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Brief Report

Ten facet scales for the Big Five Inventory: Convergence with NEO PI-R facets, self-peer agreement, and discriminant validity

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ABSTRACT

Scales were developed to assess 10 specific facet traits within the broad Big Five personality domains from the item pool of the Big Five Inventory (BFI). In two independent samples, the BFI facet scales demonstrated substantial (a) reliability, (b) convergence with self-reports on the Revised NEO Personality Inventory and peer-reports on the BFI, and (c) discriminant validity. These brief scales offer new opportunities for researchers who wish to assess specific personality characteristics within an overarching Big Five framework.

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1. Introduction

One of the most important advances in personality psychology in the past half-century has been the emergence of a consensus that the most important individual differences in adults' personality characteristics can be organized in terms of five broad trait domains: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness. These "Big Five" domains (Goldberg, 1990) now serve as a common language in the field, facilitating communication and collaboration.

Since the emergence of the Big Five model, however, researchers have come to recognize that there are both advantages and disadvantages to investigating personality in terms of these five broad domains. On the one hand, each Big Five domain possesses the advantage of high bandwidth (John, Hampson, & Goldberg 1991). That is, each domain's great breadth allows for efficient personality description, and the for prediction of many outcomes with modest-to-moderate levels of precision. On the other hand, an important limitation of examining personality in terms of the five broad domains is their low fidelity. Each domain subsumes more specific personality characteristics, sometimes referred to as facets (Costa & McCrae, 1992, 1995). Aggregating these related but distinguishable facet traits into only five broad domains results in a loss of information—information that may be useful for psychological description, prediction, and explanation.

This bandwidth-fidelity dilemma (Cronbach & Gleser, 1957) can be resolved by examining personality hierarchically, that is, by examining specific personality characteristics within an overarching Big Five framework. To achieve this resolution, hierarchical Big Five measures are needed—measures that assess both the five broad domains and more specific traits within those domains. Some such measures have already been developed, including the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) and measures scored from the International Personality Item Pool (Goldberg, 1999). However, use of these measures in many types of research has been limited by the fact that they each include hundreds of items. To address this limitation, and thereby further promote examination of more specific personality characteristics within the Big Five domains, the present research developed and validated facet scales from the item pool of a brief and widely used Big Five measure, namely the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991; see John, Naumann, & Soto (2008)).

2. Selecting a universe of potential BFI facets

The complete process by which we developed facet scales for the BFI is described below, in Section 3. However, one preliminary issue

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warrants special comment here: that of selecting a universe, or comprehensive set, of potential facet traits to assess using the BFI.

Different researchers have taken different approaches to the task of defining facet-level personality characteristics within the Big Five domains. These approaches have included identifying previously studied psychological constructs that fall within the Big Five domains (e.g., Costa & McCrae, 1992), defining facets as circumplex regions that mix or blend the domains (e.g., Hofstee, de Raad, & Goldberg, 1992), and factor-analyzing sets of trait adjectives, questionnaire items, or scales within each domain (e.g., DeYoung, Quilty, & Peterson, 2007; Roberts, Chernyshenko, Stark, & Goldberg, 2005; Saucier, 1994; Saucier & Ostendorf, 1999). Before developing facet scales for the BFI, we therefore faced an important choice: What set of facet traits should we set out to measure?

We ultimately decided to measure a subset of the 30 facets assessed by the NEO PI-R (Costa & McCrae, 1992). We chose these 30 facets as our universe of potential BFI facets for three reasons. First, the list of NEO PI-R facets is quite extensive. It includes 6 facets within each domain, providing flexibility for developing a smaller set of BFI facet scales. Second, previous research has demonstrated that the BFI includes item content relevant to many of the NEO PI-R facets (John et al., 2008), suggesting that much or all of the BFI item pool could be mapped onto the NEO PI-R facets. Finally, the NEO PI-R is currently the most widely used hierarchical Big Five measure; therefore, developing conceptually similar facet scales for the BFI would promote convergence with a substantial body of existing research.

3. Method

3.1. Samples and procedures

Development and validation of the BFI facet scales drew on data from two independent samples.

3.1.1. Community sample for scale development

This sample (see Goldberg, 1999) consisted of 642 adults (58% female; $M = 50.98$ years old, $SD = 12.52$ years). Most of these participants completed the NEO PI-R ($N = 565$) and rated themselves on a set of 739 trait-descriptive adjectives ($N = 521$). Four years later, all participants provided BFI self-reports, and most ($N = 590$) were also described by one to three peers ($M = 2.52$ peers) using the BFI.

