Selection & Development Review

SDR

CONTENTS

Editorial

WELCOME ALL TO THE DECEMBER edition of *Selection & Development Review*. If you are reading this during the holiday season, then I hope over indulgence does not interfere too much with your appreciation of this issue: if you are already back at your desks, then I hope the diet (or insert the appropriate New Year resolution!) is going well.

The fare for this edition ranges widely across highly relevant areas for all those interested in selection and development issues. The question of the costs/benefits of investment in 'expensive' selection processes is helpfully and practically reviewed by Mark Parkinson; the models he provides will repay close attention in terms of building winning arguments for the adoption of best practice selection solutions.

Kieran Duignan challenges us to think more deeply about the ways in which we translate test scores into words, particularly in the context of coaching and development. (I'm reminded of the time when I used the word 'shy' during developmental feedback in the US; in terms of impact I might as well have suggested to the individual that they were a bit smelly!)

Big 5 personality theory continues to be a productive and important area for debate and Graham Tyler, Peter Newcombe and Paul Barrett add to our understanding through a review of Five Factor structure in a cross cultural context; with some relevant findings for the application of Western models in Asia and globally.

Finally, Ruth Doughty, Louise Geraghty and Jackie Scullard share their findings in relation to a significant job profiling exercise undertaken in British Gas. Selecting for the Call Centre environment can be challenging and their research leads to practical outcomes – both in terms of the benefits of job profiling and lessons for the recruitment process more generally.

A varied menu, containing all the right intellectual and practical food groups, to counterbalance Christmas excess!

Bon Appetite.

Ceri Roderick
On behalf of the Editorial Team

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The Chinese challenge to the Big 5

IN 2003, GRAHAM TYLER WROTE AN article for *Selection & Development Review* reviewing the 15FQ+* (Tyler, 2003). The article introduced the 15FQ+ (Psychometrics Limited, 2002) as a psychometrically-sound personality assessment tool that was beginning to accumulate cross-cultural evidence of its utility in workplace psychological assessment. In the interim two years, our research team has been active in the translation, adaptation and validation of the 15FQ+ in Asia as part of a project which aimed to assess the utility of Western and Chinese models and measures of personality in Asia and globally. The following provides data and analysis from one stage of this program and provides a rationale for the acceptance of the Five Factor Model (FFM) of personality and related assessment tools in China.

The FFM may be seen as a culturally-universal model of personality (McCrae, 2004) which purports that, at the core of the human condition, there are five major personality dimensions: Openness to Experience (O), Conscientiousness (C), Extraversion (E), Agreeableness (A) and Emotional Stability (N). The model assumes to be supported across cultures because personality is seen, to a large extent, as being biologically-based. Additionally, proponents of the FFM have found, through factor analysis in cross-cultural studies, that the five factors can be recovered with varying degrees of similarity to Western, or more often, North American norms (e.g. McCrae & Allik, 2002). The vast majority of this research has used the NEO-PI-R or NEO-FFI (Costa & McCrae, 1992). The 15FQ+ is comprised of fifteen Primary personality factors similar to those proposed by Cattell in his ground-breaking research. In addition, this questionnaire contains a meta-cognitive personality scale named 'Intellectance' and five Global factors which are similar to the five factors of the FFM. For detailed information on each of these scales, please see Tyler (2003).

