



Motivation and young people's career planning: A perspective from the reinforcement sensitivity theory of personality



Philip J. Corr ^{*}, Sofia Mutinelli

City, University of London, England

ARTICLE INFO

Article history:

Received 16 July 2016

Received in revised form 19 October 2016

Accepted 22 October 2016

Available online xxxxx

Keywords:

Reinforcement sensitivity theory

Personality

BAS, BIS, FFFS, career

Adaptability

Optimism

Knowledge

ABSTRACT

We examined the associations between personality factors of the reinforcement sensitivity theory (RST) of personality and career planning predispositions in young people (university students and recent graduates), comprising Career Adaptability, Career Optimism, and Perceived Knowledge. As predicted, all three career planning dispositions were positively correlated with Behavioural Approach System (BAS) scores, principally Reward Interest and Goal-Drive Persistence; and all dispositions negatively correlated with Behavioural Inhibition System (BIS) scores – these significant associations survived hierarchical multiple regression with age and gender statistically controlled. These findings indicate that motivational factors of the kind measured by RST-related approach-avoidance factors are associated meaningfully with career planning predispositions. Although a novel finding, further work is needed to determine whether these relationships exist when actual career-related decisions and behaviours are examined.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Motivation and personality are important in career planning and choice. This has been confirmed by previous research focussing on such specific factors as self-efficacy (e.g., Choi et al., 2012; Taylor & Betz, 1983) and career-related interests (e.g., artistic, realistic, enterprising factors; Pellerone, Passanisi, & Bellomo, 2015), as well as more general factors of personality (e.g., Gunkel & Schlaegel, 2010). However, this individual differences literature has focussed mainly on the specific competencies required to pursue and achieve career success (Bell & Blanchflower, 2011): Transferable, non-intellective, capabilities, which include self-efficacy, conscientiousness, resilience, positive expectations and optimism (Järnlström, 2000; Richardson, Abraham, & Bond, 2012). Expectations of the *future* are especially important because they affect perceptions of opportunities and challenges (e.g., Chang, Choi, & Kim, 2008) which engage motivational and emotional processes.

2. Approach and avoidance personality factors as distal antecedents

There has been little research on individual differences in fundamental systems of emotion and motivation in career-related dispositions; and, specifically, no work relating to the reinforcement sensitivity theory (RST) of personality (Gray & McNaughton, 2000; Corr & McNaughton, 2012; for a review of this literature, see Corr, 2008). Work relating RST personality processes to motivation within

the workplace (for a review, see Corr, McNaughton, Wilson, Burch, & Poropat, 2016) suggests that this is a viable research path to follow. Specifically, there is a need to relate career planning dispositions to stable individual differences as distal *antecedents* (for a discussion of the motivational nature of RST in terms of distal-proximal processes, see Corr & Krupić, 2016).

2.1. Career dispositions and RST

One major model of career-related dispositional factors, which we employ in this paper, comes from Rottinghaus, Day, and Borgen (2005), who proposed three principal career-related factors: *Career Adaptability* (CA; perceiving one's ability to cope with unexpected events, adapting to a continuously changing working environment, and exploiting changes as a means to succeed); *Career Optimism* (CO; perceiving that the best possible outcomes will take place and expecting that all circumstances will evolve in the best possible way); and *Perceived Knowledge* (PO; perception of how well an individual understands the job market and employment trends). Rottinghaus et al. (2005) proposed that *adapting* to the complex job market, being *optimistic* and having *knowledge* of it are, in fact, career-related psychological resources which have a major impact on career planning.

The reinforcement sensitivity theory (RST) of personality proposes three major systems: one incentive motivation system, the *Behavioural Approach System* (BAS); and two defensive systems, the *Fight-Flight-Freeze System* (FFFS) and the *Behavioural Inhibition System* (BIS). The FFFS mediates reaction to immediate threat, and is related to the

^{*} Corresponding author.

E-mail address: philip.corr@btopenworld.com (P.J. Corr).

emotion of fear, while the BIS mediates reactions in the face of goal-conflict, and is related to the emotion of anxiety.

2.2. RST predictions

In this research, we use the Reinforcement Sensitivity Theory Personality Questionnaire (RST-PQ; Corr & Cooper, 2016) which contains separate measures for the BIS and FFFS, as well as four BAS factors (Reward Interest, Goal-Drive Persistence, Reward Reactivity, and Impulsivity) – in addition, there is a defensive Fight factor that is not of interest to this paper. We hypothesized that the degree of motivational orientation to career planning (defined in terms of Career Adaptability, Career Optimism, Perceived Knowledge) should be related to the strength and weakness of these RST factors. Specifically, we predicted that individuals with high levels of positive adaptability, optimism and knowledge would be higher on BAS factors. More specifically, Reward Interest and Goal-Drive Persistence should be the most consistent predictors of a positive career planning orientation. As this process entails expectations and not final outcome, Reward Reactivity should be expected to play, if any, a much weaker role; and, similarly, Impulsivity little if any (and possibly a negative) role.

