INFLUENCE OF CRITERION-CHANGE ON SUPERVISORY RATING CONCERNING THE FIVE FACTOR MODEL

Márta JUHÁSZ

Department of Ergonomics and Psychology Budapest University of Technology and Economics H–1521 Budapest, Hungary Phone: (36-1) 463-4022, Fax: (36-1) 463-2106 e-mail: juhaszm@erg.bme.hu

Received: November 22, 2004

Abstract

This study was carried out in a Hungarian Telecommunication Inquiry Service, where a new software was introduced in 1996. The objective of my work was to investigate the criterion-changes of the operator job in a six-year period and their reflections in the supervisory ratings of performance. The differences in the supervisory preferences were shown through the operators' personality profiles. To describe the operators' personality the Five Factor Model (NEO-PI-R by COSTA-MCCRAE, [2]) was used in this special context. I was interested in the changes of the predictive validity of the personality factors depending on the modifications of the criteria of successful person-job fit. Relations were studied, on the one hand, between the criterion change and the supervisory ratings about the operators' achievements, on the other hand between the operators' personality profiles and their supervisory judgements.

Keywords: personality, predictive validity, criterion, performance rating.

1. Theoretical Framework for my Research

1.1. The Thorndike's Paradigma and its Cracks

The selection technology developed in the first half of the 19th century had a solid empirical, psychometrical basis. The classical American selection model describes a number of steps and rules that should be strictly followed: 'A personnel selection programme which does not involve empirical checks of the selection procedures against criteria of job success is at best a static and untested one. At worst it might be outright charlatanism. The feature that distinguishes reputable work in personnel selection from that of the mass of self-styled psychologists, personnel experts and other quacks is that the reputable worker in the field is continuously concerned with testing, verifying and improving the adequacy of his procedures' (THORNDIKE, 1949, in: WOLFF-BOSCH, [3]).

1.1.1. The Steps of the Model

- analysing the job,
- selecting or, if necessary, constructing predictors,
- developing criteria to measure job performance,
- testing the validity of the predictors on a random sample of applicants,
- putting together the most favourable combination of predictors and determining the decision scores,
- using this combination for selection purposes.

1.1.2. Objection to the Emphasis on Individual Differences

As it can be seen this model was constructed for validating the predictors in the first place. The most important assumption was that differences in job performance were attributed exclusively to individual differences in ability, capacities and individual characteristics, so personality traits were considered to be constant. Attention was paid only to measuring the nature and size of these individual differences.

1.1.3. Objection to the Criterion

The other major factor was the belief in the existence of the criterion. THORNDIKE's approach was based on the *ultimate* (*one-dimensional*) *criterion* whether applicants are suitable or not. Social and psychological studies of the fifties noted the influence of the management style on performance and the relation between work and motivation, as well as its influence on individual performance. In the sixties the interest in system-theories increased. The organization was regarded as an open system that was difficult to reconcile with an ultimate criterion based on the complete final goal. The open system theory shows that a person's contribution is not absolute. New and other requirements are made all the time and individuals must meet new challenges. THORNDIKE's model is applicable only in a closed organization system.

The concept of a simple, ultimate, one-dimensional criterion must be abandoned and replaced with *multiple criteria*. Furthermore it is questionable whether only performance criteria based on organization's objectives should be applied. Employees, too, make demands regarding their work, and social indices such as job satisfaction can be used as criteria as well (DE WOLFF–BOSCH, [3]).

The HOFSTEE's [4] notion of the criterion has never been completely defined. At any moment the selection decision may introduce new elements that have their impacts on the judgment of the criterion. In this sense the criterion always carries elements of creativity; it can never be fully specified. The criterion in the selection context carries too many subjective elements, so the criterion is not one-dimensional. There are many aspects of job behaviour and on each and every one of them the judged may be better or worse independently of the performance in other aspects.

Decisions have to be made and it is impossible to hire someone for only one aspect of a job and not for the other. So the decision maker ranks the applicants in terms of their ability, traits, etc, and hires the topmost. This situation that implies the final ranking of applicants is only one dimension: a person is either hired or not.

