

The Concept 5.2 OPQ & The 16PF5

The Concept 5.2 OPQ:

Inefficient Measurement or broad occupational assessment?

(Subtitled: the Reality behind the Myths)

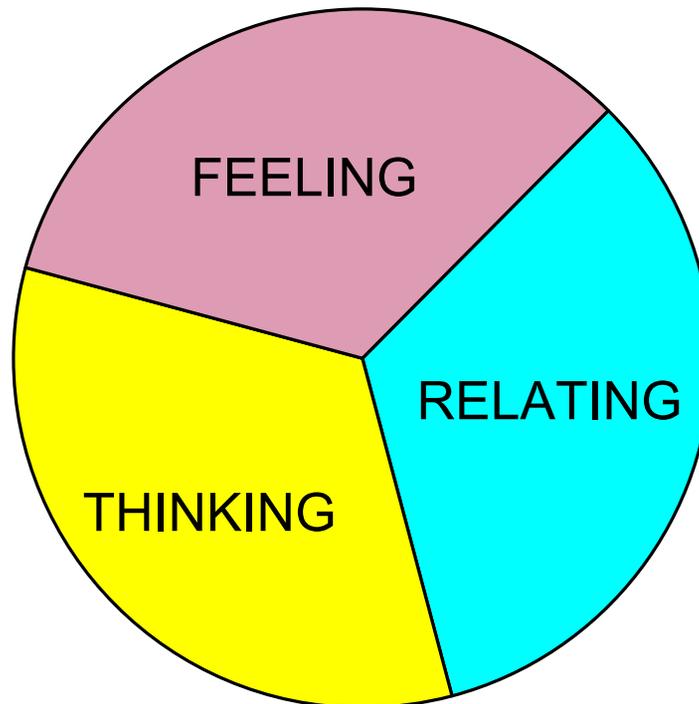
And...

The comparability of the 16PF Form A and the 16PF5: Some observations on the 16PF5 test.

(Also subtitled: the Reality behind the Myths).

The OPQ Model of Personality

- ➔ 3 attribute domains describe an individual's personality
- ➔ Deductive, a priori model construction
- ➔ An **ENERGIES** domain somewhere in the middle...



The OPQ Model of Personality

- ➡ Model constructs should be completely specified
- ➡ Relations between constructs should be specified *a priori*
- ➡ Causal paths should be defined with testable specifications
- ➡ The measurement model underlying the psychological model should be completely specified (linear, non-linear, chaotic, probabilistic vs true-score)
- ➡ Testable components of the model should be clearly differentiated from speculative opinion

The OPQ Model of Personality

- ➡ 2 Concept manual pages describe the features of the OPQ model of personality.
- ➡ No testable features of the model are specified
- ➡ A series of generalities serve as the basis for model definition. E.g. “People vary in their behaviour” ...
“Personality is a changing thing but still shows certain stabilities”

The OPQ Model of Personality

- ▣▣▣▣➔ Various conceptual models proposed -tested statistically
- ▣▣▣▣➔ Scales are claimed to be empirically-identified
“psychologically meaningful and **measurable** scales”
- ▣▣▣▣➔ “The Concept Model stands alone as a psychologically meaningful and **statistically justifiable** model of personality...” p.4 OPQ Factor manual

The OPQ Model of Personality

- ➡ Inductive methods of analysis confirm the deductive model
- ➡ 32 Concept scales identified by Factor Analysis from an initial pool of 40 scales, followed by further item and factor analysis on 1500 items.
- ➡ **CONTRARY** to the received wisdom concerning the OPQ, 30 Concept scales were initially identified by **Item and Factor Analysis**

The OPQ Model of Personality

- ➡ Therefore, one testable feature of the concept model is that 30 scales should be able to be identified by Factor Analytic techniques.
- ➡ In the Concept Manual introduction to the OPQ tests, the deductive concept model development is contrasted with the inductive factor model development. It is now apparent that this distinction is **an illusion**

OPQ Scale Development - Stated Aims

- ➡ High internal consistency
- ➡ Items correlate higher with their own scale than with other scales
- ➡ High face validity of items
- ➡ Enhanced customer acceptability
- ➡ Occupational Relevance - work based personality

OPQ Scale Development - The Reality

PROBLEM #1: TOO LONG?