Furthermore, given the motivationally and emotionally challenging nature of career planning – especially the evocation of goal-conflict – high levels of the BIS should impair it. This prediction derives from the theory that the BIS is activated by goal-conflict and this activation should be expected to lead to task-irrelevant processing which, in the context of career planning, would be disadvantageous – the result would be excessive worry, rumination and focus on what might go wrong. Given the nature of the career planning variables, these RST-related associations should be highest for the motivational factors of *Career Adaptability* (CA) and *Career Optimism* (CO), and least relevant for the more cognitive factor of *Perceived Knowledge* (PO).

3. Method

3.1. Participants

One hundred and seventy-seven students and recent graduates (77 men, 100 females) were recruited from English Universities. Age ranged from 18 to 30 years old ($M = 21.6$; $SD = 3.2$). Thirty per cent classified themselves as Asian, 59% White European, 5% Black African/American, and 6% 'other'.

3.2. Measures

3.2.1. The career futures inventory

The Career Futures Inventory (CFI) is a 25-item questionnaire measuring career planning dispositions (Rottinghaus et al., 2005). It is comprised of three subscales: *Career Adaptability* (CA), consisting of 11 items ($\alpha = 0.85$) (e.g., "My career success will be determined by my efforts"); *Career Optimism* (CO), consisting of 11 items ($\alpha = 0.87$) (e.g., "Thinking about my career inspires me"); and *Perceived Knowledge* (PK), consisting of 3 items ($\alpha = 0.73$) (e.g., "It is easy to see future employment trends") (Rottinghaus et al., 2005). Participants responded on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The CFI has good internal consistency and validity; specifically, temporal stability is satisfactory for the three scales; and convergent-divergent validity is supported by significant relations with personality, problem solving styles, positive and negative affect, optimism and self-efficacy (for a summary, Rottinghaus et al., 2005).

3.2.2. Reinforcement Sensitivity Theory of Personality Questionnaire (RST-PQ)

The 65-item RST-PQ (Corr & Cooper, 2016) measures three major systems: *Fight/Flight/Fear System* (FFFS) (e.g., "I am the sort of person who easily freezes-up when scared"); *Behavioural Inhibition System*

(BIS) (e.g., "When trying to make a decision, I find myself constantly chewing it over"); and four *Behavioural Approach System* (BAS) factors: *Reward Interest* (e.g., "I regularly try new activities just to see if I enjoy them"); *Goal-Drive Persistence* (e.g., "I am very persistent in achieving my goals"); *Reward Reactivity* (e.g., "I get a special thrill when I am praised for something I've done well"); and *Impulsivity* (e.g., "I find myself doing things on the spur of the moment"). Participants were asked how accurately each statement described them and responded on a scale from 1 (*not at all*) to 5 (*highly*). (An additional scale of *Defensive Fight* was also measured, but is not reported in this study.) The RST-PQ has adequate internal reliability (Cronbach α): FFFS = 0.78; BIS = 0.93; BAS Reward Interest = 0.75; BAS Goal-Drive Persistence = 0.86; BAS Reward Reactivity = 0.78; BAS Impulsivity = 0.74 (Corr & Cooper, 2016).

3.3. Procedure

Most participants attended a laboratory session at City, University of London where they completed the questionnaires in a quiet environment. For those who were unwilling or unable to attend the Department (31%), they were emailed the questionnaires which they returned by email. Ethics approval was obtained from the Psychology Department Research Ethics Committee at City, University of London.

4. Results

Table 1 provides the descriptive statistics and intercorrelations for all variables. The means and SDs for the CFI and RST-PQ were similar to published norms; and the alphas are all within an acceptable range. Pearson product-moment correlations were as expected. The three CFI factors positively, but moderately, correlated. Age was significantly, but weakly, correlated with Perceived Knowledge. Gender was correlated with several variables: Females were higher on BAS Reward Reactivity and the FFFS (which has been found in previous studies); and they were lower on Perceived Knowledge and BAS Reward Interest. RST-PQ factors intercorrelated in a similar manner to published data (e.g., Corr & Cooper, 2016).

In terms of Career Adaptability, as expected, there was a positive correlation with BAS Reward Interest and Goal-Drive Persistence, and a negative one with the BIS (and weakly with the FFFS). A similar pattern was found for Career Optimism, although this time there was an additional, albeit weak, positive correlation with BAS Reward Reactivity. Much the same was found for Perceived Knowledge.