3.1.2. Student sample for replication

This sample consisted of 829 undergraduate students (77% female; $M = 21.68$ years old, $SD = 3.90$ years) who completed the BFI and the NEO PI-R in a single session. Approximately two months later, a subsample ($N = 138$) completed the BFI again, and another subsample ($N = 277$) was described by a friend, romantic partner, or family member using the BFI.

3.2. Measures

3.2.1. The Big Five Inventory

The Big Five Inventory (BFI; John, Donahue et al. 1991; see Appendix A and John et al. (2008)) is a 44 item questionnaire that assesses the Big Five personality domains and is freely available for use in research. In previous research, its domain scales have shown high reliability, clear factor structure, strong convergence with longer Big Five measures, and substantial self-peer agreement (Benet-Martínez & John, 1998; John et al., 2008; Soto, John, Gosling, & Potter, 2008). Across the two present samples, alpha reliabilities for the domain scales ranged from .81 to .88, with a mean of .85.

3.2.2. The Revised NEO Personality Inventory

The Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) is a 240-item questionnaire that assesses the Big Five domains, as well as 6 more specific facet traits within each domain. Costa and McCrae (1992) presented evidence for the structural validity, reliability, and self-peer agreement of the 30 facet scales and 5 domain scores. Across the two present samples, the alpha reliabilities of the domain scales ranged from .88 to .93, with a mean of .90.

3.2.3. Controlling for individual differences in acquiescent response style

Acquiescent response style is the tendency to consistently agree (yea-saying) or consistently disagree (nay-saying) with test items, regardless of their content. Uncontrolled individual differences in acquiescence pose a serious threat to validity, especially for scales with an imbalance of true- and false-keyed items (McCrae, Herbst, & Costa, 2001; Soto et al., 2008). Because the small number of BFI items prohibits the development of fully balanced facet scales, we controlled for individual differences in acquiescence via within-person centering prior to all analyses presented here (see Appendix B, and Soto et al. (2008)).

3.3. Development of the BFI facet scales

Development of the BFI facet scales proceeded in three steps. First, the pool of 44 BFI items was compared with the 30 NEO PI-R facet scales. To identify facet-level personality characteristics assessed by the NEO PI-R that were also clearly represented in the BFI item pool, we used conceptual judgments and correlations, in the community sample, of the BFI items with the NEO PI-R facets. For example, the BFI Extraversion domain scale includes several items conceptually and empirically related to the NEO PI-R Assertiveness facet (e.g., *Has an assertive personality*). Altogether, 10 such constructs were identified, two per Big Five domain. (This symmetry was coincidental.) The constructs were Assertiveness and Activity in the Extraversion domain, Altruism and Compliance in the Agreeableness domain, Order and Self-Discipline in the Conscientiousness domain, Anxiety and Depression in the Neuroticism domain, and Aesthetics and Ideas in the Openness domain.

Second, each of the 44 BFI items was assigned to 1 of 10 preliminary facet scales, on the basis of conceptual judgments and correlations, in the community sample, of the BFI items with the NEO PI-R items and facet scales. Analyses of the 10 preliminary scales indicated strong convergence with the corresponding NEO PI-R facets, but also considerable intercorrelations between each pair of same-domain BFI facet scales (e.g., between the Assertiveness and Activity facets of Extraversion), indicating much general domain variance.

Third, a total of 9 BFI items were removed from the preliminary facet scales, in order to improve the scales' discriminant validity while maintaining (or even improving) their internal consistency and convergence with the NEO PI-R facets. The 10 final scales were thus scored using 35 of the 44 BFI items; see Appendix A for item text and Appendix B for scoring instructions.

4. Results

4.1. Reliabilities and intercorrelations of the BFI facet scales

Despite their brevity, the BFI facet scales demonstrated moderate to strong reliability, as shown in Table 1. In the community sample, their alpha reliabilities averaged .72 (range = .63–.84). In the student sample, their alphas averaged .70 (range = .53–.83), and their retest reliabilities averaged .80 (range = .71–.88). These

Table 1
Alpha reliabilities and intercorrelations of the BFI facet scales in two samples.