The OPQ CM5.2 test seems too long - it appears to be a rather inefficient measure of some personality characteristics

OPQ Scale Development - The Reality

- ➡ By reducing the length of some scales with high alphas and high item-total correlations, from 8 items to a minimum of 4 items (**67** items removed)
- ➡ re-scoring the test and correlating the original scale scores with the shortened scale scores
- ➡ re-computing alphas for the shortened scales
- ➡ doing all this on two separate samples of respondents (**N=420** and **N=621**)

OPQ Scale Development - The Reality

Scale Name	Long Alpha	Short Alpha	No. of Items	Long vs Short R
Persuasive	0.76	0.72	5	0.94
Modest	0.87	0.89	4	0.93
Artistic	0.86	0.85	4	0.94
Practical	0.91	0.92	4	0.97
Active	0.81	0.85	5	0.96

Averaged coefficients from both samples (N1 + N2 = 1041)

OPQ Scale Development - The Reality

PROBLEM #2: EVIDENCE?

Currently, there is no public-domain empirical evidence available to demonstrate that all of the 30 concepts can be isolated as “measurable scales”.

Also, there is no evidence to support the empirical existence of the 8, 14, or 19 factor models

OPQ Scale Development - The Reality

- ➡ No factor patterns for either the Concept or Factor Models published by SHL
- ➡ Matthews, Stanton, Graham, and Brimelow (1990)- 94 respondents - 30 scales factored - only a 5 factor model partially replicated
- ➡ Matthews and Stanton (1994) - 2000 respondents - item and scale factor analysis - 21 concepts identified - only a 5/6 factor model partially replicated

OPQ Scale Development - The Reality

- Barrett, Kline, Paltiel, and Eysenck (accepted JOOP, pending revision) - 621 respondents - item and scale factor analysis - 19 concepts identified, once again, only the 5 factor model given partial support.
- No support for the empirical existence of the 3 super-constructs of Relating, Thinking, or Feeling.

OPQ Scale Development - The Reality

PROBLEM #3: ITEM COMPLEXITY?

Up to 21% of the Concept Model items correlate higher than 0.5 with non-keyed scale scores, even though they correlate higher than this with their own keyed scale score.

(from Barrett, Kline, Paltiel, and Eysenck (submitted) - N=621 respondents)

OPQ Scale Development - The Reality

PROBLEM #4: OCCUPATIONAL VALIDITY?

Is this test really occupationally valid - any more so than a more conventional, general personality questionnaire?

OPQ Scale Development - The Reality

➡ When making multiple hypothesis tests, in order to control for the likelihood of obtaining statistically significant results by chance, **under conditions of non-independent hypothesis testing**, it is usual to compute a Bonferroni significance level (α) -which is given by:

$$\alpha' = (\alpha \div n)$$

where α' = adjusted alpha (actual level to use)

α = desired alpha

n = the number of significance tests to be made

OPQ Scale Development - The Reality

- ➡ So, if we carry out say 10 significance tests at a desired **significance level of 0.05**, we would in fact look for rejection of the Null Hypothesis at a p value of **0.005**, not 0.05
- ➡ if we carry out say 30 significance tests at a desired **significance level of 0.01**, we would in fact look for rejection of the Null Hypothesis at a p value of **0.0003**, not 0.01

OPQ Scale Development - The Reality

A concrete example of the effect of this correction applied to some SHL validation data taken from the OPQ Factor Manual, chapter: **The Validity of the OPQ** ... pages 4-5