1.2. Predicting Job Performance Using the Five Factor Model

The interest in identifying personality predictors of job performance has led researchers to use the Five Factor Personality Model as an important conceptual tool. The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions.

This taxonomy represents an empirical model of personality, consisting of the dimensions of *Neuroticism* (the tendency to experience negative affect, such as anxiety, depression and hostility), *Extraversion* (the quantity and intensity of interpersonal interaction), *Openness to experience* (the proactive seeking and appreciation of new experiences), *Agreeableness* (the quality of one's interpersonal interactions along a continuum from compassion to antagonism), and *Conscientiousness* (the amount of persistence, organization, and motivation in goal-directed behaviours). In our research we used the NEO-PI-R personality Questionnaire by COSTA–MCCRAE [2]. It consists of five major domains of personality, as well as the six traits or facets that define each domain. (Supplement 1.)

Some researchers' study demonstrated the predictive power of the model within employment context (BARRICK-MOUNT, [1]; TETT, [8]; SALGADO [7]). BARRICK-MOUNT's [1] study was a 35-year view on personality-based prediction research, which was able to identify some salient relations between personality and work performance.

PIEDMONT [6] evaluated the relations between the five-factor model and supervisor ratings of performance. Scores on the *Conscientiousness* scale correlated with all performance ratings over a diverse number of occupational groups. Low *Neuroticism* and high *Extraversion* scores also predicted high performance. Low *Straightforwardness* scale of the *Agreeableness* factor was associated with the ability to accomplish work-related goals and to adapt to changing work conditions. In his study the dimensions are related to personality qualities, for example the ability to work together and the ability to cope with job stress should be related to a person's level of extraversion and neuroticism. The rating form asked supervisors to rate their employees on a 5-point scale ranging from unsatisfactory (1) to excellent (5) on 12 relevant performance items that constituted three performance scales. These scales were labelled *interpersonal relations* (items: communicates clearly, team player), *task orientation* (items: hard-working, gets things done), and *adaptive capacity* (items: learns and adapts ready, copes effectively with setbacks, functions well in unstructured situation).

The results show the Conscientiousness factor correlated with the performance ratings in a consistent way, as expected. For example competence, striving

for achievement and self-discipline appear to be salient and predict successful job performance in all the rated areas.

Extraversion scores were significantly correlated with ratings on the interpersonal relations scale (r=0.20). Extraversion was a significant predictor of job success. High scores on this factor indicate warm, engaging, positive and orientation toward others facilitating interpersonal interactions.

Persons who received high scores on the Agreeableness factor not only like being with others but are also willing to engage in any social activity to attain their goals. In a group situation, individuals scoring high on Extraversion and low on Straightforwardness may be perceived as leaders, or as charismatic or both.

The Neuroticism factor was a significant predictor of ratings concerning interpersonal relations (r = -0.16), and adaptive capacity (r = -0.17). Hardy, emotionally stable individuals were rated by their supervisors as being able to maintain a consistent relationship with others, and able to cope with various demands associated with their jobs.

Summarizing these findings it can be said that the Conscientiousness factor scores correlate consistently with job performance across a wide range of occupational categories. The scales of Conscientiousness such as competence, achievement striving, and self-discipline are specific personality qualities that underlie job success.

2. Antecedents

2.1. The Motivation of the Organization for Creating a New Selection Process

My research started in 1996, when new information technology was introduced in the Hungarian Telecommunication Inquiry Service (JUHÁSZ, [5]). It was very important to provide a high level service in the revolutionized surroundings of the Hungarian market. This made the service more reliable and more precise: the new software and the new technology in this part of the service were able to offer quicker, more precise and more effective information to the clients. This modernizing process required the reorganization of human resource management and the client service system. The aim of the organization was to keep those employees who were able to improve and keep their job performance even though quantitative and qualitative expectation had been changed towards them. So it became necessary to establish a more effective *selection process*. Our goal was to select operators who were able to meet the high expectations in a long term without any mental and physical problems.