BFI facet	Assertiveness		Activity		Altruism		Compliance		Order		Self-Discipline		Anxiety		Depression		Aesthetics		Ideas	
	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.
Reliability																				
Alpha	.84	.83	.66	.76	.74	.68	.63	.61	.63	.56	.71	.75	.82	.83	.65	.53	.78	.78	.72	.71
Retest	–	.88	–	.74	–	.71	–	.81	–	.74	–	.77	–	.86	–	.82	–	.82	–	.80
Intercorrelations																				
Assertiveness	–	–																		
Activity	**.53**	**.58**	–	–																
Altruism	.17	.15	.29	.33	–	–														
Compliance	−.17	−.06	.07	.18	**.53**	**.56**	–	–												
Order	.05	.00	.25	.17	.17	.23	.03	.12	–	–										
Self-Discipline	.18	.19	.43	.28	.22	.32	.11	.19	**.61**	**.56**	–	–								
Anxiety	−.07	−.21	−.23	−.24	−.16	−.12	−.23	−.22	−.12	−.07	−.25	−.22	–	–						
Depression	−.11	−.20	−.34	−.31	−.30	−.30	−.26	−.33	−.15	−.20	−.30	−.27	**.46**	**.56**	–	–				
Aesthetics	.07	.05	.11	.18	.06	.05	.10	.08	.01	.05	.06	.11	−.03	−.08	−.01	.00	–	–		
Ideas	.20	.23	.23	.30	−.06	.08	−.03	.03	.02	.04	.12	.18	−.21	−.26	−.04	−.13	**.49**	**.47**	–	–

Note. Com., Community sample ($N = 642$); Stud., Student sample ($N = 829$; $N = 138$ for retest reliabilities). Within-domain discriminant correlations are printed in boldface. For the student sample, correlations of at least .07 in magnitude are statistically significant at the $\alpha = .05$ level (two-tailed). For the community sample, correlations of at least .08 in magnitude are statistically significant at the $\alpha = .05$ level (two-tailed).

reliabilities were similar to the alphas of the longer NEO PI-R facet scales, which averaged .75 across the two samples (see Table 2).

Table 1 also shows that the BFI facet scales were well differentiated from each other. The five within-domain discriminant correlations (e.g., Assertiveness with Activity) averaged a moderate .53 in the community sample and .55 in the student sample. The magnitudes of the 40 between-domain discriminant correlations (e.g., Assertiveness with Order) were much lower still, averaging only .15 in the community sample and .17 in the student sample.

4.2. Correlations with the NEO PI-R facet scales

There was strong convergence between each BFI facet scale and the corresponding NEO PI-R facet, as shown in Table 2. In the community sample, despite the fact that the BFI and the NEO PI-R were administered four years apart, the 10 raw convergent correlations (e.g., BFI Assertiveness with NEO PI-R Assertiveness) averaged .61; corrected for unreliability (as indexed by alpha coefficients), these correlations averaged .82 (range = .72–.90). In the student sample, the raw convergent correlations averaged .69, and the corrected correlations averaged .93 (range = .87–1.00).

The two sets of facets also showed impressive discriminant validity. In both samples, each BFI facet scale correlated more strongly with its corresponding NEO PI-R facet scale than with any other NEO PI-R facet. The 20 within-domain discriminant correlations (e.g., BFI Assertiveness with NEO PI-R Activity) averaged a moderate .44 in the community sample and .48 in the student sample. The magnitudes of the 80 between-domain discriminant correlations (e.g., BFI Assertiveness with NEO PI-R Order) averaged only .12 in the community sample and .15 in the student sample.

4.3. Correlations with peer-reports

The BFI facet scales demonstrated substantial self-peer agreement, as shown in Table 2. In the community sample (with ratings averaged across as many as three peers), the raw convergent correlations between self- and peer-reports averaged .51 (range = .39–.66), and the corrected correlations averaged .68 (range = .53–.82). In the student sample, the peer criterion was less reliable (with ratings from only a single peer per participant); nevertheless, the raw convergent correlations still averaged .45 (range = .25–.61), and the corrected correlations averaged .64 (range = .37–.84). These self-peer correlations were similar to those typically observed for the BFI domain scales (John et al., 2008).

Self-peer discrimination was also strong. Within-domain discriminant correlations (e.g., self-reported Assertiveness with peer-reported Activity) averaged a modest .35 in the community sample and .33 in the student sample. Cross-domain discriminant correlations (e.g., self-reported Assertiveness with peer-reported Order) were weaker still, with magnitudes averaging only .09 in each of the two samples. In fact, each self-reported BFI facet correlated most strongly with the corresponding peer-reported facet in 19 of 20 cases. The lone exception was that self-rated Openness to Ideas correlated slightly more strongly with peer-rated Openness to Aesthetics (.37) than with peer-rated Openness to Ideas (.36) in the student sample.

