

**Online Supplement to**  
***Protean and Boundaryless Career Orientations: A Critical Review and Meta-Analysis***

**Part A**  
**Meta-Analytic Sample**

**Scales Snowball Searched for Potential Sources**

- Baruch, Y. (2008, August). *Development and validation of a measure for protean career*. Paper presented at the annual meeting of the Academy of Management, Anaheim, CA.
- Baruch, Y. (2014). The development and validation of a measure for protean career orientation. *The International Journal of Human Resource Management*, 25(19), 2702–2723. <http://doi.org/10.1080/09585192.2014.896389>
- Baruch, Y., Bell, M. P., & Gray, D. (2005). Generalist and specialist graduate business degrees: Tangible and intangible value. *Journal of Vocational Behavior*, 67(1), 51–68. <http://doi.org/10.1016/j.jvb.2003.06.002>
- Baruch, Y., & Quick, J. C. (2007). Understanding second careers: Lessons from a study of U.S. Navy admirals. *Human Resource Management*, 46(4), 471–491. <http://doi.org/10.1002/hrm.20178>
- Bridgstock, R. S. (2007). *Success in the protean career: A predictive study of professional artists and tertiary arts graduates* (Doctoral dissertation). Queensland University of Technology, Brisbane, Australia. Retrieved from <http://eprints.qut.edu.au/16575/>
- Briscoe, J. P., & Hall, D. T. (2005). *Protean and boundaryless career assessment collection*. Unpublished, copyrighted scale collection, Boston, MA.
- Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, 69(1), 4–18. <http://doi.org/10.1016/j.jvb.2005.09.002>
- Briscoe, J. P., Hall, D. T., & Frautschy DeMuth, R. L. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior*, 69(1), 30–47. <http://doi.org/10.1016/j.jvb.2005.09.003>
- DiRenzo, M. S. (2010). *An examination of the roles of protean career orientation and career capital on work and life outcomes* (Doctoral dissertation). Drexel University, Philadelphia, PA. Retrieved from <https://idea.library.drexel.edu/islandora/object/idea%3A3378/datastream/OBJ/view>
- DiRenzo, M. S., Greenhaus, J. H., & Weer, C. H. (2015). Relationship between protean career orientation and work–life balance: A resource perspective. *Journal of Organizational Behavior*, 36(4), 538–560. <http://doi.org/10.1002/job.1996>
- Farashah, A. D. (2015). Strategic fit framework of succession planning: Effects on career attitudes and career success. *International Journal of Human Resources Development and Management*, 15(2-4), 233–257.
- Gubler, M. (2011). *Protean and boundaryless career orientations: An empirical study of IT professionals in Europe* (Doctoral dissertation). Loughborough University, Leicestershire, United Kingdom. Retrieved from <https://dspace.lboro.ac.uk/2134/8938>
- Gubler, M., Arnold, J., & Coombs, C. (2014a). Organizational boundaries and beyond: A new look at the components of a boundaryless career orientation. *Career Development International*, 19(6), 641–667. <http://doi.org/10.1108/CDI-11-2013-0143>
- Gubler, M., Arnold, J., & Coombs, C. (2014b). Reassessing the protean career concept: Empirical findings, conceptual components, and measurement. *Journal of Organizational Behavior*, 35, S23–S40. <http://doi.org/10.1002/job.1908>
- Hall, D. T., & Briscoe, J. P. (2001). *The career attitude index*. Unpublished, copyrighted scale, Boston, MA.
- Joao, T. F. (2010, November). *The relationship between perceived career mobility, career mobility preference, job satisfaction and organizational commitment* (Master's thesis). University of South Africa, Pretoria, South Africa. Retrieved from <http://uir.unisa.ac.za/handle/10500/4693>

- Joao, T. F., & Coetzee, M. (2011). Perceived career mobility and preference, job satisfaction and organisational commitment in the financial sector: An exploratory study. *South African Journal of Labour Relations*, 35(1), 38–60.
- Kruanak, K., & Ruangkanjanases, A. (2014). Brain gain for Thailand: The determinants of international students' intention to stay on after graduation. *International Journal of Trade, Economics and Finance*, 5(4), 337–346. <http://doi.org/10.7763/IJTEF.2014.V5.394>
- Liberato Borges, L. F. (2014). *Gerenciamento proteano de carreira entre universitários* (Doctoral dissertation). Universidade Federal do Espírito Santo, Vitória, Brazil. Retrieved from <http://repositorio.ufes.br/jspui/handle/10/1157>
- Liberato Borges, L. F., & Andrade, A. L. de. (2014). Preditores da carreira proteana: Um estudo com universitários. *Revista Brasileira de Orientação Profissional*, 15(2), 153–163.
- Liberato Borges, L. F., De Andrade, A. L., de Oliveira, M. Z., & Guerra, V. M. (2015). Expanding and Adapting the Protean Career Management Scale for University Students (PCMS-U). *Spanish Journal of Psychology*, 18, e103. <http://doi.org/10.1017/sjp.2015.83>
- Ma, M., & Taylor, P. (2003). The development of a boundaryless career orientation scale [Abstract]. *Australian Journal of Psychology*, 55(S1), 135–136. <http://doi.org/10.1111/j.1742-9536.2003.tb01889.x>
- Otto, K., Glaser, D., & Dalbert, C. (2004). *Skalendokumentation "Geografische und berufliche Mobilitätsbereitschaft."* Hallesche Berichte zur Pädagogischen Psychologie. Retrieved from <http://psydok.sulb.uni-saarland.de/volltexte/2004/400/>
- Taborda, S. M. C. Q. (2012). *Carreiras proteanas e empregabilidade: Estudo com uma amostra de chefias*. Retrieved from <http://hdl.handle.net/10451/6918>