2.2. Job Analysis (1996)

Based on *the job analysis* we determined criteria to draw up a psychological personnel assessment process. Different methods were used for the analysis: results of various job analyses made for similar jobs, analysis of documents, surveys among supervisors, group discussion among supervisors and employees, analysis of a working day (analysis of video and audio recordings). With knowledge of the data we determined the requirements and set up the criteria of successful work.

2.3. Selection Process (1996)

According to the results of the job analysis the selection methods dealt with:

General mental ability such as Memory, Attention, Emphasizing and understanding the importance, Comprehension. We measured these abilities with our own instruments and other widely known methods were used as well.

Personality traits such as *Compliance, Confidence, Extraversion, Modesty, Kindness, Self-control, Tolerance*. These traits were measured with NEO-PI-R, a Big Five personality questionnaire (COSTA–MCCRAE, [2]). (Supplement 1.)

Sample: 344 employees

2.4. Validation Process (1997)

Six months after the selection the *validation process* was completed giving feedback about the validity of the predictors and correcting them and the selection decision. This was sufficient time for the employees to get familiar with the new task, to get used to the new environment and to adapt themselves to the new requirements.

The performance data of employees by *objective methods* [gathering and analysing IBM and ACD (Automatic Call Device)] and by *subjective methods* (operators rating by colleagues, speaking style analysis, and the supervisory rating of the employees' performance) were collected (Juhász, [5]).

For the evaluation of the employees' performance by their supervisors a scoring sheet was used which contained the exact definition of the dimensions to be used for the evaluation. Supervisors used a 4-point scale for rating them. The rating categories of the scoring sheet were determined by the criteria of the selection:

1) Achievement, 2) Accuracy, 3) Knowledge of software, 4) Endurance, 5) Quietness, 6) Politeness, 7) Good communication skill, 8) Pleasant voice, 9) Understanding of speech, 10) Memory, 11) Good relationship with the colleagues.

Sample: 100 employees

3. Detecting the Criterion Change in the Job Analysis

During our talk with the supervisors after applying the new selection process (mentioned above) for some years, they mentioned that not very suitable persons had been selected recently. In the meantime the well-detected criterions have been modified in the organization due to the perceptible economic and social changes in Hungary. It was high time the selection methods were revised.

According to these experiences some questions could be defined for consideration:

• How has the job criterion been changed by the new circumstances in the organization?

The criteria change was investigated for a six-year period, from 1996 to 2002, in comparison with those criteria which were based on the selection process in 1996.

For the predictor validation procedure the supervisory rating was repeated again, asking the supervisors to rate their operators' performance in the years of both 2000 and 2002. It seemed obvious to investigate these questions:

- Does the supervisory rating follow the criterion change or not?
- Has the supervisory rating been modified by the criterion change?
- How has the same employee's rating (describing his personality based on the Five Factor Model) modified in different periods?

3.1. Criterion Change

The criterion change is a risk factor in the validation process of the predictors. For this reason continuous control of the methods is required. Our hypothesis was that the predictive validity of the selection methods depends on the context in which they are used.

It is reasonable to suppose that in 1996 when the entire organization was in a learning period, the role of cognitive abilities was more emphatic, whereas after these changes the role of the personality traits such as Agreeableness, Conscientiousness, and Extraversion became more important.

3.2. Methods

The job analysis is the most popular and useful method to detect the criteria of successful job performance. Studying previous documents concerning job analysis in the call centre in 1993, it was found that the supervisors had been asked to gather those attributes that contribute to completing a job successfully. In this way four categories could be established: I. Self-discipline (patience, quietness); II. Cognitive

ability (attention, memory, emphasizing importance); III. Polite behaviour (friend-liness, sociability); IV. Tolerance (acceptance). In the year of 1996 we asked the supervisors to distribute 100 points among these categories expressing the weights of the importance in this work. This job analysis method was repeated in the years 2000 and 2002. The difference between supervisors' judgements in various years can be seen in *Table 1*.