We, then, used hierarchical multiple regression to provide a more statistically rigorous test (Table 2). In Step 1, we entered Age and Gender, which were associated only with Perceived Knowledge – older people and males reported having greater perceived knowledge. In Step 2, RST-PQ factors were entered. The results corroborated those found with the zero-order correlations. Adjusted R^2 estimates were sizeable, especially for the motivationally-relevant CFI factors of Adaptability (0.31) and Optimism (0.45). The general pattern of correlations conform to prediction, especially involving the positive associations with BAS Reward Interest and Goal-Drive Persistence, and a negative correlation with BIS.

5. Discussion

We examined the relationships between career planning predispositions (Career Adaptability, Career Optimism and Perceived Knowledge) and personality factors of the reinforcement sensitivity theory (RST; Behavioural Approach System, BAS; Fight-Flight-Freeze System, FFFS; and Behavioural Inhibition System, BIS). Zero-order correlations revealed a straightforward picture, with all three career-related factors positively correlated with BAS factors, most consistently, and largest in magnitude, with Reward Interest and Goal-Drive Persistence, as expected. In relation to the defensive factors, the BIS was negatively and significantly

Table 1
Bivariate correlations and descriptive statistics.

Variable	1	2	3	4	5	6	7	8	9	10
Positive Career Planning Attitudes										
1. Career Adaptability										
2. Career Optimism	0.39***									
3. Perceived Knowledge	0.37***	0.44***								
Reinforcement Sensitivity										
4. BAS Reward Interest	0.43***	0.39***	0.32***							
5. BAS Goal-Drive Persistence	0.40***	0.60***	0.27***	0.36***						
6. BAS Reward Reactivity	0.12	0.15*	0.03	0.35***	0.34***					
7. BAS Impulsivity	0.11	0.07	0.16*	0.42***	0.08	0.43***				
8. BIS	-0.33***	-0.30***	-0.20**	-0.24**	-0.07	0.09	17*			
9. FFFS	-0.15*	0.12	0.04	-0.14	0.18*	0.17*	0.13	0.37***		
Demographics										
10. Age	0.03	0.03	0.15*	0.12	-0.04	0.02	0.07	0.02	-0.06	-
11. Gender	0.04	-0.01	-0.19*	-0.21*	0.13	0.19*	0.06	0.14	0.35**	-
Mean	42.51	37.26	8.80	19.77	22.07	29.97	19.76	57.63	22.98	21.64
SD	5.60	8.00	2.97	4.12	3.86	4.58	4.09	12.09	5.90	3.17
Range	31	39	12	19	18	25	18	60	26	12
Alpha	0.78	0.86	0.81	0.79	0.82	0.75	0.63	0.90	0.76	-

Note. N = 177. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. BAS = behavioural approach system, BIS = behavioural inhibition system, FFFS = fight-flight freeze system.

correlated with all three career-related dispositions, which suggests that higher levels of goal-conflict detection debilitate career planning – in contrast, FFFS correlations were inconsistent and weak.

Multiple regression analyses confirmed this pattern. Although the BIS was negatively associated with Career Adaptability, Career Optimism and Perceived Knowledge, FFFS was positively, but very weakly, correlated with Optimism and Perceived Knowledge (it was negatively correlated with Adaptability). As regards interpretation of these associations, higher levels of FFFS should impair Adaptability by virtue of an avoidance style of responding, although at the same time it might motivate a higher level of perceived knowledge. But its (albeit weak) relationship with optimism is less easy to explain and must await replication before interpretation is attempted – much the same is true for RST-PQ Impulsivity which, despite its lower alpha, was positively associated with Perceived Knowledge, although the magnitude of this association was small.

The largest associations was found for Goal-Drive Persistence – with a beta of 0.52 for Optimism. This finding is very much in keeping with the theoretical rationale of the RST-PQ, which argues that successful BAS behaviour is more than reward sensitivity and impulsivity: It entails planning and persistence of behaviour ('drive') over the temporal

intervals when reinforcement is not (extrinsically) presented – in this sense, the personality factor of goal-drive persistence is a form of intrinsic motivation (for further discussion, see Corr & Krupić, 2016).

In terms of study limitations, perhaps the most important is the distinction between (a) self-reported career planning dispositions and (b) actual career-related decisions and behaviours. For example, it is quite possible that higher levels of the BIS might enhance the practice of career planning and job search by initiating a process of risk assessment and the search for solutions to perceived difficulties, but this may not be revealed in self-reported cognition. However, it would be unsafe to assume that this is the inevitable outcome, and for this reason RST research now needs to be extended to actual job search and behavioural decisions. As it has now been shown that RST personality are related to career planning dispositions, this provides the theoretical basis for more extensive research work. In relation to this point, it would be valuable to employ longitudinal designs to examine temporal trajectory of career-related predispositions on later career choices, behaviours and success (e.g., level of income, progression, and work satisfaction).