4.4. Partial correlations with NEO PI-R self-reports and BFI peer-reports

To examine the unique personality variance captured by each BFI facet scale, we computed their convergent partial correlations with (a) self-reports on the corresponding NEO PI-R facet scales and (b) peer-reports on the same BFI facet scales. Each convergent partial correlation controlled for self-reports on the

Table 2
Correlations of BFI facet self-reports with NEO PI-R facet self-reports and BFI facet peer-reports in two samples.

Criterion	Alpha		Assertiveness		Activity		Altruism		Compliance		Order		Self-Discipline		Anxiety		Depression		Aesthetics		Ideas	
	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.	Com.	Stud.
NEO PI-R facet																						
Assertiveness	.80	.80	**.61**	**.71**	.44	.49	.01	.07	−.18	−.10	.14	.14	.25	.30	−.17	−.31	−.15	−.25	.03	.08	.30	.29
Activity	.75	.65	.40	.48	**.61**	**.63**	.04	.17	−.09	.00	.22	.18	.37	.38	−.03	−.07	−.14	−.17	.05	.13	.21	.27
Altruism	.72	.74	.13	.08	.26	.26	**.65**	**.68**	.37	.46	.16	.27	.22	.26	−.09	−.05	−.25	−.24	.10	.09	−.02	.09
Compliance	.73	.67	−.24	−.25	−.03	−.03	.42	.40	**.53**	**.58**	.03	.06	.03	.06	−.17	−.03	−.19	−.20	.11	.01	−.14	−.11
Order	.74	.76	.10	−.03	.16	.08	.05	.05	−.05	.00	**.60**	**.67**	.49	.43	−.04	.07	−.08	−.04	−.07	.03	−.11	−.08
Self-Discipline	.79	.82	.15	.20	.35	.30	.13	.25	.03	.16	.54	.53	**.67**	**.72**	−.25	−.25	−.27	−.31	−.02	.08	.02	.14
Anxiety	.83	.82	−.11	−.19	−.23	−.22	−.11	−.11	−.19	−.22	−.08	−.01	−.20	−.17	**.68**	**.78**	.40	.49	−.03	−.05	−.16	−.23
Depression	.85	.85	−.14	−.29	−.32	−.37	−.21	−.25	−.18	−.25	−.19	−.25	−.33	−.34	.51	.62	**.54**	**.70**	−.05	−.06	−.08	−.22
Aesthetics	.83	.81	.02	.09	.09	.20	.04	.11	.13	.15	−.03	.04	−.01	.10	.00	−.04	.04	.01	**.68**	**.71**	.41	.44
Ideas	.81	.82	.08	.14	.08	.18	−.13	−.01	−.03	−.03	−.02	.02	.03	.11	−.13	−.25	.00	−.09	.39	.43	**.59**	**.66**
Peer BFI facet																						
Assertiveness	.80	.87	**.63**	**.61**	.45	.43	.15	.08	−.14	−.09	.01	.04	.12	.19	−.07	−.26	−.10	−.15	.06	.01	.13	.17
Activity	.72	.75	.38	.33	**.54**	**.47**	.19	.12	.01	.01	.09	.09	.21	.18	−.15	−.13	−.24	−.22	.07	.07	.12	.18
Altruism	.72	.79	.01	.01	.14	.17	**.44**	**.38**	.32	.24	.05	.07	.03	.19	−.10	−.05	−.20	−.21	−.03	.02	−.12	−.06
Compliance	.73	.80	−.16	−.10	.03	.07	.32	.19	**.45**	**.25**	.00	−.01	−.02	.05	−.16	−.01	−.20	−.20	.04	.04	−.06	.00
Order	.57	.73	−.09	.03	.04	.04	.06	.12	−.01	.01	**.51**	**.48**	.34	.40	−.01	−.01	−.07	−.09	−.06	−.04	−.13	−.04
Self-Discipline	.74	.78	.00	.11	.19	.19	.06	.18	.01	.16	.35	.42	**.39**	**.51**	−.10	−.10	−.20	−.24	−.05	−.05	−.09	.09
Anxiety	.81	.88	.00	−.20	−.13	−.16	−.07	−.05	−.15	−.05	−.07	.02	−.10	−.06	**.51**	**.43**	.29	.34	.11	−.05	−.06	−.19
Depression	.54	.66	−.01	−.07	−.23	−.15	−.24	−.15	−.20	−.09	−.08	−.06	−.13	−.11	.34	.24	**.46**	**.44**	.07	−.01	.04	−.05
Aesthetics	.73	.84	.02	.05	.04	.12	−.01	.01	.06	.03	−.10	.08	−.05	.13	.00	−.05	.03	−.11	**.66**	**.54**	.34	.37
Ideas	.70	.78	.13	.08	.16	.20	−.07	.02	.00	−.02	−.08	.09	.02	.16	−.16	−.12	−.02	-.08	.37	.29	**.52**	**.36**