Criterion	1993 1996 $N = 75$ $N = 36$		2000 $N = 15$			2002 $N = 15$					
Self-discipline	38.0 %	I.	mean: std:	19.6 8.4	III.	mean: std:		III. ↑	mean: std:	24.5 6.8	III. ↑
Cognitive abibity	20.8 %	III.	mean: std:	38.8 11.9	I.		33.0 7.5		mean: std:	29.0 10.2	I. ↓
Polite behaviour	33.9 %	II.	mean: std:	28.0 10.1	II.	mean: std:	25.0 5.3	II.↓	mean: std:	25.5 6.2	II.↓
Tolerance	7.3 %	IV.	mean: std:	13.3 6.1	IV.	mean: std:	19.0 5.7	IV. ↑	mean: std:	20.5 6.3	IV. ↑
Kendall's coefficient (* $p < 0.1$; ** $p < 0.05$)			0.45**		0.54**		0.38**				

Table 1. Criterion comparison in different years

3.3. Results of the Criterion Analysis

There was an important difference between the results of the criterion analysis (1996) and the previous results. Managers, supervisors who were asked for job analysis emphasized the role of *cognitive abilities* more than they had in the previous years.

In the last two years we repeated the open-ended question: what was the most important attribute to occupy the operator job, and we could observe the tendency of criterion change in the answers.

In picture I you can see that during the introduction of New Information Technology (NIT) the role of the *cognitive capacities* was highlighted and the *personality* traits became less important. In 2002 the cognitive abilities have less importance than the personality traits. The reason could be that a continuous change took place in the organization in the period of the job analysis (1996). The supervisors and the employees were in a very intensive learning period, that is why the role of the cognitive abilities became salient (*Fig. 1*).

According to the Big Five personality traits next to each attitude you can see in brackets the more suitable personality factor. The main dimensions that emerged

in 2002 in this service job are the *Agreeableness* (A), *Conscientiousness* (C), and *Neuroticism* (N) personality factors.

	NITT	
Rating	1996 NIT	2002
1.	Emphasizing importance	Patience (N)
2.	Quickness	Politeness (A)
3.	Attention	Accuracy (C)
4.	Software knowledge	Communication skill (E)
5.	Politeness (A)	Helpfulness (A)
6.	Helpfulness (A)	Intelligence
7.	Memory	Emphasizing importance
8.	Flexibility (O)	Quickness
9.	Accuracy (C)	Tolerance (N)
10.	Tolerance (N)	Dutifulness (C)

Fig. 1. Criterion analysis for a 6-year period (1996–2002) (N: Neuroticism; E: Extraversion; O: Openness to experience; A: Agreeableness; C: Conscientiousness)

4. Characteristics of the Supervisory Rating (1997–2000–2002)

4.1. Methods

As mentioned above, in the year of 1997 the supervisors were asked to compile a scoring sheet containing 11 dimensions that were measured on a 4-point scale ranging from strongly agree (1) to strongly disagree (4). Using the factor analysis method these dimensions were reduced to two main factors for more comfortable data analysis.

In the year of 2000 we used the same method of completing the scoring sheet with the overall supervisory rating dimension. These dimensions could be restricted to two well-separated factors with statistical factor analysis.

Considering the criterion change in the meantime the supervisory rating sheet was required to complement or replace other performance dimensions in the year of 2002. These additional dimensions were *Job proficiency, Trainability, Cooperation, Self-discipline, Dependent, Deliberate, Adaptable and the supervisor's overall rating about the employee.*

Table 2 Factor analysis of the supervisory rating (1997)(N = 97) KMO = 0.91. (> 0.3)

Rating dimensions	Factor 1	Factor 2	
Understanding of speech	0.74	0.48	
Memory	0.94		
Good relationship with	0.50	0.56	
the colleagues			
Good communication skills	0.81	0.49	
Accuracy	0.81	0.46	
Software knowledge	0.89		
Endurance	0.72	0.38	
Achievement	0.94		
Politeness		0.92	
Quietness		0.93	
Pleasant voice	0.37	0.78	