## Inclusion and Exclusion of Potential Sources

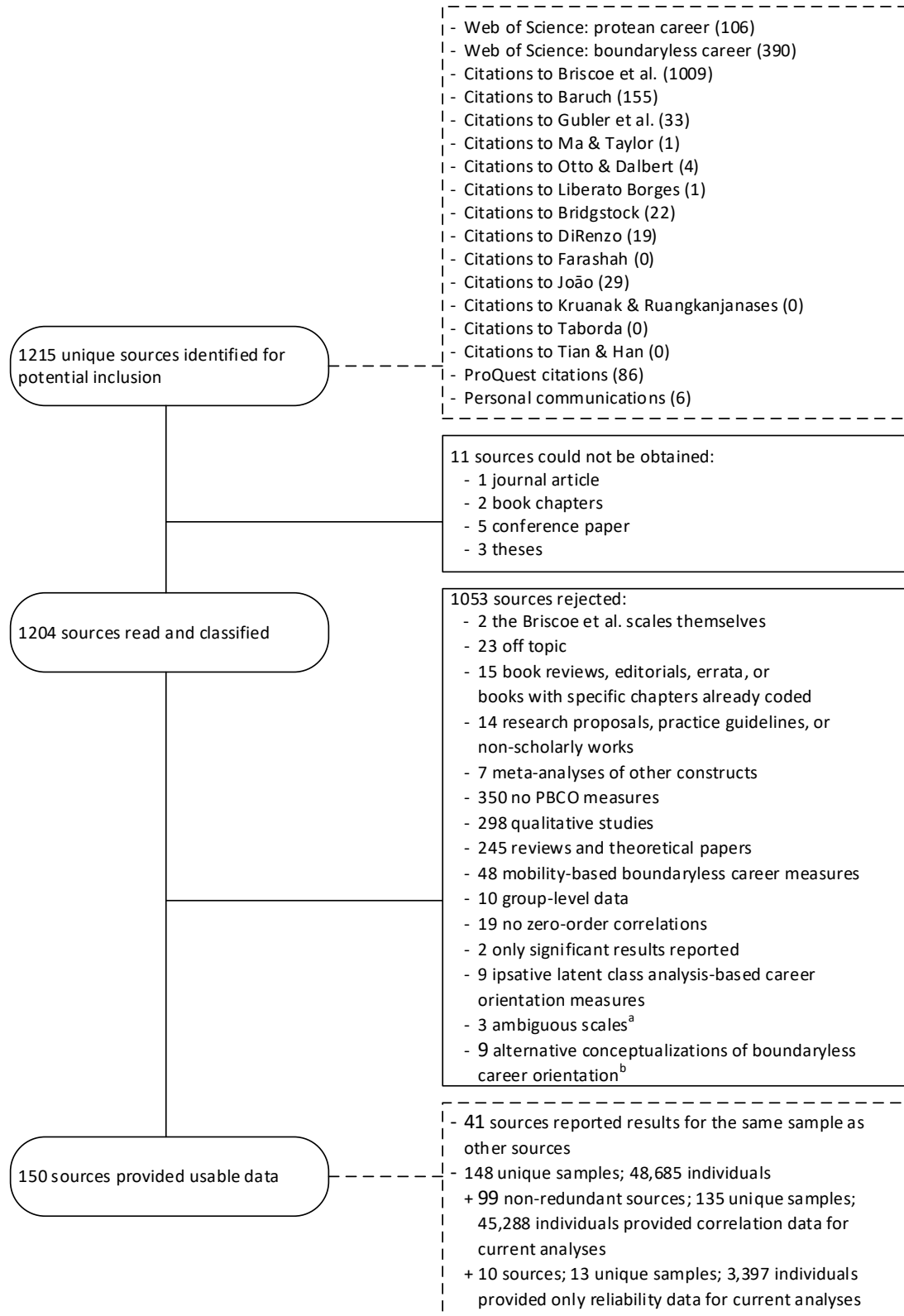


Figure S1. Numbers of sources considered, included, and excluded, and reasons for exclusion. <sup>a</sup> scales which could not be clearly classified as measuring one of the protean and boundaryless career orientation constructs. <sup>b</sup> conceptualizations include willingness to travel on business trips, willingness to accept a job for which one is overqualified, positive attitudes about unemployment, geographic mobility preferences, and occupational mobility preferences.

**Part B**  
**Protean and Boundaryless Career Orientations Definitions and Scale Classifications**

Table S1. *Scale classifications for protean and boundaryless career orientation measures*

Construct	Description	Scales included
Protean career orientation	Preferences to take responsibility for one's own career outcomes and development, to make decisions based on one's core values or identity, and to pursue satisfaction and subjective career success (Briscoe et al., 2006; Hall, 2002)	
<i>Self-directed</i>	Feelings of independence in one's career or responsibility for managing one's career path or direction	Protean Career Attitude Scale: Self-Directed Career Management (Briscoe et al., 2006); Escala de Gerenciamento Proteano de Carreira para Universitários: Autogerenciamento (Liberato Borges, 2014; Liberato Borges et al., 2015; Liberato Borges & Andrade, 2014); Protean Career Orientation: Self-Directed (Direnzo et al., 2015)
<i>Values-driven</i>	Reliance on one's personal values, identity, or desires to make career decisions and evaluate one's career success	Protean Career Attitude Scale: Values-Driven (Briscoe et al., 2006); Escala de Gerenciamento Proteano de Carreira para Universitários: Direcionamento para Valores (Liberato Borges, 2014; Liberato Borges et al., 2015; Liberato Borges & Andrade, 2014); Protean Career Orientation: Values-Driven (Direnzo et al., 2015)
<i>Overall</i>	Measures that combine aspects of self-directed and values-driven components of the protean career orientation	Protean Career Orientation (Baruch, 2014; Baruch et al., 2005; Baruch & Quick, 2007); Protean Career Attitude Scale: Total (Briscoe et al., 2006); Self-Direction (Gubler, 2011); Escala de Gerenciamento Proteano de Carreira para Universitários: Total (Liberato Borges, 2014; Liberato Borges et al., 2015; Liberato Borges & Andrade, 2014); Protean Career Success Orientation Instrument (Bridgstock, 2007); Protean Career Orientation: Total (Direnzo et al., 2015); [Protean] Career Perception (Kruanak & Ruangkanjanases, 2014); Protean Career Attitudes (Taborda, 2012); Knowing Why (Fleisher et al., 2014); Protean Career Orientation (Tschirhart et al., 2008)

Construct	Description	Scales included
Boundaryless career orientation	Preferences to follow a career path characterized by independence from any single employer for work success, resources, and advancement, including psychological mobility and physical mobility preferences (Arthur & Rousseau, 1996)	
<i>Psychological mobility</i>	Desires to work with individuals or contexts outside of one's current organization (without formally changing employers or job titles), confidence in one's career despite constraints, rejection of career opportunities for personal reasons	Boundaryless Career Attitude Scale: Boundaryless Mindset (Briscoe et al., 2006); Working Beyond Organizational Boundaries, Rejection of Career Opportunities for Personal Reasons (Gubler et al., 2014)
<i>Organizational mobility preferences</i>	Desire to change one's organization or job frequently throughout one's career, preferences to change employment environments frequently (e.g., for temporary work), or aversion to remaining in one organization for long	Boundaryless Career Attitude Scale: Organizational Mobility Preferences (Briscoe et al., 2006); Organizational Mobility (Gubler et al., 2014); Preference for Temporary Work (Marler et al., 2002); Voluntariness of Being a Temporary Worker (Galais & Moser, 2009); Preference for Temporary Work (Clinton et al., 2011)
<i>Geographic mobility preferences</i> (omitted from analyses)	Preferences to change one's geographic location, either domestically or internationally, throughout one's career	Geographic Mobility (Gubler et al., 2014); Geographic Mobility Readiness (Otto et al., 2004)
<i>Occupational mobility preferences</i> (omitted from analyses)	Preferences to change one's occupation or broad field throughout one's career	Occupational Mobility (Gubler et al., 2014); Occupational Mobility Readiness (Otto et al., 2004)
<i>Overall</i>	Measures that combine aspects of both psychological mobility and one or more forms of preferences for physical mobility (e.g., organizational mobility, geographic mobility, occupational mobility)	Boundaryless Career Attitude Scale: Total (Briscoe et al., 2006); Boundaryless Total Score (Gubler et al., 2014); Career Interests: Direction of Movement, Career Interests: Frequency of Movement (Farashah, 2015)