- ▶▶▶▶ 234 trainee cashiers - OPQ scores vs performance ratings
- ▶▶▶▶ Before correction - **61 significant** correlations reported
- ▶▶▶▶ After correction (16 scales correlated with 50 performance criteria)
= 800 tests = an actual required p value of 0.0000625
- ▶▶▶▶ on this basis, correlations above 0.26 will be significant at 0.05
- ▶▶▶▶ Thus, **8 out of the 61 reported are conservatively significant.**

OPQ Scale Development - The Reality

- ➡ If we ignore the statistical significance of the correlations, and instead ask what might the “true” value be for a correlation, we can compute a 95% confidence interval for any coefficient. That is, we can say that the true value would fall somewhere between an upper and lower value in 95 out of 100 studies.
- ➡ Thus, for a “significant” correlation between say **Relaxed** and *adopts correct security practices with cash* (**-0.213**) the true value lies somewhere between **-0.09** and **-0.33**

OPQ Scale Development - The Reality

➡ SHL have responded to the criticisms of “fishing” or “data dredging” by reporting a series of studies that correlate peer ratings of subordinates with OPQ Concept scale scores, within a predictive hypothesis testing framework:

OPQ Scale Development - The Reality

- ▶▶▶▶ Dulewicz(1992) - **predictive** - 100 existing and potential managers - 40 job competencies - boss ratings - hypothesised relations with a subselection Of the 30 concept scales - 57 predictions, 35 significant, **average significant correlation of 0.23**.
- ▶▶▶▶ Interestingly, Dulewicz refers to the **30 factors of the OPQ Concept 5 questionnaire** (p.2). Also, he declined to use his own 12 “supra-competencies” in favour of the 40 because “...**their definitions were more similar to the OPQ factors**” (p.2).

OPQ Scale Development - The Reality

- ▣▣▣▣▶ Robertson and Kinder (1993) - **predictive** - 20 SHL studies in a meta-analysis - personnel practitioner and psychologists' ratings of job competencies, correlated with OPQ test scores - **average validity of 0.20.**

OPQ Scale Development - The Reality

- ▶▶▶▶▶ Saville, Nyfield, Sik, and Hackston (1991) - **predictive** - cross validation samples of data - 440 (1984) and 270 (1988) managers' ratings of subordinate personality and performance criteria. 5 Job Performance Criteria - cross validation over 10 out of 30 scales - **average 1988 personality vs criterion correlation = 0.28**

OPQ Scale Development - The Reality

- ▣▣▣▣➔ Gibbons, Baron, Nyfield, and Robertson (1995) **predictive study** - 468 UK managers - correlating **new** OPQ “big 5” factors with 5 scale scores from the SHL Inventory of Management Competencies. **Results indicated average correlation of 0.26.**
- ▣▣▣▣➔ What was so wrong with the **OPQ FM5** questionnaire, as advertised in the 1993 Factor Manual?

OPQ Scale Development - The Reality

PROBLEM #5: ITEM REDUNDANCY?

Are some OPQ Concept Scales really “scales” in the accepted sense of the word, or do they consist of paraphrases of the same item?

OPQ Scale Development - The Reality

➡ As Peter Saville has indicated in a conference paper presented in 1989, the item composition of a personality scale should not consist of a single item asked several different ways (referring specifically to the 16PF scale of Harria vs Premsia (Tough Minded)).

OPQ Scale Development - The Reality

Factor I - 16PF Form A - Tough Minded

Item No. Paraphrased Text

- | | |
|-----|---|
| 11 | I would rather be a playwright than a construction engineer |
| 112 | Being a guidance counsellor appeals to me more than an engineering manager . |
| 138 | The beauty of a poem appeals to me more than that of a well-made gun |

