outcome focused, whereas agreeableness is associated with a preference for workplaces that are team-orientated and low on conflict (Judge & Cable, 1997). Thus, it can be expected that disposition will account for at least some of the variance in a new economy career orientation. One disposition likely to be associated with a new career orientation is the proactive composite, which is defined as a disposition towards managing one's environment (Bateman & Crant, 1993). Proactive individuals are less constrained by situational influences, are alert to possibilities, and are prepared to act when they identify them. Crant (2000) specifically suggested that proactive individuals "might engage in career management activities by identifying and acting on opportunities to change the scope of their jobs or move to more desirable divisions of the business" (p. 36); all behaviours consistent with a new economy career orientation.

A proactive disposition also has been associated with a range of career adaptability attributes, including information-seeking, planning, perseverance, coping and self-awareness (Crant, 2000; Seibert, Kraimer, & Crant, 2001), and related to many aspects of self-regulation, such as self-efficacy, goal setting, perseverance and optimism (Fugate, Kinicki, & Ashforth, 2004; Rottinghaus, Day, & Borgen, 2005). Fugate et al. (2004), for example, suggested that those with a proactive disposition would develop multiple options and transferable skills, which will ensure their employability in unstable work climates. Thus, while we expected that a proactive disposition would be associated with a new economy career orientation, we considered that this effect would be indirect. We expected (Hypothesis 2) that a proactive disposition would be directly associated with better career adaptability skills (i.e., the skills to thrive in a changing work environment), which, in turn,

would be associated with a higher new economy career orientation. See Figure 1. This position is consistent with Super and Knasel (1981), who referred to career adaptability as an individual behaving proactively in their career.

Support and New Economy Career Orientation

Individuals do not operate independently of their social environment; thus, the work values that individuals develop are predicated on the environmental supports they receive (Weisenberg & Aghakhani, 2007). Supportive work environments (i.e., support from co-workers, supervisors, and more generically, from the organisation) are associated with the development and maintenance of positive workplace values and more productive behaviours (Day & Bedeian, 1991). For example, a consistent finding in the organisational literature is that perceived on-the-job support is associated with valuing and engaging in non-paid citizenship behaviours that benefit the organisation (Randall, Cropanzano, Bormann, & Birjulin, 1999). The mechanism for these relationships relates, at least in part, to supportive environments reducing individual anxiety, increasing efficacy and fostering experimentation with creative problem-solving (Babin & Boles, 1996).

Environmental support is also an important source of career information, guidance and advice (Seibert, Kraimer, & Liden, 2001), and is an important resource when managing uncertainty and change; that is, environmental supports are associated with the development of career adaptive behaviours (McShane & Travaglione, 2007). The environmental supports available to adolescents come primarily from their family, friends, workplace, and educational institution (Weisenberg & Aghakhani, 2007). Young people with a strong support base are more likely to feel valued, resulting in higher levels of self-esteem, efficacy and coping generally (Blustein, Schultheiss, & Flum, 2004). For example, Kenny and Bledsoe (2005) found that emotional support from the family was positively associated with

adolescents' expectations of career success; and Blustein et al. (2001) found that relational/emotional support, whilst being particularly beneficial in times of stress, was adaptive for various career-related tasks. Consistent with this argument, we expected (Hypothesis 3) that the environmental support received by adolescents would be positively related to their capacity to adapt and to self-regulate, which, in turn, would be associated with more positive new economy career values. See Figure 1.

Thus, the goal of this study was to test the associations between dispositional resources, environmental supports, career adaptive strategies, and a new economy career orientation. First, our model proposes that being career adaptable (i.e., reporting more career planning, career exploration, a better understanding of career decision-making, self-exploration, and self-regulatory strategies) will be associated with new economy career values (i.e., self-directed career management, values-driven career orientation, and a boundaryless organisation orientation). Second, our model proposes that personal resources (i.e., a proactive disposition) and environmental supports (i.e., social supports) will enhance career adaptability, which, in turn, will lead to stronger associations with new economy career values. The outcome variable of new economy career orientation is considered especially relevant as it is these values and beliefs that orientate young people to the realities of modern workplaces and careers.

Method

Participants

Participants were 207 university students, who were almost exclusively first year students from the social science faculty within the university, enrolled in a first year psychology course. There were 151 young women (72.92%) and 56 men, who ranged in age from 17 to 25 years ($M = 20.9$ years, $SD = 2.2$). The vast majority were Australian-born Caucasians,

together with a small proportion of international students, largely from Asia and northern Europe, which is typical of the university campus composition where the study was conducted. Students were mostly full-time (90.3%), and the majority (69.6%) were working part-time as well as studying.