Note. Com., Community sample ($N = 642$; $N = 565$ for correlations with NEO PI-R self-reports; $N = 590$ for correlations with BFI peer-reports); Stud., Student sample ($N = 829$; $N = 277$ for correlations with BFI peer-reports). Convergent correlations are printed in boldface. For the student sample, correlations of at least .07 in magnitude with NEO PI-R self-reports, and correlations of at least .12 in magnitude with BFI peer-reports, are statistically significant at the $\alpha = .05$ level (two-tailed). For the community sample, correlations of at least .09 in magnitude are statistically significant at the $\alpha = .05$ level (two-tailed).

other same-domain BFI facet scale (e.g., self-reported BFI Assertiveness with NEO PI-R Assertiveness, controlling for BFI Activity), thus eliminating any general domain variance shared by the two BFI facets. The partial correlations with NEO PI-R self-reports averaged .50 in the community sample and .58 in the student sample. The partial correlations with BFI peer-reports averaged .41 in the community sample and .34 in the student sample. All 40 partial correlations were positive and statistically significant ($ps < .05$). These findings provide further evidence that the BFI facet scales provide meaningful information beyond that captured by the five broad domains.

4.5. Matching the facet scales with their adjective correlates

Finally, we used a matching task to test whether the BFI facet scales could be reliably distinguished on the basis of their external correlates (cf. Costa & McCrae, 1995). The first author created two sets of 10 cards. Each card in one set presented the name and items for a BFI facet scale. Each card in the second set presented a list of the 10 trait-descriptive adjectives (from the set of 739 administered to the community sample) that correlated most strongly with a particular (but unspecified) facet scale. For example, the correlate card corresponding with the BFI Depression facet listed the adjectives *depressed*, *moody*, *sad*, *grumpy*, *troubled*, *angry*, *negative*, and *irritated*, versus *happy* and *joyful*.

Six judges who had not previously seen the facet scales' adjective correlates—one professor of personality psychology (the second author), four advanced students in a personality psychology graduate program, and one non-psychologist—were each presented with the facet cards, and with the correlate cards in random order. They were instructed to match each facet card with the card they thought contained that facet's strongest adjective correlates. All 6 judges correctly matched all 10 pairs of facet and correlate cards, providing further evidence for the discriminant validity of the facet scales.

4.6. Effects of within-person centering

Did centering the BFI item responses, to control for individual differences in acquiescent responding, affect the facets' measurement properties? Most results were only trivially affected. Convergent correlations between the facet scales when scored from raw responses and when scored from centered responses were very high: they averaged .99 across the two samples, with a minimum of .97. Moreover, scoring the facet scales from raw or from centered responses resulted in very similar patterns of reliability coefficients and correlations with NEO PI-R self-reports and BFI peer-reports. However, the centering procedure did substantially affect correlations between scores on the facet scales and scores on the BFI acquiescence index. When scored from raw responses, these correlations averaged .14 (maximum = .35) across the two samples; when scored from centered responses, they averaged only .09 (maximum = .20).

5. Discussion

The present research developed 10 facet scales for the Big Five Inventory. Despite their brevity, these scales demonstrated moderate to strong levels of reliability. They converged well with both NEO PI-R self-reports and BFI peer-reports. They also showed substantial discriminant validity.

5.1. Controlling for individual differences in acquiescence

Prior to developing the BFI facet scales, we controlled for individual differences in acquiescent responding through within-person centering (around each participant's score on an acquiescence index); see Appendix B. This approach proved highly effective at minimizing correlations between individual differences in acquiescence and scores on the facet scales. We therefore encourage researchers to center their data around the BFI acquiescence index (Soto et al., 2008) before scoring the facet scales.