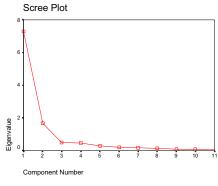


Chart 1

Table 3 Factor analysis of the supervisory rating (2000) (N = 107) KMO = 0.84. (> 0.3)

Rating dimensions	Factor 1	Factor 2
Memory	0.77	
Understanding of speech	0.67	
Good relationship	0.44	0.45
with the colleagues		
Good communication skills	0.69	
Accuracy	0.66	
Software knowledge	0.67	
Achievement	0.85	
Endurance	0.43	0.44
Pleasant voice		0.75
Quietness		0.82
Politeness		0.82
Overall rating	0.74	0.46

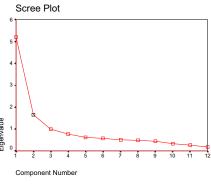


Chart 2

Table 4 Factor analysis of the supervisory rating (2002) (N=41) KMO = 0.89. (> 0.3)

Rating dimensions	Factor 1	Factor 2
Memory	0.48	
Dependent	-0.52	-0.39
Job proficiency	0.67	
Endurance	0.78	
Trainability	0.88	
Adaptable		0.81
Politeness		0.84
Cooperation	0.48	0.63
Self-discipline	0.38	0.68
Pleasant voice		0.89
Deliberate	0.48	0.65
Overall rating	0.60	0.68

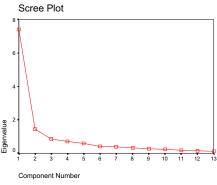


Chart 3

4.2. Naming the two Performance Factors

Analysing the contents of the factors we can give the name *Cognitive performance* factor (CPF) to Factor1, because it contains the Achievement, Accuracy, Software knowledge, Endurance, Understanding of speech, Memory, Good communication skill, Job proficiency₍₂₀₀₂₎, Trainability ₍₂₀₀₂₎ performance dimensions which are associated with the employees' general mental ability and skills in work performance.

We gave the name Affective performance factor (APF) to Factor2, because it contains Quietness, Politeness, Pleasant voice, Adaptable (2002), Cooperation (2002), Self-discipline (2002), Deliberate (2002). All these dimensions are related to personality traits that determine social behaviour in the workplace.

It is very interesting that the Endurance (2000) and the Good relationship with the colleagues (1997–2000) performance dimensions load both performance factors. It is of further interest that in 2000 the supervisor's overall rating about his employee was influenced by the employee's mental ability, whereas in 2002 it was influenced by the employee's personality traits and social skills. This means that when supervisors appreciate an employee they perceive the current circumstances and the criteria well. In the year of 2002 an employee was judged by his social skills and personality traits such as patience, politeness, helpfulness.

4.3. Correlations between the NEO-PI-R Domains and Facets and the Supervisory Performance Factors

Fig. 2 contains the correlations between the NEO-PI-R domain and facet scales and supervisory performance ratings in each of the three years (1997–2000–2002). The picture shows the tendency of the Cognitive and Affective Performance factors that reflects well the criterion change in this job in the six-year period. As it can be seen, there is a number of significant correlations.

The Cognitive performance factor (CPF) has significant correlations with the Openness to experience (O) and Extraversion (E) personality domains. It seems that when the supervisors assess the operators' everyday performance according to the CPF (Memory, Software knowledge, Endurance) they prefer those people who score high on these personality factors. The people who reached a high score on these factors are regarded to be more intelligent, quicker by supervisor. They were considered to be better workers probably because these persons were more open to experience, to new things, for example to a new technology, and probably they had fewer problems in acquiring an unfamiliar knowledge. Agreeableness personality factor and its scales show negative correlation with the Cognitive Performance Factor. This finding were approved in the selection and evaluation processes, too. Operators who had a high score on the Agreeableness factor performed worse in tests measuring cognitive abilities. Later on the supervisors estimated them to a lower score in those tasks which required high cognitive capacities in the everyday work.