**Part C**  
**Reliability Artefact Distributions**

Table S2. *Reliability distributions for protean and boundaryless career orientation measures*

Dimension	$k_\alpha$	$N_\alpha$	$\bar{\alpha}$	$SD_\alpha$	$SD_\alpha^{res}$	$\sqrt{\bar{\alpha}}$	$SD_{\sqrt{\alpha}}$	$SD_{\sqrt{\alpha}}^{res}$	$\bar{r}_{ij}$	$SD_{r_{ij}}$	$SD_{r_{ij}}^{res}$	$k_{r_{tt}}$	$N_{r_{tt}}$	$\bar{r}_{tt}$	$SD_{r_{tt}}$	$\sqrt{\bar{r}_{tt}}$	$SD_{\sqrt{r_{tt}}}$	$M_t$	$SD_t$
<b>Protean self-directed</b>	<b>83</b>	<b>29 858</b>	<b>.779</b>	<b>.050</b>	<b>.045</b>	<b>.882</b>	<b>.028</b>	<b>.026</b>	<b>.345</b>	<b>.095</b>	<b>.092</b>	<b>3</b>	<b>897</b>	<b>.572</b>	<b>.022</b>	<b>.756</b>	<b>.015</b>	<b>6.0</b>	<b>0.0</b>
<i>Briscoe et al. measure</i>	79	27 522	.780	.051	.047	.883	.029	.027	.350	.096	.094	3	897	.572	.022	.756	.015	6.0	0.0
<i>Other measures</i>	4	2 336	.761	.018	.006	.872	.010	.003	.293	.069	.066	—	—	—	—	—	—	—	—
<b>Protean values-driven</b>	<b>65</b>	<b>22 434</b>	<b>.739</b>	<b>.069</b>	<b>.064</b>	<b>.859</b>	<b>.041</b>	<b>.038</b>	<b>.353</b>	<b>.106</b>	<b>.103</b>	<b>1</b>	<b>458</b>	<b>.440</b>	<b>—</b>	<b>.663</b>	<b>—</b>	<b>6.0</b>	<b>—</b>
<i>Briscoe et al. measure</i>	61	20 098	.741	.068	.063	.860	.040	.038	.363	.100	.097	1	458	.440	—	.663	—	6.0	—
<i>Other measures</i>	4	2 336	.718	.085	.083	.846	.050	.048	.266	.136	.135	—	—	—	—	—	—	—	—
<b>Protean overall</b>	<b>97</b>	<b>31 599</b>	<b>.790</b>	<b>.074</b>	<b>.071</b>	<b>.888</b>	<b>.042</b>	<b>.041</b>	<b>.299</b>	<b>.078</b>	<b>.075</b>	<b>7</b>	<b>1 663</b>	<b>.556</b>	<b>.041</b>	<b>.745</b>	<b>.027</b>	<b>7.9</b>	<b>4.7</b>
<i>Baruch measure</i>	63	20 195	.714	.045	.035	.845	.027	.021	.292	.047	.039	3	759	.552	.050	.742	.033	5.3	1.2
<i>Briscoe et al. measure</i>	26	7 728	.828	.040	.036	.910	.022	.020	.295	.086	.084	2	575	.545	.033	.738	.022	6.0	0.0
<i>Other measures</i>	9	3 780	.740	.109	.107	.858	.064	.063	.335	.080	.077	2	329	.590	.063	.767	.041	13.5	6.4
<b>Psychological mobility</b>	<b>58</b>	<b>18 974</b>	<b>.832</b>	<b>.085</b>	<b>.083</b>	<b>.911</b>	<b>.048</b>	<b>.048</b>	<b>.466</b>	<b>.114</b>	<b>.111</b>	<b>2</b>	<b>209</b>	<b>.634</b>	<b>.007</b>	<b>.796</b>	<b>.004</b>	<b>6.5</b>	<b>3.5</b>
<i>Briscoe et al. measure</i>	57	17 624	.849	.057	.054	.921	.031	.030	.480	.104	.101	1	79	.640	—	.800	—	4.0	—
<i>Other measures</i>	1	1 350	.600	—	—	.775	—	—	.273	—	—	1	130	.630	—	.794	—	9.0	—
<b>Org. mobility pref.</b>	<b>62</b>	<b>21 464</b>	<b>.777</b>	<b>.059</b>	<b>.055</b>	<b>.881</b>	<b>.034</b>	<b>.032</b>	<b>.449</b>	<b>.078</b>	<b>.073</b>	<b>3</b>	<b>500</b>	<b>.537</b>	<b>.091</b>	<b>.731</b>	<b>.062</b>	<b>6.3</b>	<b>2.5</b>
<i>Briscoe et al. measure</i>	57	18 444	.778	.059	.054	.881	.034	.032	.449	.070	.064	2	356	.503	.088	.708	.060	5	1.4
<i>Other measures</i>	5	3 020	.768	.067	.065	.875	.039	.038	.453	.128	.125	1	144	.620	—	.787	—	9.0	—
<b>Boundaryless overall</b>	<b>53</b>	<b>16 141</b>	<b>.816</b>	<b>.063</b>	<b>.060</b>	<b>.903</b>	<b>.036</b>	<b>.034</b>	<b>.300</b>	<b>.076</b>	<b>.073</b>	<b>2</b>	<b>228</b>	<b>.637</b>	<b>.013</b>	<b>.798</b>	<b>.008</b>	<b>6.5</b>	<b>3.5</b>
<i>Briscoe et al. measure</i>	51	14 639	.820	.065	.062	.905	.037	.035	.311	.071	.068	1	79	.650	—	.806	—	4.0	—
<i>Other measures</i>	2	1 502	.784	.017	.010	.885	.010	.005	.191	.001	.000	1	149	.630	—	.794	—	9.0	—