Survey Materials

For all items, the response format was a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*), with higher scores representing higher levels of the construct. Minor changes were made to some items to make them more suitable for an Australian university sample. For example, this question from the Protean Career Attitudes Scale, “When developmental opportunities have not been offered by my company, I’ve sought them out on my own”, was replaced with, “When developmental opportunities have not been available to me, I’ve sought them out on my own”.

New economy career orientation. We operationalised this construct using two scales, which tapped values and attitudes that orientated an individual towards a protean or boundaryless career. (a) *Protean career attitudes* were measured using Briscoe et al.’s (2006) 14-item scale. This has two subscales designed to measure self-directed career management (8 items; e.g., “I am in charge of my own career”) and values-driven career orientation (6 items; e.g., “What’s most important to me is how I feel about my career success, not how other people feel about it”). Briscoe et al. reported satisfactory internal reliability coefficients (.81 and .69, respectively) for the two subscales. (b) *Boundaryless career attitudes* were measured using Briscoe et al.’s 13-item scale, which has two subscales designed to measure boundaryless mindset, reflecting an individual’s attitude to working across organisational boundaries (8 items; e.g., “I would enjoy working on projects with people across many organisations”), and mobility preference, being a preference for working

in a single organisation (5 items; e.g., “I would feel very lost if I couldn’t work for one organisation”). Briscoe et al. reported satisfactory internal reliability coefficients (.89 and .75, respectively) for these two subscales. Both the protean and boundaryless measures were devised using full-time and part-time university students, and employed adults. The authors demonstrated validity using factor analysis, inter-subscale correlations, and by testing the associations between the subscales and other career-related variables, such as goal orientation, and by testing the association with the personality measure of openness to experience.

Proactive disposition. This was assessed using the Proactive Personality Scale (Bateman & Crant, 1993), which assesses an individual’s personal disposition toward proactive behaviour (17 items, e.g., “I am always looking for better ways to do things”). The scale was devised originally using university students. It has acceptable internal reliability (coefficients ranging from .87 to .89), a unidimension factor structure (Crant, 1995), and sound validity, based on relationships to the Big-5 personality factors and to achievement orientated variables, such as peer-rated potential for leadership roles (Bateman & Crant, 1993).

Social support. This was measured using the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), which taps support from three sources of family, friends and significant others (4 items per source; e.g., “My family is willing to help me make decisions”). Test-retest reliability coefficients (2-3 months) ranged from .72 to .85 for the three subscales (Zimet et al., 1988). Validity has been demonstrated for university students by showing factorial independence and correlating the test with measures of self concept, social desirability bias, depression, anxiety, and a second measure of social support (Dahlem, Zimet, & Walker, 1991).

Career adaptability. This was operationalised as planfulness, exploration and decision-making, as these are “the critical developmental dimensions of career adaptability” (Savickas, 1997, p. 256), and as self-regulation, which reflects self-management of goal-directed behaviours (Savickas, 1997; Karoly, 1993). (a) *Career planning* was measured using the career planning and thinking subscale of the Career Salience Scale (Greenhaus, 1971; 8 items; e.g., “I enjoy thinking about and making plans about my future career”). Zikic and Klehe (2006) reported satisfactory internal reliability (.72), and provided support for validity by identifying positive associations with job seeking and employment networking. (b) *Self exploration and environmental exploration* were assessed using two subscales of the Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983): self-exploration (5 items; e.g., “In the last three months, I have understood how my past behaviour relates to my future career”), and environmental exploration (6 items, e.g., “In the last three months, I have investigated career possibilities”). Creed, Fallon, and Hood (2009) reported internal reliabilities of .84 and .88, respectively for the two subscales with a sample of university students. The same authors demonstrated factorial independence, and, in support of validity, showed that the subscales were negatively associated with career distress, and positively associated with career planning. (c) *Decision-making* was measured using the indecision subscale of the Career Decision Scale (Osipow, 1987; 16 items; e.g., “I think I know what educational course to do, but I feel I need some additional support for it as a choice for myself”). The subscale is widely used with high school and university students. It has sound internal reliability (.80 to .90) and support for validity is provided in the manual (Osipow, 1987). (d) *Self-regulation* was measured using the 21-item Self Regulation Questionnaire (Neal & Carey, 2005), which assesses goal directed behaviour in the face of changing circumstances, such as when undergoing career transitions. Two

factors have been identified: goal setting (10 items; e.g., “I am usually able to accomplish goals I set for myself”), and impulse control (11 items; e.g., “I learn from my mistakes”). Internal reliability coefficients of .86 (goal setting) and .84 (impulse control) have been reported, and both convergent and divergent validity have been established (Neal & Carey, 2005). Creed et al. (2009) used the scale with a sample of university students. They reported an internal reliability for the total scale of .97, and found positive correlations with career exploration, planning and decision-making.