5.2. Convergence with other Big Five facet models

The 10 BFI facet scales were initially developed to converge with facets assessed by the widely used NEO PI-R. However, the particular facets that emerged from our analyses also correspond well with lower-level traits identified by other hierarchical Big Five models. For example, within the Extraversion domain, our Assertiveness and Activity facets are quite similar to (a) the Assertiveness and Activity-Adventurousness facets identified by Saucier and Ostendorf (1999) in analyses of English and German trait adjectives, (b) the I+/II− and I+/III+ circumplex regions defined by Hofstee et al. (1992) in analyses of English trait adjectives, and (c) the Assertiveness and Enthusiasm constructs identified by DeYoung et al. (2007) in analyses of existing Big Five questionnaire scales. These correspondences suggest that research conducted using the BFI facet scales should be easy to synthesize with that conducted using other Big Five facet models. They also suggest that personality researchers are progressing toward consensus about the most important lower-level traits that can be distinguished within each Big Five domain.

6. Conclusion

We are confident that the BFI facet scales will prove useful to researchers who wish to investigate personality at a level of abstraction more specific than that captured by the broad Big Five domains, especially those for whom the advantage of administering a brief measure rather than a lengthy one outweighs the disadvantage of slightly lower reliability coefficients. The scales encourage researchers to design new studies that use the BFI as a brief hierarchical measure of the Big Five. They also create opportunities for archival research using the many existing BFI datasets. Both types of research will help us progress toward a comprehensive understanding of personality structure and process.

Appendix A

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

The Big Five Inventory

Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
1	2	3	4	5

I see myself as someone who...

__1. is talkative
__2. tends to find fault with others
__3. does a thorough job
__4. is depressed, blue
__5. is original, comes up with new ideas
__6. is reserved
__7. is helpful and unselfish with others
__8. can be somewhat careless
__9. is relaxed, handles stress well
__10. is curious about many different things
__11. is full of energy
__12. starts quarrels with others
__13. is a reliable worker
__14. can be tense
__15. is ingenious, a deep thinker
__16. generates a lot of enthusiasm
__17. has a forgiving nature
__18. tends to be disorganized
__19. worries a lot
__20. has an active imagination
__21. tends to be quiet
__22. is generally trusting
__23. tends to be lazy
__24. is emotionally stable, not easily upset
__25. is inventive
__26. has an assertive personality
__27. can be cold and aloof
__28. perseveres until the task is finished
__29. can be moody
__30. values artistic, aesthetic experiences
__31. is sometimes shy, inhibited
__32. is considerate and kind to almost everyone
__33. does things efficiently
__34. remains calm in tense situations
__35. prefers work that is routine
__36. is outgoing, sociable
__37. is sometimes rude to others
__38. makes plans and follows through with them
__39. gets nervous easily
__40. likes to reflect, play with ideas
__41. has few artistic interests
__42. likes to cooperate with others
__43. is easily distracted
__44. is sophisticated in art, music, or literature

Please check: Did you write a number in front of each statement?

Appendix B. The BFI acquiescence index and facet scales

B.1. Scoring the BFI acquiescence index and centering the BFI items

Item numbers for 16 pairs of BFI items with opposite implications for personality are 1 and 21, 6 and 16, 31 and 36, 2 and 17, 7 and 12, 27 and 42, 32 and 37, 3 and 43, 8 and 13, 18 and 33, 23 and 28, 9 and 19, 24 and 29, 34 and 39, 5 and 35, and 30 and 41 (Soto et al., 2008). The BFI acquiescence index is computed as the mean response to this set of 32 items. To center a participant's BFI item responses around the acquiescence index, subtract their score on the index from each of their 44 item responses. To reverse-key a centered item response, multiply it by −1. SPSS syntax for centering BFI responses is available from us.

B.2. Scoring the BFI facet scales

Item numbers for the 10 BFI facet scales are presented below. Reverse-keyed items are denoted by "R." We recommend that researchers center each participant's set of 44 item responses before scoring the facet scales, in order to control for individual differences in acquiescent responding. SPSS syntax for scoring the facet scales is available from us.

Assertiveness (Extraversion): 1, 6R, 21R, 26, 31R
Activity (Extraversion): 11, 16
Altruism (Agreeableness): 7, 22, 27R, 32
Compliance (Agreeableness): 2R, 12R, 17
Order (Conscientiousness): 8R, 18R
Self-Discipline (Conscientiousness): 13, 23R, 28, 38, 43R
Anxiety (Neuroticism): 9R, 19, 34R, 39
Depression (Neuroticism): 4, 29
Aesthetics (Openness): 30, 41R, 44
Ideas (Openness): 10, 15, 25, 35R, 40.

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