*Note.*  $k_\alpha$  = number of internal consistency values in the artifact distribution;  $N_\alpha$  = total sample size for internal consistency values;  $\bar{\alpha}$  = sample size-weighted mean internal consistency (the vast majority of studies reported coefficient alpha—a small number of studies instead reported coefficient omega/composite reliability);  $SD_\alpha$  = sample size-weighted observed standard deviation of  $\alpha$ ;  $SD_\alpha^{res}$  = residual standard deviation of  $\alpha$  after removing artefact sampling error;  $\sqrt{\bar{\alpha}}$  = sample size-weighted mean square root of  $\alpha$ ;  $SD_{\sqrt{\alpha}}$  = observed sample size-weighted standard deviation of  $\sqrt{\alpha}$ ;  $SD_{\sqrt{\alpha}}^{res}$  = residual standard deviation of  $\sqrt{\alpha}$  after removing artefact sampling error (used for reliability corrections in the current meta-analyses);  $\bar{r}_{ij}$  = sample size-weighted mean interitem correlation;  $SD_{r_{ij}}$  = observed sample size-weighted standard deviation of  $r_{ij}$ ;  $SD_{r_{ij}}^{res}$  = residual standard deviation of  $r_{ij}$  after removing artefact sampling error;  $k_{r_{tt}}$  = number of test-retest reliability values;  $N_{r_{tt}}$  = total sample size for test-retest reliability values;  $\bar{r}_{tt}$  = sample size-weighted mean test-retest reliability;  $SD_{r_{tt}}$  = observed sample size-weighted standard deviation of  $r_{tt}$ ;  $\sqrt{\bar{r}_{tt}}$  = sample size-weighted mean square root of  $r_{tt}$ ;  $SD_{\sqrt{r_{tt}}}$  = observed sample size-weighted standard deviation of  $\sqrt{r_{tt}}$ ;  $M_t$  = mean number of months between test administrations;  $SD_t$  = standard deviation of months between test administrations.

**Part D**  
**Supplemental Meta-Analysis Results**

Table S3. *Meta-analytic results for PBCO with job and geographic mobility behavior*

<b>Relation</b>		<b><i>k</i></b>	<b><i>N</i></b>	<b><math>\bar{r}</math></b>	<b><math>SD_r</math></b>	<b><math>SD_{res}</math></b>	<b><math>\bar{\rho}</math></b>	<b><math>SD_{r_c}</math></b>	<b><math>SD_{\rho}</math></b>	<b>95% CI</b>	<b>80% CV</b>
<i>Job mobility</i> <sup>a,b</sup>	PS	2	453	.02	.07	.00	<b>.02</b>	.08	.00	(-.65, .70)	(.02, .02)
	PV	2	453	-.03	.09	.05	<b>-.04</b>	.10	.06	(-.94, .86)	(-.24, .16)
	OP	3	1 787	-.02	.01	.00	<b>-.02</b>	.01	.00	(-.05, .00)	(-.02, -.02)
	PsM	4	2 144	.10	.07	.05	<b>.11</b>	.08	.06	(-.01, .23)	(.01, .21)
	OMP	4	2 144	-.04	.06	.05	<b>-.04</b>	.07	.05	(-.15, .07)	(-.12, .04)
<i>Geographic mobility</i> <sup>a,c</sup>	PS	1	212	.02	—	—	<b>.02</b>	—	—	(-.13, .18)	—
	PV	1	212	-.14	—	—	<b>-.16</b>	—	—	(-.32, -.01)	—
	OP	3	1 625	.02	.07	.05	<b>.02</b>	.08	.06	(-.17, .22)	(-.09, .14)
	PsM	2	1 543	.08	.03	.00	<b>.09</b>	.03	.00	(-.16, .35)	(.09, .09)
	OMP	3	1 639	.04	.06	.04	<b>.04</b>	.07	.05	(-.13, .21)	(-.05, .13)
<i>Occupational mobility</i> <sup>a,d</sup>	PS	1	212	.03	—	—	<b>.03</b>	—	—	(-.12, .19)	—
	PV	1	212	-.22	—	—	<b>-.26</b>	—	—	(-.41, -.11)	—
	OP	1	212	-.12	—	—	<b>-.13</b>	—	—	(-.28, .02)	—
	PsM	1	212	.06	—	—	<b>.07</b>	—	—	(-.08, .21)	—
	OMP	1	212	-.09	—	—	<b>-.10</b>	—	—	(-.25, .05)	—

*Note.* *k* = number of samples included in meta-analysis, *N* = total sample size,  $\bar{r}$  = mean observed correlation,  $SD_r$  = observed standard deviation of correlations,  $SD_{res}$  = residual standard deviation of correlations after accounting for sampling error and unreliability,  $\bar{\rho}$  = mean correlation corrected for unreliability in both measures,  $SD_{r_c}$  = observed standard deviation of corrected correlations;  $SD_{\rho}$  = residual standard deviation of corrected correlations; 95% CI = 95% confidence interval for  $\bar{\rho}$ ; 80% CV = 80% credibility interval for  $\rho$ ; PS = protean self-directed; PV = protean values-driven; PsM = psychological mobility; OMP = organizational mobility preferences; OP = overall protean orientation; <sup>a</sup> Not corrected for criterion unreliability, <sup>b</sup> number of jobs within one organization over time, <sup>c</sup> number of different geographic locations worked in over time; <sup>d</sup> number of different occupational fields worked in over time.