Background information. We sought information on gender, age, study status (full-time vs. part-time), employment status (study only vs. study and part-time work), and students’ university entry score, all of which are considered important contextual variables in the career development of young people (Lent, 2005).

Procedure

First, we piloted the paper-and-pencil survey, which contained 106 items and took about 15 minutes to complete, with a small group of six students from the same student population. This was to identify any potential difficulties with the content or with readability. Second, we recruited a sample of students via announcements in lectures, online university notice boards and word of mouth. Students received course credit for completing the survey, and had their names placed in a draw to win a \$50 voucher. About 300 students were eligible to participate in the study. Students completed the survey in their own time and returned it to the researchers. The surveys contained very few missing values. These did not suggest a pattern, and were thus considered to be missing at random and presenting no threat to the integrity of the dataset. Where scale values were missing, we replaced them with the scale mean.

Results

Data Management for Latent Model Testing

The desirable ratio of participants to parameters estimated in a latent variable analysis is 10:1 (Kline, 1998). To achieve this, we used a mixture of multi-item parcels, factor scores, and observed scores to create the latent variables. Multi-item parcels (Landis, Beal, & Tesluck, 2000) were used for boundaryless mindset, mobility preference, protean attitude and proactive disposition. To create these, we subjected each scale individually to an exploratory factor analysis where a single-factor solution was specified. We then paired the highest and lowest loading individual items and allocated these to the first parcel, paired the second highest and second lowest loading items and allocated them to the second parcel, and so on, until all items were exhausted. We formed the two parcels by summing the individual items allocated to each. In this process, protean attitudes were best represented as a unidimensional factor, rather than as two subscales as identified by Briscoe et al. (2006).

For the other latent variables, planning was best represented by two factors, social support and decision-making were best represented by three factors, and self-regulation was best represented by four factors. These parcels were created by summing the individual items for each factor. Environmental exploration and self exploration were best represented by their individual observed items. The one variation here was that planning was represented by 7 rather than 8 items, after one item was discarded due to a low loading.

Thus, 10 latent variables were included in the initial measurement model, with each of these represented by multi-item parcels, factor scores or individual items. The 10 latent variables were protean attitudes, mobility preference, boundaryless mindset and proactive disposition (each represented by two multi-item parcels based on the procedure recommended by Landis, Beal, & Tesluck), planning (represented by two parcels based on factor scores), social support and decision-making (each represented by three parcels based

on factor scores), self-regulation (represented by four parcels based on factor scores), environmental exploration (represented by six individual items), and self exploration (represented by five individual items). See Table 1 for summary data, internal reliability coefficients and bivariate correlations among observed and latent variables.

Insert Table 1 about here

We used maximum likelihood estimation in the AMOS statistical package. Model fit was assessed using χ^2 , Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA; Byrne, 2001). The χ^2 and CFI indices compare the specified model to a model with complete independence. A non-significant χ^2 and CFI values $> .90$ to $.95$ reflect a good fit (Byrne, 2001). As the χ^2 statistic is sensitive to sample size (the more participants, the higher the χ^2 value), we also considered a χ^2 value two to three times greater than the degrees of freedom as acceptable (Carmines & McIver, 1981). The RMSEA estimates the error due to the approximate fit of the model. The less error the better; thus, RMSEA values $< .05$ to $.08$ reflect a good model fit (Byrne, 2001).

Predicting New Economy Career Orientation

Prior to assessing the hypothesized structural model shown in Figure 1, we assessed a measurement model to test the extent to which all multi-item composite indicators measured the latent variables as intended. The variation to Figure 1 was that new economy career orientation was operationalised as three latent variables (protean attitude, boundaryless mindset, mobility preference), and career adaptability was operationalised as five latent variables (planning, environmental exploration, self exploration, decision-making, self-regulation). The fit statistics for this analysis were satisfactory, $\chi^2(383) = 611.12, p < .001$, $\chi^2/\text{df} = 1.60$, CFI = .93, RMSEA = .05.