Graham Tyler, Peter Newcombe & Paul Barrett

Indigenous personality researchers have, on the other hand, claimed that the FFM does not envelop all aspects of personality in cultures removed from the West. Cheung *et al.* (2001) argue that the Five Factor structure identified by Costa and McCrae cannot be clearly replicated in a Chinese sample, with suggestions that the personality structure of the Chinese sample is significantly different from that of the Western samples. In China, this claim falls within a context wherein local academics are playing 'catch-up' and creating a local indigenous psychology after years of borrowing from the West. This follows an era prior to the Cultural Revolution that saw the study and application of individual difference psychology as non-socialist. Even still, much psychology is taught in English or translated from English-language academic journals. Indigenous researchers such as Cheung *et al.* (2001) have proposed the necessity of developing a local psychology and local tools to assess individual differences. The Cheung *et al.* (2001) research has pointed to the existence of a further dimension existing in Chinese people that is not covered by the FFM. This has been termed 'Interpersonal-relatedness' and the team claims that this finding has shed light upon a 'blind-spot' in Western psychology. Cheung and her team also claim that this additional personality factor exists not only in the Chinese, but also in other Asian and Western cultures, such as Singapore and the US (Cheung, Cheung, Leung, Ward & Leong, 2003). In order to measure this dimension of personality, as well as those included within the FFM, Cheung's team developed a measure known as the Chinese Personality Assessment Inventory (CPAI). This measure has been revised and now exists in both

Chinese and English as the Cross-Cultural Personality Assessment Inventory (CPAI-2). It measures the so-called indigenous dimensions of Face, Family-Orientation, Defensiveness, Graciousness-Meanness, Veraciousness-Slickness, Traditionalism-Modernity, Ren Qing (relationship orientation), Harmony and Thrift-Extravagance under the Interpersonal-Relatedness banner.

Obviously, a potential 'blind-spot' in Western tests and the ability to learn from another culture and inform Western psychology is of interest to academics and practitioners alike. This is especially so given the accelerating pace of globalisation, the fact that one quarter of the world's population is Chinese and the fact that the Chinese people are populating elsewhere in the world in large numbers. For these reasons, the research team instigated a programme of research assessing personality-based prediction of workplace performance in China.

In the first study, the 15FQ+ Form A English version was systematically and methodically translated into Traditional Chinese and then back-translated in order to ensure quality of the translation (Brislan, 1970). It was then administered alongside the NEO-FFI (for construct validation purposes) to 178 final year business studies students at a Hong Kong university. Grade Point Average (GPA) was also collected from these participants. Following analysis of the data and individual item analysis of the 15FQ+, further work was carried out on the translation with local psychologists to ensure that the concepts under measurement were as similar as possible to those in the English version of the test. Subsequently, the updated 15FQ+ was administered alongside the indigenous scales of the Traditional Chinese version of the CPAI-2 to 437 professional individuals working for one of four Hong Kong organisations: an airline, a five-star hotel, a bus company and a security company. Performance appraisal data was collected from the human resource department of one of these organisations for 149 respondents. In order to provide a UK comparison norm, anonymous bureau-scored data (N=1378) from the 15FQ+ was collected from the UK publisher.

Internal consistency reliability is quantified as an 'alpha' statistic that varies between 0 and 1. Values greater than 0.70 are generally considered acceptable for personality assessments. Results demonstrated generally acceptable levels of internal consistency for the NEO-FFI scales used in the Chinese student trial study (Table 1). Although the Openness factor did fall below an acceptable level, this has been observed before in Chinese samples (McCrae, Yik, Trapnell, Bond, & Paulhus, 1998). A number of the 15FQ+ scales fell below acceptable levels of reliability for the trial data-set, but the number of scales falling below this level was reduced (following further item-analysis and translation work) with the administration to the professional sample. However, further refinement was still indicated (Table 2). The student sample provided some evidence for both construct-related validity and criterion-related validity of the 15FQ+. Significant (although small) relationships were observed in the expected directions between NEO-FFI factors and their counterpart 15FQ+ factors, whilst significant relationships were observed between 15FQ+ and NEO-FFI Conscientiousness and student's Grade Point Average (Table 1). The CPAI-2 displayed less than acceptable reliability on all but the Family Orientation scale (Table 2) although the findings are consistent with the published CPAI-2 norm group alphas (Cheung *et al.*, 2004).