Table S4. *Meta-analytic results for Big Five personality traits with outliers*

Relation		<i>k</i>	<i>N</i>	$\bar{r}$	$SD_r$	$SD_{res}$	$\bar{\rho}$	$SD_{r_c}$	$SD_{\rho}$	95% CI	80% CV
<i>All samples</i>											
Conscientiousness	PS	12	5 843	.24	.08	.06	<b>.34</b>	.11	.09	(.27, .42)	(.23, .46)
	PV	10	4 706	.15	.08	.07	<b>.21</b>	.12	.10	(.12, .30)	(.07, .35)
	OP	11	4 914	.24	.09	.07	<b>.34</b>	.12	.09	(.26, .42)	(.21, .47)
	PsM	12	5 034	.14	.11	.09	<b>.19</b>	.14	.13	(.10, .28)	(.02, .36)
	OMP	12	5 033	−.02	.08	.06	<b>−.03</b>	.11	.08	(−.10, .04)	(−.14, .08)
Extraversion	PS	12	5 843	.21	.10	.09	<b>.27</b>	.13	.11	(.19, .35)	(.12, .43)
	PV	10	4 706	.09	.09	.07	<b>.12</b>	.12	.10	(.04, .21)	(−.01, .26)
	OP	10	4 707	.16	.10	.09	<b>.21</b>	.13	.12	(.12, .31)	(.05, .37)
	PsM	11	4 827	.37	.09	.08	<b>.47</b>	.12	.10	(.39, .54)	(.33, .60)
	OMP	11	4 826	.11	.13	.12	<b>.14</b>	.17	.16	(.03, .26)	(−.07, .36)
Openness	PS	15	6 660	.28	.07	.06	<b>.37</b>	.09	.07	(.31, .42)	(.27, .47)
	PV	13	5 523	.21	.08	.06	<b>.28</b>	.10	.08	(.22, .34)	(.17, .39)
	OP	13	5 524	.27	.07	.05	<b>.36</b>	.09	.07	(.30, .41)	(.26, .45)
	PsM	14	5 644	.37	.09	.07	<b>.47</b>	.11	.09	(.40, .53)	(.35, .59)
	OMP	14	5 643	.15	.10	.08	<b>.20</b>	.13	.11	(.12, .27)	(.05, .34)
Agreeableness	PS	12	5 843	.15	.12	.11	<b>.22</b>	.18	.16	(.11, .34)	(.00, .44)
	PV	10	4 706	.09	.15	.14	<b>.14</b>	.23	.22	(−.03, .30)	(−.17, .44)
	OP	10	4 707	.14	.16	.15	<b>.21</b>	.24	.23	(.04, .38)	(−.11, .52)
	PsM	11	4 827	.21	.10	.09	<b>.30</b>	.15	.12	(.20, .40)	(.13, .47)
	OMP	11	4 826	−.03	.07	.05	<b>−.04</b>	.10	.08	(−.11, .03)	(−.15, .06)
Emotional Stability	PS	13	6 205	.15	.08	.06	<b>.22</b>	.11	.08	(.15, .28)	(.11, .33)
	PV	10	4 706	.08	.08	.06	<b>.12</b>	.11	.09	(.04, .20)	(−.00, .24)
	OP	10	4 707	.14	.08	.06	<b>.20</b>	.11	.09	(.12, .28)	(.08, .33)
	PsM	12	5 189	.17	.08	.06	<b>.23</b>	.12	.09	(.16, .30)	(.11, .35)
	OMP	11	4 826	.08	.04	.00	<b>.12</b>	.06	.00	(.08, .16)	(.12, .12)
<i>Without Rastgar et al. (2014)</i>											
Conscientiousness	PS	11	5 544	.24	.08	.07	<b>.35</b>	.12	.09	(.27, .43)	(.22, .48)
	PV	9	4 407	.15	.08	.07	<b>.22</b>	.12	.10	(.13, .32)	(.08, .36)
	OP	10	4 615	.25	.09	.07	<b>.35</b>	.12	.10	(.27, .44)	(.22, .49)
	PsM	11	4 735	.16	.09	.07	<b>.22</b>	.12	.09	(.14, .30)	(.09, .34)
	OMP	11	4 734	−.02	.08	.06	<b>−.02</b>	.11	.08	(−.10, .05)	(−.14, .09)
Extraversion	PS	11	5 544	.20	.09	.08	<b>.26</b>	.12	.10	(.18, .34)	(.12, .40)
	PV	9	4 407	.07	.04	.00	<b>.10</b>	.05	.00	(.06, .14)	(.10, .10)
	OP	9	4 408	.15	.07	.05	<b>.19</b>	.09	.06	(.12, .25)	(.10, .27)
	PsM	10	4 528	.38	.09	.07	<b>.48</b>	.11	.09	(.40, .56)	(.36, .60)
	OMP	10	4 527	.11	.13	.12	<b>.14</b>	.17	.16	(.01, .26)	(−.09, .36)
Openness	PS	14	6 361	.28	.07	.06	<b>.37</b>	.10	.08	(.31, .43)	(.27, .47)
	PV	12	5 224	.20	.08	.06	<b>.27</b>	.10	.08	(.21, .34)	(.17, .38)
	OP	12	5 225	.27	.07	.06	<b>.36</b>	.10	.07	(.29, .42)	(.25, .46)
	PsM	13	5 345	.35	.06	.03	<b>.45</b>	.07	.04	(.40, .49)	(.39, .50)
	OMP	13	5 344	.13	.06	.04	<b>.17</b>	.08	.05	(.13, .22)	(.11, .24)