We then tested the hypothesized structural model. As the outcome variables had only weak correlations with age, gender and the other demographic variables, these were not included in the model. This model also had a satisfactory fit to the data, $\chi^2(397) = 637.12$, $p < .001$, $\chi^2/df = 1.61$, CFI = .92, RMSEA = .05. The non-significant pathways identified in the model were progressively removed, and additional pathways, which had not been hypothesized, were included. The final model (see Figure 2) also generated a satisfactory fit, $\chi^2(409) = 618.61$, $p < .001$, $\chi^2/df = 1.51$, CFI = .93, RMSEA = .05. Based on the chi-square difference test, there was no significant difference between the first and the final model ($\Delta\chi^2 = -18.51$, $\Delta df = 12$, $p > .05$); however, we accepted the final model as it was the more parsimonious (Kline, 1998).

In this model, proactive disposition accounted for significant variance in environmental exploration (12.8%), self exploration (20.7%) and decision-making (4%). Proactive disposition and environmental exploration accounted for 23% of the variance in planning, and proactive disposition and decision-making accounted for 86.6% of self-regulation. Planning and self-regulation accounted for 14% of mobility preference. Self-regulation accounted for 48.7% in protean attitude, and social support, self-regulation and mobility preference accounted for 42.4% in boundaryless mindset.

Insert Figure 2 about here

Test of Mediation

In the final model, planning predicted mobility preference, and self-regulation predicted mobility preference, protean attitude and boundaryless mindset. We followed the recommendations of Shrout and Bolger (2002) to test whether these two variables mediated the relationships between the predictor (proactive disposition) and the outcome variables. This involved testing a model that contained the direct effects only (i.e., proactive

disposition predicting protean attitude, boundaryless mindset and mobility preference), and testing a model that included both the direct and indirect effects. We used the AMOS bootstrapping function to estimate standard errors and 95% confidence intervals for all direct and indirect estimates. Mediation occurs when the predictor is significantly associated with an outcome, the mediator is significantly associated with the predictor and the outcome, and the 95% confidence intervals of the indirect effect via the mediator do not include zero. As social support was not significantly associated with any mediator variable, its effect was not assessed.

In the model testing the direct paths, proactive disposition was significantly associated with protean attitude ($\beta = .61, p < .001$) and boundaryless mindset ($\beta = .53, p < .001$), but not with mobility preference ($\beta = -.15, p = .20$). Thus, proactive disposition met the first criterion for mediation with two of the outcome variables. The model testing the direct and indirect effects was based on 1000 bootstrapped samples. In this model, proactive disposition was associated with self-regulation ($\beta = .70, p < .001$) and decision-making ($\beta = -.19, p = .013$). Decision-making was associated with self-regulation ($\beta = -.38, p < .001$), Self-regulation was associated with protean attitude ($\beta = .54, p = .0031$) and boundaryless mindset ($\beta = .32, p = .03$), and proactive disposition was associated with boundaryless mindset ($\beta = .28, p = .035$), but not protean attitude ($\beta = .18, p = .19$). The 95% confidence interval for the indirect effects of proactive disposition on protean attitude (CIs = .84-1.46) and boundaryless mindset (CIs = .02-.41) did not contain zero, indicating self-regulation significantly mediated between proactive disposition and the two outcome variables. Decision-making also carried the effect of proactive disposition to self-regulation (CIs = .01-.13). Overall, 46.8% of the variance in protean attitude and 31.8% of the variance in boundaryless mindset were accounted for. The indirect effect of proactive disposition on

protean attitude was 31.1%, and for boundaryless mindset was 15.3%, indicating partial mediation in both cases. The indirect effect for protean disposition on self-regulation was 4.4%.

Discussion

We operationalised new economy career orientation as a combination of values and attitudes towards a protean and a boundaryless career (Briscoe et al., 2006). Consistent with previous research findings, two dimensions were identified for boundaryless careers. However, attitudes towards a protean career were found to reflect only a single dimension. We found correlations among the new economy career measures were similar to those found by the developers, and found associations between these measures and the other scales used in the study in the expected direction, which indicated support for the validity and use of the measures with this sample. The finding regarding the dimensionality of the protean career measure was inconsistent with the findings by Hall (2004) and the scale developers (Briscoe et al., 2006), who identified two dimensions of a protean career. Hall used working adults in his sample and Briscoe et al. used both adults and university students, whereas our study used university students solely. This suggests that future researchers might fruitfully test for age differences in new work values and examine the construct from a developmental perspective. Career orientation and work values are shaped by the family and by young peoples' early workplace experiences (Loughlin & Barling, 2001). Identifying critical periods for the development of these values, and their determinants, would allow interventions and education to assist young people, and maybe children, to explore and make decisions about the type of work experiences available to them.