In conclusion, we have shown that RST personality factors are related to self-reported career planning dispositions in young people. These new findings are of theoretical interest, and even perhaps of some practical significance, in providing knowledge regarding the influence of individual differences in fundamental motivational and emotional processes on one of the major everyday concerns of young people.

Table 2
Hierarchical multiple regression of RST-PQ personality factors and the three scales of the Careers Futures Inventory.

Career factors	Adaptability		Optimism		Knowledge	
	β	t	β	t	β	t
	Step 1 (Profile)					
Age	0.03	0.39	0.02	0.23	0.13	1.82*
Gender	0.04	0.50	-0.01	0.06	-0.18	2.42**
Model:	$F(2,174) = 0.19$; AdjR ² = -0.01, ns		$F(2,174) = 0.03$; AdjR ² = -0.01, ns		$F(2,174) = 0.496$; AdjR ² = 0.04***	
Step 2 (RST-PQ)						
FFFS	-0.13	1.74*	0.19	2.87***	0.17	2.17**
BIS	-0.21	2.99***	-0.28	4.36***	-0.21	2.70***
BAS-RI	0.29	3.34***	0.17	2.30**	0.13	1.40
BAS-GDP	0.31	4.24***	0.52	8.12***	0.25	3.13***
BAS-RR	-0.09	1.21	-0.10	1.42	-0.14	1.77*
BAS-Imp	0.05	0.63	0.02	0.33	0.16	1.96**
Full Model:	$F(8,168) = 10.66$; AdjR ² = 0.31***		$F(8,168) = 19.23$; AdjR ² = 0.45***		$F(8,168) = 6.49$; AdjR ² = 0.20***	

Note. * $p < 0.05$, ** $p < 0.01$. FFFS = Fight/Flight Freeze System; BIS = Behavioural Inhibition System; BAS = Behavioural Approach System; RI = Reward Interest; GDP = Goal-Drive Persistence; RR = Reward Reactivity; Imp = Impulsivity. ns = non-significant.

References

- Bell, D. N., & Blanchflower, D. G. (2011). The crisis, policy reactions and attitudes to globalization and jobs. IZA Discussion Paper No. 5680 Available at SSRN: <http://ssrn.com/abstract=1835320>.
- Chang, J., Choi, J., & Kim, M. (2008). Turnover of highly educated R&D professionals: The role of pre-entry cognitive style, work values and career orientation. *Journal of Occupational and Organizational Psychology*, 81, 299–317.
- Choi, B. Y., Park, H., Yang, E., Lee, S. K., Lee, Y., & Lee, S. M. (2012). Understanding career decision self-efficacy: A meta-analytic approach. *Journal of Career Development*, 39, 443–460.
- Corr, P. J. (2008). Reinforcement sensitivity theory (RST): Introduction. In P. J. Corr (Ed.), *The reinforcement sensitivity theory of personality* (pp. 1–43). New York, NY: Cambridge University Press.
- Corr, P. J., & Cooper, A. (2016). The reinforcement sensitivity theory of personality questionnaire (RST-PQ): Development and validation. *Psychological Assessment*, 4, 1040–3590 Online First Publication, February.
- Corr, P. J., & Krupić, D. (2016). Motivating personality: Approach, avoidance, and their conflict. In A. Elliot (Ed.), *Advances in motivation science*. London: Elsevier.
- Corr, P. J., & McNaughton, N. (2012). Neuroscience and approach/avoidance personality traits: A two stage (valuation-motivation) approach. *Neuroscience and Biobehavioral Reviews*, 36, 2339–2354.
- Corr, P. J., McNaughton, N., Wilson, M. R., Burch, G., & Poropat, A. (2016). Putting the Reinforcement Sensitivity Theory (RST) to work. In S. Kim, J. M. Reeve, & M. Bong (Eds.),

- Recent developments in neuroscience research on human motivation*. Bingley: Emerald Group Publishing (in press).
- Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system* (2nd ed.). Oxford, England: Oxford University Press.
- Gunkel, M., & Schlaegel, C. (2010). The influence of personality on students' career decisiveness - A comparison between Chinese and German economics and management students. *Mering: Rainer Hampp Verlag*, 21, 229–243.
- Järnlström, M. (2000). Personality preferences and career expectations of Finnish business students. *Career Development International*, 5, 144–154.
- Pellerone, M., Passanisi, A., & Bellomo, M. (2015). Identity development, intelligence structure, and interests: A cross-sectional study in a group of Italian adolescents during the decision-making process. *Psychology Research and Behavior Management*, 8, 239–249.
- Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138, 353–387.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The career futures inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment*, 13, 3–24.
- Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, 22, 63–81.