Relation		<i>k</i>	<i>N</i>	$\bar{r}$	$SD_r$	$SD_{res}$	$\bar{\rho}$	$SD_{r_c}$	$SD_{\rho}$	95% CI	80% CV
Agreeableness	PS	11	5 544	.18	.04	.00	<b>.26</b>	.07	.00	(.22, .31)	(.26, .26)
	PV	9	4 407	.12	.06	.03	<b>.19</b>	.09	.05	(.12, .26)	(.12, .26)
	OP	9	4 408	.18	.05	.01	<b>.27</b>	.08	.01	(.21, .33)	(.25, .29)
	PsM	10	4 528	.23	.08	.06	<b>.33</b>	.12	.08	(.24, .42)	(.21, .45)
	OMP	10	4 527	-.03	.07	.05	<b>-.04</b>	.11	.08	(-.12, .04)	(-.15, .07)
Emotional Stability	PS	12	5 906	.16	.06	.03	<b>.24</b>	.08	.04	(.18, .29)	(.18, .29)
	PV	9	4 407	.09	.06	.04	<b>.14</b>	.09	.06	(.07, .21)	(.06, .22)
	OP	9	4 408	.16	.05	.00	<b>.23</b>	.07	.00	(.18, .28)	(.23, .23)
	PsM	11	4 890	.17	.09	.07	<b>.23</b>	.12	.09	(.15, .32)	(.11, .36)
	OMP	10	4 527	.08	.05	.00	<b>.12</b>	.07	.00	(.07, .17)	(.12, .12)
<b><i>Without Rastgar et al. (2014) or Lyons et al. (2015)</i></b>											
Conscientiousness	PS	10	3 556	.24	.10	.09	<b>.31</b>	.13	.12	(.21, .41)	(.15, .47)
	PV	8	2 419	.14	.11	.10	<b>.19</b>	.15	.13	(.07, .32)	(.01, .37)
	OP	9	2 627	.25	.12	.10	<b>.32</b>	.15	.13	(.21, .44)	(.15, .50)
	PsM	10	2 747	.14	.11	.09	<b>.18</b>	.14	.11	(.08, .28)	(.02, .34)
	OMP	10	2 746	-.06	.07	.04	<b>-.08</b>	.09	.05	(-.14, -.01)	(-.15, -.00)
Extraversion	PS	10	3 556	.25	.07	.05	<b>.31</b>	.09	.06	(.25, .37)	(.23, .39)
	PV	8	2 419	.07	.06	.00	<b>.10</b>	.07	.00	(.04, .16)	(.10, .10)
	OP	8	2 420	.18	.07	.04	<b>.22</b>	.09	.06	(.14, .30)	(.14, .30)
	PsM	9	2 540	.43	.07	.04	<b>.53</b>	.08	.04	(.46, .59)	(.47, .59)
	OMP	9	2 539	.19	.11	.10	<b>.24</b>	.14	.12	(.13, .35)	(.07, .41)
Openness	PS	13	4 373	.29	.09	.07	<b>.38</b>	.11	.09	(.31, .45)	(.25, .50)
	PV	11	3 236	.21	.10	.08	<b>.28</b>	.13	.10	(.20, .37)	(.14, .42)
	OP	11	3 237	.27	.09	.08	<b>.36</b>	.12	.10	(.27, .44)	(.22, .49)
	PsM	12	3 357	.34	.07	.04	<b>.43</b>	.09	.05	(.37, .48)	(.36, .49)
	OMP	12	3 356	.15	.07	.04	<b>.20</b>	.09	.05	(.14, .26)	(.13, .26)
Agreeableness	PS	10	3 556	.17	.05	.01	<b>.21</b>	.07	.02	(.17, .26)	(.19, .24)
	PV	8	2 419	.13	.08	.06	<b>.18</b>	.11	.07	(.09, .27)	(.07, .28)
	OP	8	2 420	.18	.07	.05	<b>.23</b>	.10	.06	(.15, .31)	(.14, .32)
	PsM	9	2 540	.23	.11	.10	<b>.28</b>	.14	.12	(.17, .39)	(.12, .45)
	OMP	9	2 539	-.03	.10	.08	<b>-.04</b>	.12	.10	(-.14, .05)	(-.18, .09)
Emotional Stability	PS	11	3 918	.15	.07	.04	<b>.19</b>	.08	.05	(.13, .25)	(.12, .26)
	PV	8	2 419	.07	.07	.04	<b>.09</b>	.09	.06	(.01, .17)	(.01, .17)
	OP	8	2 420	.14	.06	.00	<b>.17</b>	.07	.00	(.12, .23)	(.17, .17)
	PsM	10	2 902	.13	.09	.07	<b>.16</b>	.11	.09	(.08, .24)	(.04, .28)
	OMP	9	2 539	.10	.06	.00	<b>.13</b>	.07	.00	(.07, .18)	(.13, .13)

*Note.* *k* = number of samples included in meta-analysis, *N* = total sample size,  $\bar{r}$  = mean observed correlation,  $SD_r$  = observed standard deviation of correlations,  $SD_{res}$  = residual standard deviation of correlations after accounting for sampling error and unreliability,  $\bar{\rho}$  = mean correlation corrected for unreliability in both measures,  $SD_{r_c}$  = observed standard deviation of corrected correlations;  $SD_{\rho}$  = residual standard deviation of corrected correlations; 95% CI = 95% confidence interval for  $\bar{\rho}$ ; 80% CV = 80% credibility interval for  $\bar{\rho}$ ; PS = protean self-directed; PV = protean values-driven; PsM = psychological mobility; OMP = organizational mobility preferences; OP = overall protean orientation; the first set of results is for analyses including all samples; the second set of results excludes effect sizes from Rastgar et al. (2014) because they were outliers for most traits; the third set of results additionally excludes Lyons et al. (2015) because they measured the Big Five traits using the Ten Item Personality Inventory (TIPI), limiting the construct coverage of their Big Five measures (cf. Credé et al., 2012, for a critique of the construct breadth and reliability of this measure).

**Part E**  
**Sources of Meta-Analytic Data for Incremental Validity Analyses**

Table S5. *Sources of meta-analytic data for incremental validity analyses*

Criterion	1	2	3	4	5	6	7	8	9	10	11
1 Protean: Self-directed											
2 Protean: Values-driven	A										
3 Psychological mobility	A	A									
4 Org. mobility pref.	A	A	A								
5 Agreeableness	A	A	A	A							
6 Emotional Stability	A	A	A	A	B						
7 Conscientiousness	A	A	A	A	B	B					
8 Extraversion	A	A	A	A	B	B	B				
9 Openness	A	A	A	A	B	B	B	B			
10 Proactive personality	A	A	A	A	C	C	C	C	C		
11 Self-efficacy	A	A	A	A	D	D	D	D	D	S	
12 Career self-manage.	A	A	A	A	S	S	S	S	S	C	S
13 Career satisfaction	A	A	A	A	G	G	G	G	G	C	G*
14 Salary/salary growth	A	A	A	A	K	K	L	K	K	C	S
15 Promotions/hierarchical level	A	A	A	A	K	K	L	K	K	C	S
16 Job satisfaction	A	A	A	A	E	E	E	E	E	C	F
17 Turnover intentions	A	A	A	A	H	H	H	H	H	S	S

*Note.* <sup>A</sup> present main paper meta-analyses; <sup>B</sup> Davies et al. (2015); <sup>C</sup> Fuller & Marler (2009); <sup>D</sup> Judge & Ilies (2002); <sup>E</sup> Judge et al. (2002); <sup>F</sup> Judge & Bono (2001); <sup>G</sup> Ng & Feldman (2014); <sup>H</sup> Zimmerman (2008); <sup>K</sup> Ng et al. (2005); <sup>L</sup> Ng & Feldman (2010); <sup>S</sup> present supplemental meta-analyses; \* correlation between career satisfaction and core self-evaluations.

Meta-analytic correlation tables, sample sizes, and variances are available at <https://osf.io/27dqf/>

## **Part F**

### **Supplemental Meta-Analyses for Incremental Validity Analyses**

Several cells of the matrix of meta-analytic mean correlations used in the incremental validity analyses were missing, as there were no published meta-analyses reporting these values. Specifically, were unable to locate meta-analytic estimates of (1) correlations of the Big Five personality traits with career self-management behaviors, (2) the correlation between proactive personality and turnover intentions, (3) correlations of self-efficacy with turnover intentions, career self-management behaviors, salary, and promotions/hierarchical level, and (4) correlations between self-efficacy and proactive personality. We conducted additional meta-analyses to estimate these relations and complete the correlation matrix.