OPQ Scale Development - The Reality

Factor I - 16PF Form B - Tough Minded

Item No. Paraphrased Text

87 I do not tend to be interested in **mechanical** matters

112 I would rather be a philosopher than a **mechanical** engineer

163 I would rather watch a concert artist than a programme on
new inventions on the television

OPQ Concept Alpha & Mean ITC's

ITC = corrected item-total correlation

Scale	Alpha	ITC	Scale	Alpha	ITC	Scale	Alpha	ITC
R1	.79	.50	T1	.89	.68	F1	.85	.59
R2	.77	.48	T2	.90	.71	F2	.75	.46
R3	.60	.31	T3	.87	.63	F3	.83	.57
R4	.89	.67	T4	.72	.43	F4	.85	.60
R5	.78	.51	T5	.74	.44	F5	.77	.50
R6	.85	.62	T6	.62	.32	F6	.59	.30
R7	.87	.63	T7	.77	.49	F7	.82	.56
R8	.66	.36	T8	.85	.59	F8	.79	.52
R9	.68	.39	T9	.59	.30	F9	.68	.37
D1	.70	.39	T10	.80	.52	F10	.75	.45
Relationships (& SD)			Thinking Style			Feelings		

Examples of OPQ Concept 5.2 scale items (paraphrased for copyright purposes)

T8-Innovative

alpha=.85

Mean ITC=.59

- 8 I do not find it easy to generate creative **ideas**
- 39 People approach me for creative **ideas**
- 70 I find it hard to be inventive
- 101 New **ideas** come easily to me
- 132 My **ideas** are rarely innovative
- 163 I enjoy coming up with lots of valuable **ideas**
- 194 I rarely have many original **ideas**
- 225 I generally have an original approach to problems

Examples of OPQ Concept 5.2 scale items (paraphrased for copyright purposes)

R5-Affiliative

alpha=.78

Mean ITC=.51

- 29 I prefer my own **company** to that of others
- 60 I get much pleasure from other people's **company**
- 91 **Companionship** is not a major concern to me
- 122 I develop close attachments to people
- 153 I rarely long for the **company** of others
- 184 I have a large number of friends
- 215 I do not like making new friendships
- 246 I get enjoyment from the **companionship** of others

The POP questionnaire

- ◆ R1 Persuasiveness I like selling, whether ideas or products
- ◆ R2 Controlling I like organising and taking charge of people.
- ◆ R3 Independent I speak my mind even if its unpopular
- ◆ R4 Outgoing I am an outgoing and sociable person
- ◆ R5 Affiliative I enjoy being in the company of others.
- ◆ R6 Soc Confident I am at ease in social settings.
- ◆ R7 Modest I am modest about my achievements.
- ◆ R8 Democratic I like the group to participate in decision-making.
- ◆ R9 Caring I am sensitive to other people's problems.
- ◆ T1 Practical I enjoy repairing objects or devices.
- ◆ T2 Data Rational I enjoy working with numbers and statistics.
- ◆ T3 Artistic I appreciate the performing and literary arts.
- ◆ T4 Behavioural I like analysing other people's behaviour.
- ◆ T5 Traditional I am described as something of a traditionalist.
- ◆ T6 Change Orient. I am usually critical of people's ideas.

The POP questionnaire - Results

Uncorrected Corrected

◆ R1 Persuasive	.64	.98	I like selling, whether ideas or products
◆ R2 Controlling	.73	>1.0	I like organising and taking charge of people.
◆ R3 Independent	.48	.79	I speak my mind even if its unpopular
◆ R4 Outgoing	.69	.98	I am an outgoing and sociable person
◆ R5 Affiliative	.58	.88	I enjoy being in the company of others.
◆ R6 Soc Confident	.64	.91	I am at ease in social settings.
◆ R7 Modest	.68	.99	I am modest about my achievements.
◆ R8 Democratic	.57	.93	I like the group to participate in decision-making.
◆ R9 Caring	.51	.74	I am sensitive to other people's problems.
◆ T1 Practical	.88	>1.0	I enjoy repairing objects or devices.
◆ T2 Data Rational	.84	>1.0	I enjoy working with numbers and statistics.
◆ T3 Artistic	.79	>1.0	I appreciate the performing and literary arts.
◆ T4 Behavioural	.64	.98	I like analysing other people's behaviour.
◆ T5 Traditional	.56	.85	I am described as something of a traditionalist.
◆ T6 Change Orient.	.48	.80	I am usually critical of people's ideas.
◆ T7 Conceptual	.68	>1.0	I enjoy the discussion of hypothetical ideas.
◆ T8 Innovative	.74	>1.0	I generate creative and innovative ideas.
Median r	.64	.98	