The role of this CPF is gradually decreasing, and the role of the Affective

performance factor (APF) is gradually increasing. The APF has significant positive correlation with the Agreeableness (A) and Extraversion (E) factors as well, and negative correlation with Neuroticism (N). When supervisors evaluated their employees according to APF (Quietness, Politeness, etc.) they preferred operators who reached a high score on the Agreeableness factor. In 2002, in the supervisors' view it was more important to be agreeable, tender-minded, reliable and compliant than to be quick and to have a good memory (CPF). Emotional Stability (N) appears to be a very important personality trait.

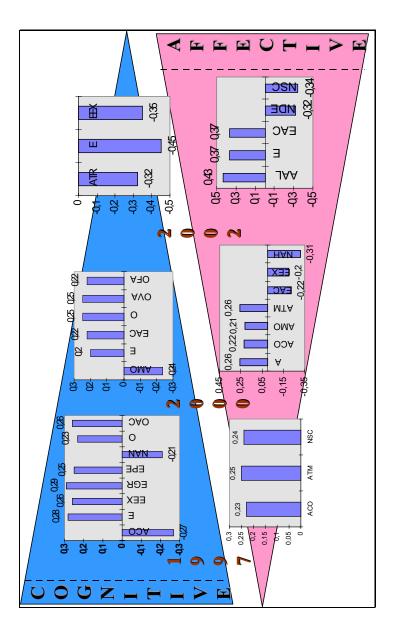
Contrary to our expectation we have not found significant correlations between the *Conscientiousness* (C) personality factor and the supervisory performance. This is very interesting because this personality domain has got a comprehensive validity for all professional groups and all criterion types. In our sample the supervisors did not appreciate those employees who were a bit slow and deliberate.

4.4. Stable Correlations between Personality and Performance

In spite of criterion changes a strong and constant correlation could be detected between the supervisory rating and the personality domains and facets.

Table 5. Significant correlations between NEO-PI-R personality traits and the supervisory rating

I	NEO-PI-R Domains and facets	CPF	APF
E: O:	Extraversion Openness to experience	0.28** 0.23*	0.37
ACO:	Accomplishment		0.23*
ATM:	Tender-mindedness		0.26*



NDE: Depression, NAH: Angry hostility, E: Extraversion, EEX: Excitement seeking, EGR: Gregariousness, EPE: Positive Emotion, EAC: Activity, O: Openness to experience, OAC: Actions, OVA: Value, OFA: Fantasy, A: Agreeableness, AAL: Altruism, Fig. 2. Correlations between the NEO-PI-R domains/facets and the Supervisory Rating Factors NAN: Anxiety, NSC: Self-consciousness, ACO: Compliance, AMO: Modesty, ATR: Trust, ATM: Tender-Mindedness

The Extraversion personality factor of the NEO-PI-R is a significant predictor of job success. BARRICK-MOUNT [1] found this dimension to be a relevant predictor particularly for managerial and sales positions similar to our sample. High scores on the Extraversion scale indicate a warm, engaging, positive orientation toward others. High score on the Extraversion and on the Openness to experience scales predict a good mental ability too. These people are open to new things, they are able to learn quickly, so their supervisors appreciate them very often. The Accomplishment and Tender-mindedness facets of the Agreeableness domain have recently been very important in service jobs.

5. Discussion

Work and organizational psychologists realized that personality assessment can be valuable only if they are meaningfully matched to occupational criteria. This new attention to differentiating criteria and to more precise specification of the links between personality and job constructs has led to interest in more detailed personality profiles than the five factor model offers. For our research we applied a Big Five-based personality measurement and our examination led to getting to know in more detail the nature of predictive validity of the personality domains in job context.

We wanted to demonstrate that the criterion changes are reflected in the supervisors' ratings and the supervisors' views. If we use the supervisors' rating to validate the predictors and determine the predictive validity of the various selection methods (in this case the personality scales) we have to be aware that predictive validity can be modified by the criterion change.