### **Methods**

#### **Search Methods**

Our literature began with queries to the metaBUS database (Bosco et al., 2017). The metaBUS database is a cloud-based platform which contains individual effect sizes curated from all articles published between 1980 and 2017 in a set of 28 journals in the fields of industrial–organizational psychology and management. metaBUS classifies variables reported in each article using a detailed construct taxonomy. Researchers can use the interface provided on the metaBUS website (<http://metabus.org/>) to query all studies published in these journals during this period that report correlations between two chosen constructs. In addition to providing a list of studies reporting queried correlations, metaBUS also produces meta-analytic summary statistics. For the present purposes, the metaBUS database was used only to identify studies, which were then independently coded and analyzed by the present authors. We ran metaBUS queries for each of the Big Five traits (“emotional stability”, “extraversion”, “openness”, “agreeableness”, “conscientiousness”) paired with any of a range of constructs in the metaBUS taxonomy reflecting career self-management behavior (“network”, “networking behavior”, “career exploration”, “career exploratory behavior”, “career planning”, “internal social capital development”, “external social capital development”, “human capital

development”). We also ran queries for correlations pairing proactive personality (“proactive personality”) with turnover intentions (“turnover intentions”, “intention to quit”) and self-efficacy (“self-efficacy”, “efficacy”), and pairing self-efficacy with salary (“salary”, “income”), promotions/hierarchical level (“promotion”, “hierarchical level”, “organizational level”, “manager level”), career self-management behaviors (see above), and turnover intentions (see above).

We supplemented the metaBUS results with keyword searches in Web of Science and ProQuest Dissertations and Theses. The terms listed above for each trait predictor (Big Five traits, proactive personality, self-efficacy) were paired with keywords for career self-management ("Career Planning" OR "Career Exploration" OR "Networking Behavior" OR "Career Self-Management" OR "Networking"), turnover intentions ("turnover intention" OR "intention to quit"), and objective career success (“Salary” OR "Promotions" OR "Manager Level" OR "Managerial Level" OR "Organizational Level" OR "Organisational Level" OR "Hierarchical Level"), as appropriate for each meta-analysis.

### **Inclusion Criteria and Analyses**

Each identified source was read and evaluated for inclusion. To be included, studies needed to report a zero-order correlation between a pair of variables as described above and report a sample size or sufficient information to compute a standard error. After exclusion of irrelevant studies, our supplemental meta-analyses contained data from 132 unique samples and a total of 56,157 individuals. Included sources are available from the authors upon request. We used meta-analytic methods as described in the main text.

Table S6. Results for supplemental meta-analyses

Criterion		<i>N</i>	<i>k</i>	$\bar{r}$	$SD_r$	$SD_{res}$	$\bar{\rho}$	$SD_{r_c}$	$SD_{\rho}$	95% CI	80% CV
Self-efficacy	PP	3,198	8	.46	.15	.14	<b>.56</b>	.18	.17	(.45, .66)	(.34, .77)
Career self-management behavior (overall)	A	3,200	14	.10	.11	.10	<b>.11</b>	.12	.12	(.06, .19)	(-.03, .28)
	ES	3,762	20	.12	.09	.07	<b>.13</b>	.10	.08	(.09, .18)	(.03, .24)
	C	5,808	26	.16	.12	.11	<b>.18</b>	.14	.13	(.14, .24)	(.03, .35)
	E	6,497	24	.21	.10	.08	<b>.25</b>	.12	.10	(.20, .30)	(.13, .37)
	O	4,323	14	.16	.11	.09	<b>.18</b>	.12	.11	(.14, .25)	(.06, .33)
	S-E	12,552	38	.34	.12	.11	<b>.39</b>	.14	.13	(.35, .43)	(.23, .55)
Turnover intentions	PP	3,208	13	-.04	.10	.08	<b>-.05</b>	.13	.09	(-.11, .00)	(-.17, .07)
	S-E	20,350	40	-.15	.10	.09	<b>-.18</b>	.12	.11	(-.21, -.15)	(-.31, -.04)
Salary	S-E	1,087	4	.12	.06	.06	<b>.13</b>	.07	.06	(.10, .15)	(.05, .20)
Promotions/ Hierarchical level	S-E	962	4	.08	.08	.06	<b>.09</b>	.09	.06	(.01, .15)	(.01, .16)

*Note.* *k* = number of samples included in meta-analysis, *N* = total sample size,  $\bar{r}$  = mean observed correlation,  $SD_r$  = observed standard deviation of correlations,  $SD_{res}$  = residual standard deviation of correlations after accounting for sampling error and unreliability,  $\bar{\rho}$  = mean correlation corrected for unreliability in both measures,  $SD_{r_c}$  = observed standard deviation of corrected correlations;  $SD_{\rho}$  = residual standard deviation of corrected correlations; 95% CI = 95% confidence interval for  $\bar{\rho}$ ; 80% CV = 80% credibility interval for  $\rho$ ; ES = Emotional Stability, E = Extraversion, O = Openness, A = Agreeableness, C = Conscientiousness, PP = Proactive Personality, S-E = Self-Efficacy.

# Part G

## Regression Analyses Predicting Criteria Using Proactive Career Orientation Components

Table S7. Regression analyses predicting criteria using proactive career orientation components

Criterion	$\beta$ coefficients			<i>R</i>
	PS	PV	PsM	
1 Career self-management (any)	.41	−.19	.25	.49
2 Career satisfaction	.57	−.24	−.05	.45
3 Salary/Salary growth	−.01	.00	.13	.13
4 Promotions/Hierarchical level	.09	.00	.06	.13
5 Job satisfaction	.39	−.17	−.02	.32
6 Turnover intentions	−.27	.25	.14	.25

*Note.* PS = protean self-directed; PV = protean values-driven; PsM = psychological mobility;  $\beta$  = standardized regression coefficient; *R* = multiple correlation.