The OPQ - Summary Conclusions

- ① The OPQ Model of personality is poorly specified and untestable
- ② The Concept Model is itself a factor model
- ③ The OPQ Concept 5.2 might be shortened by almost one half
- ④ Only about **20** out of 30 the Concept scales are measurable
- ⑤ No empirical evidence to support 8, 14, or 19 factor models
- ⑥ There is little data to support the contention that the OPQ is more occupationally relevant than any other personality test
- ⑦ Some OPQ scales appear entirely redundant - being single item rewords
- ⑧ Overall, test development **appears** poor, with little regard paid to the psychometrics of test design and the substantive content of some of the scales generated.

The 16PF5

The Evolution of a Revolution?

The 16PF5

- ◆ In 1949 Raymond Cattell published the first edition of 16PF...it was a revolutionary concept; measuring the whole of human personality using structure discovered through factor analysis.

A good thing gets better...

- ◆ New Fifth edition represents a controlled natural evolution of 16PF...continuing to measure the same 16 factors first identified by Dr Cattell over 40 years ago.
- ◆ With the 5th edition, we have made a number of significant enhancements without changing the basic structure of the test.

The 16PF5

“The new edition of 16PF represents an advance on earlier editions, and it is expected that the appeal of this already widely used personality instrument will broaden considerably in selection and development contexts. The new British Standardisation data also serves to enhance its relevance.”
Wendy Lord` p.65, last para, Personnel Management, Feb. 1994.

“The remarkable thing about the 16PF was, and still is, the depth of the analysis it provides...” Wendy Lord` p.65, 2nd. para, Personnel Management, Feb. 1994.

The 16PF5

“The advantage of measuring source traits, as the 16PF does, is that you end up with a richer understanding of the person because you are not just describing what can be seen but also the characteristics underlying what can be seen..”

Wendy Lord` p.65, 8th. para, Personnel Management, Feb. 1994.

The 16PF5 - Why?

- Simplified language of items - clearer, shorter
- Decrease gender, cultural, racial bias
- Questions more acceptable to candidates
- Reduce testing time
- Increase cohesiveness of each scale
- Easier to score
- Factor measurement fine-tuned
- Reduce scale overlap

The 16PF5

16PF-A Reliability

	α	stability2	A / B
A	.37	.78	.64
C	.53	.60	.54
E	.60	.62	.59
F	.68	.54	.70
G	.52	.27	.56
H	.77	.75	.80
I	.56	.68	.60
L	.44	.67	.36
M	.21	.55	.23
N	.27	.47	.26
O	.57	.73	.65
Q1	.39	.61	.47
Q2	.43	.58	.48
Q3	.48	.46	.58
Q4	.69	.61	.70
Av.	.50	.58	.48

The 16PF5 - internal consistency

“The aim was to move the sixteen scales slightly further apart from each other, to make them more independent of each other. In other words, the aim was to make each scale more **cohesive** [*=within-scale item intercorrelations*] within itself..”

Wendy Lord, Presentation to the 16PF User's group, June 1994.

“We've **raised the Internal Consistency** of the factors without sacrificing the diversity of item content which makes 16PF data so rich...” ASE Publicity blurb

The 16PF5 - internal consistency

16PF-5 Reliability

	α	Stability2
A	.69	.77
C	.78	.67
E	.66	.69
F	.72	.69
G	.75	.76
H	.85	.79
I	.77	.76
L	.74	.56
M	.74	.67
N	.75	.70
O	.78	.64
Q1	.64	.70
Q2	.78	.69
Q3	.71	.77
Q4	.76	.68
Av.	.74	.70

The 16PF5 - internal consistency

R.B. Cattell's views (J.Beh.Sci., 1972, 1, 169-187):

"The charge that within-scale item intercorrelations (*=cohesive ..Wendy Lord*) are low within the 16PF (**from 0.01 to 0.14** in this paper) are correct, ...but one would have thought that **informed psychometrists** today would have recognized that this might actually be a virtue"

"The fact is that although the obsession of early psychometrists with internal consistency, under the impression that it was reliability, has long passed out of well-informed discussion, it dies hard as a superstition..."