Analyses were then run to assess the extent to which a number of personality variables (using the 15FQ+ and CPAI-2 scales) could collectively form a model that was predictive of performance. The performance variables Overall Performance, Customer Service and Planning and Organising were found to be predicted by a number of 15FQ+ Primary factors. However, just one model included a CPAI-2 scale as a significant predictor. Models comprising other performance variables showed trends that suggested that, with larger sample sizes, 15FQ+ scales might also be implicated in their prediction. 15FQ+ Primary factors fO- (self-confident, unworried) and fN+ (restrained, diplomatic) were common predictors, demonstrating that being confident, diplomatic and socially aware were important attributes in the Chinese organisation under study. Implicated in higher overall performance ratings were the qualities of being diplomatic, yet confident and having high personal drive and nervous energy. Higher customer service ratings were associated with self-sufficiency and confidence. Being rated highly on planning and organising ability was associated with being retiring, sensitive, confident and self-disciplined. The planning and organising competency was the only outcome measure to implicate a CPAI-2 scale in the prediction of performance. Those

better at planning and organising rated themselves as more veracious; that is loyal, trustworthy and honest, with both feet on the ground.

The structure of personality of the Chinese professionals was compared with a large UK 15FQ+ norm group. Analyses found that the 15FQ+ Global and Primary factors showed a similar structure when comparing Hong Kong to the UK. Global factors C and N were most readily recovered. Although E, O and A were less clearly recovered, they still showed high levels of structural similarity with the UK data.

The data indicates that Western personality tests that have been translated into Chinese can have acceptable levels of internal consistency reliability. Although still indicating a need for

further refinement, these can be higher than the levels of internal consistency reliability achieved by tests developed on Chinese samples. Clearly, the reliability and validity of such tests is dependent upon both the test's construction, and the quality of its translation. Furthermore, factor analyses have demonstrated that the Five Factor Model of personality holds up on a Chinese sample, adding further support to the universality of this model. Most notably, the current analyses have indicated that the translated versions of the 15FQ+ and NEO-FFI have, in the main, greater internal consistency reliability and criterion-related validity than does the CPAI-2's indigenously-developed scales, despite this test having been developed on a Chinese population.

Table 1: Reliability estimates for each scale of the NEO–FFI and bivariate correlations between NEO–FFI, 15FQ+ Global scales & GPA from Chinese student trial.

15FQ+ Global Factors and GPA Performance									
NEO Scales	Alpha Reliability	*N*	N	E	O	A	C	GPA	*N*
NEO N	0.84	175	**0.67****	−0.25**	0.07	0.19*	−0.13	−0.19*	128
NEO E	0.81	175	−0.39**	**0.73****	0.24**	−0.15*	−0.01	0.09	128
NEO O	0.59	175	0.10	0.18*	**0.52****	−0.24**	−0.01	−0.12	128
NEO A	0.64	175	−0.52**	0.13	−0.06	**0.37****	0.15*	0.11	128
NEO C	0.83	175	−0.40**	0.14	0.06	−0.23**	**0.52****	0.43**	128
Performance GPA		131	−0.13	−0.04	−0.15	0.02	0.36**		

Upper diagonal: Correlations between dissimilar 15FQ+ Global Factors and NEO-FFI Factors
Diagonal: Correlations between similar 15FQ+ Global Factors and NEO-FFI Factors
Lower diagonal: Correlations between dissimilar NEO-FFI and 15FQ+ Global Factors
**$p < 0.01$ (two-tailed) *$p < 0.05$ (two-tailed): denotes that the relationship is significant.

Table 2: Reliability estimates for each scale of the 15FQ+ and CPAI-2 used in each study.