Hypothesis 1, that career adaptability would be associated with new economy career orientation, was partially supported. Self-regulation predicted all three new economy career

measures, while planning predicted mobility preference. Self-regulation, or the capacity to monitor goal-directed progress and adjust one's behaviours to facilitate goal achievement (Karoly, 1993), was the most important predictor, with moderate positive correlations with protean attitude and boundaryless mindset, and a small, but significant, negative correlation with mobility preference; that is, higher levels of self-regulation were associated with a self-directed career orientation, a preference for working across organisational boundaries, and a negative attitude towards remaining within one organisation. New economy careers require employees to be self-directed, thoughtful about their values and goals, and to be able to adjust and respond to uncertain and changing environments, which is consistent with self-regulation. Baumeister and Vohs (2007) reported that individuals with good self-regulatory strategies were more likely to succeed at education and work; the current study extends this by identifying that self-regulation is positively associated with a career orientation that reflects the changing nature of employment. Conversely, adolescents with fewer self-regulatory strategies seem to be attracted to more traditionally orientated employment situations. These employment situations still exist and are likely to persist (Lips-Wiersma & Hall, 2007); however, such an orientation and a lack of skills in managing modern workplaces is likely to restrict the occupational achievements of these young people.

The significant relationship between self-regulation and the other career adaptability strategies (absolute correlation coefficients ranged from .33 to .57; see Table 1) supports the inclusion of self-regulation in career adaptive strategies when assessing career and work-related goals, as suggested by Savickas (1997). Indeed, as self-regulation was the most important predictor of new economy career orientation, a wider array of self-regulatory strategies, such as feedback seeking, social skills and emotion control (Porath & Bateman, 2006) need to be assessed along with Savickas' career adaptive strategies to determine their

relative importance in relation to career orientation, as well as in relation to other career-related variables.

The other adaptive strategy that was significantly associated with new economy career orientation was planning, which was positively correlated with mobility preference. This result suggests that late adolescents who have a stronger focus on organisation and planning also have a stronger preference for working in a more traditional work environment; and conversely, the results suggest that those with lower levels of planning also report a stronger preference for new economy careers. Being planful is seen as desirable when thinking about and managing a career (Savickas, 1997); however, high levels of planning may operate against some young people when they enter the workforce, if this reflects some form of early career foreclosure and limits their horizon to occupations as they have existed and unfolded in the past. High levels of planning may mean that these young adults are less well prepared to manage a career path that has to exist in a rapidly changing environment. Planning for change, which was not reflected in the scale we used, or being less prepared to make future plans, may be more effective strategies to succeed in future workplaces, which are likely to include fewer traditional careers. Future research could tease out the relative benefits of planning for change versus career planning generally. In the meantime, interventions and education for adolescents could profitably include components that explore the merits or otherwise of high levels of planning in a changing work environment.

Hypothesis 2, that a proactive disposition would be positively associated with career adaptability, and that an increase in adaptability would be associated with higher new economy career orientation, was partially supported. Proactive disposition was associated with more planning and self- and environmental-exploration, better knowledge and use of decision-making principles, and higher use of self-regulatory strategies. Proactive

disposition has been linked previously to other adaptive strategies, such as autonomy, self-efficacy, self-direction, perseverance, coping and information-seeking (Seibert, Kraimer, & Crant, 2001), as well as to career success (Seibert, Crant, & Kraimer, 1999). The results from the present study extend this range of correlates, and confirm the value of having this behavioural disposition when focusing on a career path.

When tested directly, proactive disposition had significant associations with protean attitude and boundaryless mindset; however, in the final model, only self-regulation partially mediated the effect of proactive disposition on these two outcome variables, suggesting that having such a disposition will be helpful when adolescents contemplate their career future and take steps to implement it. Not having a proactive disposition may be a disadvantage, not only in restricting or reducing adolescents' adaptability and self-regulation, but also leading them to focus on and choose more traditional careers. Protean careers do not suit everyone, and some people will be disadvantaged as they will not be able to manage their career or negotiate a path successfully. Those who may be disadvantaged include the low and semi-skilled (Herriot & Pemberton, 1996), and may also include those who do not have a proactive disposition. The imperative of new economy careers is that employees must drive and develop their own careers, both within and across organisations. Those who are dispositionally unable to do that, or who do it poorly, will be disadvantaged, and will benefit from interventions that identify and develop strategies or career directions to accommodate these personal qualities.