The 16PF5 - internal consistency

“The ideal internal consistency is NOT the greatest attainable but **an optimal LOW value** based upon various combined psychometric considerations.”

and finally, in response to others' criticisms of the extreme item heterogeneity of the original 16PF (**lack of “Cohesiveness” in Wendy Lord's terminology**), Cattell states: “..(these criticisms)... seem to indicate a need for appraisal of their grasp of psychometry”

The 16PF5 - internal consistency

Example of 16PF-A

16PF A Factor G

alpha= .52

Mean ITC = .28

-If I saw two neighbours children fighting I would reason with them

-When I see 'sloppy' untidy people I get disgusted and annoyed

-I think that freedom is more important than good manners & respect for the law

-People sometimes call me careless even though I'm a likeable person

-I close my mind to well meant suggestions of others, even though I know I shouldn't

-In thinking of difficulties at work I try to plan ahead before meeting them

I find the sight of an untidy room very annoying

(16PF5 Q3 item: I don't usually mind if my room is messy)

-I always make it a point in deciding anything to refer to basic **rules** of right and wrong

-I am a fairly strict person, insisting on always doing things as correctly as possible

The 16PF5 - internal consistency

“The diversity of the (16PF5) item content in each scale means that the scales retain breadth. In other words, the increased precision has not been at the expense of the depth of the analysis. The **nature of what is being measured stays the same.**”

Wendy Lord, SDR, December 1994

The 16PF5 - internal consistency

Example of 16PF5

16PF -5 Factor G

Alpha: 0.75

Mean ITC = .41

- ◆ I'd rather see a home that doesn't have too many **rules**
- ◆ I value respect for **rules** and good manner more than easy living.
- ◆ Most **rules** are made to be broken when there are good reasons for it.
- ◆ I get annoyed if people insist that I follow every single minor safety **rule**
- ◆ People should insist more than they now do that moral standards should be strictly followed
- ◆ If a person is clever enough to get around the **rules** without seeming to break them, he/she should do so only if there is a special reason
- ◆ I think that being free to do what I want is more important than good manners & respect for **rules**.

The 16PF5 - UK anglicization

- “All items were written and selected based upon specified criteria, including updating and simplifying language, avoiding content that might lead to gender, race, or disability bias, **making material cross-culturally translatable**, and avoiding language that is unacceptable in employee selection settings” H.Cattell, Executive Summary, The Revised 16PF - Psychometric Issues Symposium, 1993, Ontario
- “..This had a further effect of making the items **more transatlantic and less American**, reducing the need for major revisions for English language users outside of the US...” UK Technical Supplement.

The 16PF5 - UK anglicization

UK Anglicization??

“**ASE** prepared the UK standardization version directly from an ASCII file of the US version. A team including chartered psychologists, trainers in the 16PF & publishing specialists worked on the anglicization process”

- Movie ---> film
- Math ---> Maths
- Business office ---> office
- program ---> programme

The 16PF5 - UK anglicization

Not Mentioned??

I would rather exercise by:

- 97 **US** a. fencing or dancing ? c. wrestling or **baseball**
- 42 **UK** a. fencing or dancing ? c. wrestling or **cricket**
- 39 **US** I enjoy **racy** & slapstick humour of some TV shows
- 94 **UK** I enjoy **saucy** & slapstick humour of some TV shows

The 16PF5 - UK anglicization

Not Done??