15FQ+ Factor	Hong Kong Students N=178	Hong Kong Professionals N=437	UK Bureau Data N=1378
fA: Distant Aloof – Empathic	0.64	0.72	0.72
ß: Low Intelligence – High Intelligence	0.81	0.80	0.77
fC: Affected by Feelings – Emotionally Stable	0.73	0.76	0.78
fE: Accommodating – Dominant	0.66	0.67	0.72
fF: Sober Serious – Enthusiastic	0.69	0.72	0.79
fG: Expedient – Conscientious	0.78	0.72	0.82
fH: Retiring – Socially-bold	0.82	0.83	0.82
fI: Hard-headed – Tender-minded	0.66	0.64	0.73
fL: Trusting – Suspicious	0.71	0.68	0.73
fM: Concrete – Abstract	0.76	0.64	0.70
fN: Direct – Restrained	0.57	0.61	0.78
fO: Confident – Self-doubting	0.67	0.73	0.81
fQ1: Conventional – Radical	0.66	0.61	0.76
fQ2: Group-oriented – Self-sufficient	0.78	0.74	0.74
fQ3: Informal – Self-disciplined	0.60	0.61	0.77
fQ4: Composed – Tense-driven	0.80	0.83	0.79
Social-desirability	0.57	0.63	0.71

CPAI-2 Scale	Hong Kong Professionals N=437	Representative Sample* N=1911
Face (FAC)	0.62	0.59
Family Orientation (FAM)	0.73	0.66
Defensiveness (Ah-Q Mentality) (DEF)	0.68	0.69
Graciousness vs. Meanness (G-M)	0.69	0.66
Veraciousness vs. Slickness (V-S)	0.62	0.69
Traditionalism vs. Modernity (T-M)	0.66	0.65
Ren Qing (Relationship Orientation) (REN)	0.40	0.49
Harmony (HAR)	0.63	0.53
Thrift vs. Extravagance (T-E)	0.46	0.54

* Mainland China and Hong Kong representative sample for CPAI-2: Cheung *et al.* (2004).

References

Brislin, R.W. (1980). Translation and content analysis of oral and written material. In H.C. Triandis & J.W. Berry (Eds.), *Handbook of cross-cultural psychology* (Vol.1, pp.389–444). Boston: Allyn & Bacon.

Cheung, F.M., Leung, K., Zhang, J., Sun, H., Gan, Y., Song, W. & Xie, D. (2001). Indigenous Chinese personality constructs: Is the Five-Factor Model complete? *Journal of Cross Cultural Psychology, 32*(4), 407–433.

Cheung, F., Cheung, S., Leung, K., Ward, C. & Leong, F. (2003). The English version of the Chinese Personality Assessment Inventory. *Journal of Cross-cultural Psychology, 34*(4), 433–452.

Cheung, F.M., Cheung, S. F., Zhang, J.X., Leung, K., Leong, F. & Yeh, K.H. (2004). *Openness as a personality dimension in the Chinese cultural context: Aspects of its universality?* Unpublished manuscript.

Costa, P.T. & McCrae, R.R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual.* Odessa, FL: Psychological Assessment Resources.

McCrae, R.R. (2004). Human nature and culture: A trait perspective. *Journal of Research in Personality, 38*(1), 3–14.

McCrae, R.R., Yik, M.S.M., Trapnell, P.D., Bond, M.H. & Paulhus, D.L. (1998). Interpreting personality profiles across cultures: Bilingual, acculturation and peer rating studies of Chinese undergraduates. *Journal of Personality & Social Psychology, 74*(4), 1041–1055.

McCrae, R.R. & Allik, J. (Eds.). (2002). *The five-factor model across cultures.* New York: Kluwer Academic/Plenum Publishers.

Psychometrics Limited (2002). *The 15FQ+ Technical Manual.* Pulloxhill, Bedfordshire, UK: Psychometrics Limited.

Tyler, G. (2003). A review of the 15FQ+ Personality Questionnaire. *Selection and Development Review, 19,* 7–11.

Further information

www.15fq.com

www.personality.cn

An academic article has been accepted for publication in the first issue of 2006 of the *International Journal of Selection and Assessment.*

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*The 15FQ+ is a trademark of Psytech International Limited. The publisher of the 15FQ+ wishes to advise that the 15FQ+ (Traditional Chinese) version that was used in this study is part of an ongoing development and research project. Updated versions have since been released.