### Online Supplement References

- Arthur, M. B., & Rousseau, D. M. (Eds.). (1996). *The boundaryless career: A new employment principle for a new organizational era*. New York: Oxford University Press.
- Baruch, Y. (2014). The development and validation of a measure for protean career orientation. *The International Journal of Human Resource Management*, 25(19), 2702–2723. <https://doi.org/10/gckfmt>
- Baruch, Y., Bell, M. P., & Gray, D. (2005). Generalist and specialist graduate business degrees: Tangible and intangible value. *Journal of Vocational Behavior*, 67(1), 51–68. <https://doi.org/10/cd3t2m>
- Baruch, Y., & Quick, J. C. (2007). Understanding second careers: Lessons from a study of U.S. Navy admirals. *Human Resource Management*, 46(4), 471–491. <https://doi.org/10/bsxwsz>
- Bosco, F. A., Uggerslev, K. L., & Steel, P. (2017). MetaBUS as a vehicle for facilitating meta-analysis. *Human Resource Management Review*, 27(1), 237–254. <https://doi.org/10/f9h76j>
- Bridgstock, R. S. (2007). *Success in the protean career: A predictive study of professional artists and tertiary arts graduates* (Doctoral dissertation). Queensland University of Technology, Brisbane, Australia. Retrieved from <http://eprints.qut.edu.au/16575/>
- Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior*, 69(1), 30–47. <https://doi.org/10/czj7k3>
- Clinton, M., Bernhard-Oettel, C., Rigotti, T., & de Jong, J. (2011). Expanding the temporal context of research on non-permanent work: Previous experience, duration of and time remaining on contracts and employment continuity expectations. *Career Development International*, 16(2), 114–139. <https://doi.org/10/bsjcv3>
- Credé, M., Harms, P. D., Niehorster, S., & Gaye-Valentine, A. (2012). An evaluation of the consequences of using short measures of the Big Five personality traits. *Journal of Personality and Social Psychology*, 102(4), 874–888. <https://doi.org/10/f3wr4m>
- Davies, S. E., Connelly, B. L., Ones, D. S., & Birkland, A. S. (2015). The general factor of personality: The “Big One,” a self-evaluative trait, or a methodological gnat that won’t go away? *Personality and Individual Differences*, 81, 13–22. <https://doi.org/10/bc98>
- Direnzo, M. S., Greenhaus, J. H., & Weer, C. H. (2015). Relationship between protean career orientation and work–life balance: A resource perspective. *Journal of Organizational Behavior*, 36(4), 538–560. <https://doi.org/10/f68638>
- Farashah, A. D. (2015). Strategic fit framework of succession planning: Effects on career attitudes and career success. *International Journal of Human Resources Development and Management*, 15(2–4), 233–257. <https://doi.org/10/f3nchc>
- Fleisher, C., Khapova, S. N., & Jansen, P. G. W. (2014). Effects of employees’ career competencies development on their organizations: Does satisfaction matter? *Career Development International*, 19(6), 700–717. <https://doi.org/10/gd8c7v>
- Fuller, J. B., Jr., & Marler, L. E. (2009). Change driven by nature: A meta-analytic review of the proactive personality literature. *Journal of Vocational Behavior*, 75(3), 329–345. <https://doi.org/10/dqc699>
- Galais, N., & Moser, K. (2009). Organizational commitment and the well-being of temporary agency workers: A longitudinal study. *Human Relations*, 62(4), 589–620. <https://doi.org/10/bhqzpw>
- Gubler, M. (2011). *Protean and boundaryless career orientations: An empirical study of IT professionals in Europe* (Doctoral dissertation). Loughborough University, Leicestershire, United Kingdom. Retrieved from <https://dspace.lboro.ac.uk/2134/8938>

- Gubler, M., Arnold, J., & Coombs, C. (2014). Organizational boundaries and beyond: A new look at the components of a boundaryless career orientation. *Career Development International*, 19(6), 641–667. <https://doi.org/10/gd8c7q>
- Hall, D. T. (2002). *Careers in and out of organizations*. Thousand Oaks, CA: Sage.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluation traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: a meta-analysis. *Journal of Applied Psychology*, 86(1), 80–92. <https://doi.org/10/dgbhn5>
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3), 530–541. <https://doi.org/10/d5w23s>
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87(4), 797–807. <https://doi.org/10/ftmr8j>
- Kruanak, K., & Ruangkanjanases, A. (2014). Brain gain for Thailand: The determinants of international students' intention to stay on after graduation. *International Journal of Trade, Economics and Finance*, 5(4), 337–346. <https://doi.org/10/gd8c74>
- Liberato Borges, L. F. (2014). *Gerenciamento proteano de carreira entre universitários* (Doctoral dissertation). Universidade Federal do Espírito Santo, Vitória, Brazil. Retrieved from <http://repositorio.ufes.br/jspui/handle/10/1157>
- Liberato Borges, L. F., & Andrade, A. L. de. (2014). Preditores da carreira proteana: Um estudo com universitários. *Revista Brasileira de Orientação Profissional*, 15(2), 153–163. Retrieved from [http://pepsic.bvsalud.org/scielo.php?pid=S1679-33902014000200006&script=sci\\_arttext](http://pepsic.bvsalud.org/scielo.php?pid=S1679-33902014000200006&script=sci_arttext)
- Liberato Borges, L. F., De Andrade, A. L., de Oliveira, M. Z., & Guerra, V. M. (2015). Expanding and Adapting the Protean Career Management Scale for University Students (PCMS-U). *Spanish Journal of Psychology*, 18, e103. <https://doi.org/10/gd8c75>
- Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). Resilience in the modern career. *Career Development International*, 20(4), 363–383. <https://doi.org/10/f7n2jq>
- Marler, J. H., Barringer, M. W., & Milkovich, G. T. (2002). Boundaryless and traditional contingent employees: worlds apart. *Journal of Organizational Behavior*, 23, 425–453. <https://doi.org/10/dsghjf>
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58(2), 367–408. <https://doi.org/10/dw64z6>
- Ng, T. W. H., & Feldman, D. C. (2010). Human capital and objective indicators of career success: The mediating effects of cognitive ability and conscientiousness. *Journal of Occupational and Organizational Psychology*, 83(1), 207–235. <https://doi.org/10/ckv7sf>
- Ng, T. W. H., & Feldman, D. C. (2014). Subjective career success: A meta-analytic review. *Journal of Vocational Behavior*, 85(2), 169–179. <https://doi.org/10/b837>
- Otto, K., Glaser, D., & Dalbert, C. (2004). *Skalendokumentation "Geografische und berufliche Mobilitätsbereitschaft"* (Hallesche Berichte zur Pädagogischen Psychologie). Halle, Germany: Martin-Luther-Universität Halle-Wittenberg. Retrieved from <http://psydok.sulb.uni-saarland.de/volltexte/2004/400/>
- Rastgar, A. A., Ebrahimi, E., & Hessian, M. (2014). The effects of personality on protean and boundaryless career attitudes. *International Journal of Business Management and Economics*, 1(1), 1–5. Retrieved from <http://academicjournalscenter.org/index.php/IJBME/article/view/13>



- Taborda, S. M. C. Q. (2012). *Carreiras proteanas e empregabilidade: Estudo com uma amostra de chefias* (Master's thesis). Universidade de Lisboa, Lisbon, Portugal. Retrieved from <http://hdl.handle.net/10451/6918>
- Tschirhart, M., Reed, K. K., Freeman, S. J., & Anker, A. L. (2008). Is the grass greener? Sector shifting and choice of sector by MPA and MBA graduates. *Nonprofit and Voluntary Sector Quarterly*, 37(4), 668–688. <https://doi.org/10/bc3ntt>
- Zimmerman, R. D. (2008). Understanding the impact of personality traits on individuals' turnover decisions: A meta-analytic path model. *Personnel Psychology*, 61(2), 309–348. <https://doi.org/10/c8s>