- ◆ 43 UK

I prefer the beauty of a poem to an expert **football strategy**

- ◆ 35 UK

I frequently have **periods** when it's hard to stop a mood of self-pity

The 16PF5 - UK anglicization

The alpha Reliabilities of the 16PF5 - UK vs US

	16PF-5 (US)	16PF-5 (UK)	16PF-5 (US) in UK
A	.69	.69	.62
C	.78	.73	.77
E	.66	.68	.71
F	.72	.74	.72
G	.75	.70	.71
H	.85	.87	.87
I	.77	.76	.76
L	.74	.60	.73
M	.74	.71	.71
N	.75	.72	.78
O	.78	.77	.75
Q1	.64	.65	.69
Q2	.78	.75	.79
Q3	.71	.74	.77
Q4	.76	.73	.78
Average	.74	.72	.74

The 16PF5 - Equivalence

- New Fifth edition represents a controlled natural evolution of 16PF...continuing to measure the same 16 factors first identified by Dr Cattell over 40 years ago. [US Publicity blurb](#)
- "The nature of what is being measured remains the same. The latest edition of 16PF stays true to the original factor structure" [Wendy Lord, SDR, Dec. 1994](#)
- "..85% of the items were drawn from the existing forms ... of the 16PF" [UK Technical Supplement](#)

The 16PF5 - Equivalence

- “The 16PF fifth edition, although updated and revised, continues to measure the same 16 primary personality factor scales identified by Cattell over 45 years ago” p.3, para 1, US Administration Manual, IPAT
- “Users would be unwise to assume that scores from the 16PF form A and the 16PF5 are interchangeable.” p.13, para 3, UK Standardisation of the 16PF5: A supplement of Norms and Technical Data, ASE Ltd.
- “Clearly some of the scales show a level of correspondence that would suggest that they have changed in their scale characteristics...” Wendy Lord, Presentation to the UK 16PF User Group, June 1994

The 16PF5 - Scale Equivalence

Scale	Uncorrected R	2-week Retest Corrected R	Alpha Corrected R
A	0.59	0.72	1.17
C	0.57	0.75	0.92
E	0.55	0.70	0.86
F	0.80	0.99	1.13
G	0.46	0.55	0.76
H	0.85	0.98	1.04
I	0.71	0.85	1.09
L	0.15	0.20	0.29
M	0.21	0.26	0.54
N	0.19	0.25	0.43
O	0.60	0.80	0.91
Q1	0.15	0.19	0.30
Q2	0.51	0.58	0.90
Q3	0.52	0.60	0.87
Q4	0.60	0.72	0.85

A comparison between scores on the 16PF form A and the 16PF5 test (N=100 Sixth Form School Pupils). UK Technical Supplement, ASE

The 16PF5 - Scale Equivalence

	PF5(us)	PF5(uk)	15FQ
A	.52	.59	.47
C	.54	.57	.56
E	.55	.55	.63
F	.71	.80	.69
G	.41	.46	.63
H	.80	.85	.70
I	.55	.71	.71
L	.38	.15	.43
M	.17	.21	.34
N	.26	.19	.26
O	.67	.60	.68
Q1	.31	.15	.55
Q2	.66	.51	.53
Q3	.42	.52	.41
Q4	.48	.60	.66
Average	.49	.50	.55

A comparison between the US administration manual data, UK Technical supplement data, and Psytech 15FQ UK scale data with the 16PF-A scores

The 16PF5 - Factor Equivalence

The 16PF5 - Factor Equivalence

Scale	16PF5 vs 16PFA
Extraversion	0.81
Anxiety	0.79
Independence	0.70
Self Control	0.65
Tough Mindedness	0.38

using 2nd order sten scores, N=462, US Administration manual, p.76

The 16PF5 - conclusions

- There is an unresolved disparity between Cattell's position on test construction and that adopted by the developers of the new edition of the 16PF
- 16PF5's new cultural transferability appears questionable
- The UK anglicization of the test seems to have more commercial than substantive psychological value
- Half the 16PF5 scales do not appear to be equivalent to their earlier counterparts
- The global factor comparability also appear to lack equivalence