References

- [1] BARRICK, M. R. MOUNT, M. K., The Big Five Personality Dimensions and Job Performance: A Meta Analysis. *Personnel Psychology*, **44** (1991), pp. 1–26.
- [2] COSTA, P. T. MCCRAE, R. R., Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI): *Professional Manual*. Odessa, FL: Psychological Assessment Resources, 1992.
- [3] DE WOLFF, C. J. BOSCH, G., Personnel Selection, in: Drenth, P. J., Thierry, H., De Wolff, C. J. John (Eds) *Handbook of Work and Organizational Psychology*, John Wiley and Sons Ltd., 1984.
- [4] HOFSTEE, W. K. B.. Liever klinisch? In: Akkerman, A. E, Criteria and Individual Assessment, in: Smith, M., Robertson, I. T., Advances in Selection and Assessment, 1995.
- [5] JUHÁSZ, M., Analysis of 'Person-job Fit' in the Public Inquire Service at the Hungarian Telecom Company, *Periodica Polytechnica*, 2000.
- [6] PIEDMONT, R. L. WEINSTEIN, H. P., Predicting Supervisor Rating of job performance Using the NEO Personality Inventory, *Journal of Psychology*, **128** (1994), pp. 255-265.
- [7] SALGADO, J. F., The Five Factor Model of Personality and Job Performance in the European Community, *Journal of Applied Psychology*, **82** (1) (1997), pp. 30–43.
- [8] TETT, R. P. JACKSON, D. N. ROTHSTEIN, M., Personality Measures as Predictors of Job Performance: A Meta-Analytic Review. *Personnel Psychology*, **44** (1991), pp. 703–742.

Supplement 1: The Factors of the NEO-PI-R and their Description

Neuroticism (N)

Neuroticism concerns the degree to which the individual is insecure, anxious, depressed, and emotional versus calm, self-confident, and cool. Persons high in this factor are prone to have irrational ideas, to be less able to control their impulse, to cope with stress poorly. Persons low on this factor are emotionally stable. They are calm, relaxed and they are able to face stressful situations without becoming upset.

Extroversion (E)

Extroversion concerns the extent to which individuals are gregarious, assertive, and sociable versus reserved, timid, and quiet. They like excitement and stimulation and tend to be cheerful in disposition. They are upbeat, energetic, and optimistic. Salespeople represent the prototypical extroverts in our culture, and high extroversion strongly correlate with interest in enterprising occupations.

Openness to Experience (O)

This defines individuals who are creative, curious, and cultured versus practical with narrow interests, conventional. People with high score on openness have active imagination, aesthetic sensitivity, they prefer variety, intellectual curiosity. People who score low on Openness tend to be conventional, they prefer familiar to the novel.

Agreeableness (A)

Agreeableness concerns the degree to which individuals are co-operative, warm, and agreeable versus cold, disagreeable, and antagonistic. Like Extraversion, Agreeableness is primary dimension of interpersonal tendencies. The agreeable person is altruistic, sympathetic to others and wants to help them, and believes to get help in return. By contrast, the disagreeable or antagonistic person is egocentric, sceptical of others' intention, and competitive rather than co-operative.

Conscientiousness (C)

Conscientiousness measures the extent to which individuals are hardworking, organized, and reliable versus lazy, disorganized, and unreliable. Conscientiousness

is a very complex personality factor. It combines three major components from different personality inventory: control, orderliness and hard work.

N E	D-PI-R domains and facets
N	Neuroticism
NAN	Anxiety
NAH	Angry hostility
NDE	Depression
NSC	Self consciousness
NIM	Impulsiveness
NVU	Vulnerability
E	Extroversion
EWA	Warmth
EGR	Gregariousness
EAS	Assertiveness
EAC	Activity
EEX	Excitement seeking
EPE	Positive emotions
0	Openness to experience
<i>OFA</i>	Fantasy
$O\!AE$	Aesthetics
OFE	Feeling
OAC	Actions
OID	Ideas
OVA	Values
A	Agreeableness
ATR	Trust
AST	Straightforwardness
AAL	Altruism
ACO	Compliance
AMO	Modesty
ATM	Tender mindedness
C	Conscientiousness
CCO	Competence
COR	Order
CDU	Dutifulness
CAS	Striving for achievement
CSD	Self discipline
CDL	Deliberation