Hypothesis 3, that social support would be positively associated with career adaptability, and that an increase in adaptability would be positively associated with a new economy career orientation, was not supported. This is inconsistent with previous studies where associations with career (Creed et al., 2009) and general adaptive strategies (Cantor,

Kemmelmeier, Basten, & Prentice, 2002) have been found. We did find social support to have a direct association with boundaryless mindset, meaning that support generally from family, friends and significant others was associated with a positive attitude to working across organisational boundaries. This result is consistent with other research with adults (Arthur & Rosseau, 1996), and consistent with the notion that building a social network is part of having a boundaryless mindset, or further, that a boundaryless mindset, or psychological mobility, is motivated by opportunities for interacting with others (Sullivan & Arthur, 2006). One possible mechanism for this is that families, peers and significant others may be able to share/pass on knowledge and strategies of their career transition experiences.

Overall, the findings showed that proactive disposition, social support, the career adaptative strategy of planning, and self-regulation were associated with new economy career orientations in adolescence and early adulthood, demonstrating that person, situation and cognitive strategies were all associated with attitudes towards the new world of work. From a practical perspective, the results suggest that those working with young adults who are contemplating their transition to employment should help them explore the world of work so they might gain an understanding of how and why it is changing, and assist them to become aware of the skills and strategies required for success. All of the strategies tested in this study have a capacity for enhancement, and teaching these skills will allow individuals to be better prepared and more active in managing their own career development. The findings also have practical implications for employers when they recruit and select employees for roles in their organisations. Employers are increasingly requiring and seeking adaptable and flexible employees (Pulakos et al., 2000), and young people with a new economy career orientation will be attractive, as they are likely to be equipped to work more effectively across situations and environments affected by continuous change.

Limitations

We proposed and tested a plausible model of antecedents to career values. However, the results need to be considered in the context of the study's limitations. Our study collected data at one point in time, and relied on self-report for all measures. A more robust test of this model requires a longitudinal examination, and may need to collect data on even younger participants to determine how and when particular orientations develop. Obtaining data from multiple sources would also strengthen conclusions and recommendations. We also suggest that a new or revised measure of protean attitude is required for adolescents. Our sample was restricted to students from one university, and drawn primarily from the social science faculty. Thus, future studies need to consider more heterogeneous samples, and with larger sample sizes could assess for differences across students with different backgrounds and different career trajectories.

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Table 1

Summary data, zero-order correlations (above diagonal) and correlations among latent variables (below diagonal); N = 273

Variable	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9	10
1. Protean Attitude	54.97	5.97	.80	-	.34***	-.01	.51***	.12	.28***	.25***	.28***	-.36***	.38***
2. Boundaryless Mindset	32.70	4.51	.88	.40***	-	-.30***	.47***	.30***	.20**	.22**	.21**	-.19**	.34***
3. Mobility Preference	13.78	3.45	.78	-.01	-.36***	-	-.09	-.04	.02	-.02	.03	.17*	-.16*
4. Proactive Disposition	62.75	8.05	.87	.61***	.54***	-.15*	-	.25***	.35***	.39***	.26**	-.13	.46***
5. Social Support	49.98	7.88	.91	.17*	.39***	-.06	.36***	-	.05	.05	.20**	-.19**	.21**
6. Environmental Exploration	18.48	5.32	.87	.34***	.21**	.03	.37***	.08	-	.45***	.26**	-.02	.24**
7. Self Exploration	18.11	3.39	.82	.27***	.24***	-.02	.44***	.07	.46***	-	.33***	.04	.20**
8. Planning	25.20	4.69	.74	.38***	.26***	.15*	.48***	.32***	.40***	.47***	-	-.35***	.43***
9. Decision-making	37.92	12.85	.92	-.40***	-.21**	.21**	-.19**	-.21**	-.02	.03	-.34***	-	-.39***
10. Self-regulation	74.36	8.98	.82	.52***	.48***	-.14*	.68***	.47***	.33***	.57***	.57***	-.42***	-

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

Figure 1. Hypothesized model of career adaptability (Career Planning, Self Exploration, Career Exploration, Decision-making and Self-regulation) mediating relationships between Proactive Disposition, Social Support and New Economy Career Orientation.

Figure 2. Final model predicting New Career Orientations, with standardized regression weights reported.