**The road less traveled: A cross-cultural study of the negative wording factor in
multidimensional scales**

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Abstract

Negatively worded items (NWIs) have been found to distort the hypothesized one-factor structure of many unidimensional scales and an additional negative wording factor is needed to achieve adequate model fit. However, little is known about impact, dimensionality, and correlates of the negative wording factor for multidimensional scales. Using responses to the Big Five Inventory-2 (BFI-2) administered to nationally representative samples of Germany, Spain, France, Japan, Poland, America, and England, the present study reported on a comprehensive cross-cultural examination of the impact, dimensionality, and external correlates of negative wording factors. We further investigated whether modeling a negative wording factor affects the factor structure and criterion-related validity. It was found that NWIs blurred the factor structure of the BFI-2 in non-English-speaking countries such that factors like agreeableness was not recovered, thus rejecting configural invariance. The results also strongly supported the idea that there was a general negative wording factor across subscales of the BFI-2 and this factor was consistently related to age, gender, educational attainment and life satisfaction across countries. Moreover, modeling a negative wording factor improved the factor structure of the BFI-2 and scalar invariance was achieved. Implications of these findings were discussed.

Keywords: negative wording factor, multidimensional, cross-culture, personality

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Researchers often include both positively and negatively worded items (PWI and NWI) in the same scale to assess a latent construct (e.g., use “I’m the life of the party” and “I’m a quiet person” to assess extraversion). The rationales for this practice are that 1) using both types of items can improve content validity by sampling a broader range of behaviors along the construct continuum (Tay & Jebb, 2018), 2) NWIs can serve as cognitive “speed bumps” to disrupt automatic non-substantive processing and stimulate controlled substantive processing, thus enhancing response accuracy (Lindwall et al., 2012), and 3) averaging responses to both types of items could mitigate the effect of acquiescence (if it is present) at the scale level (Primi et al., 2019).

Despite these advantages, the inclusion of NWIs often distorts the factor structure of a scale such that a one-factor model fails to fit responses to a unidimensional scale (DiStefano & Motl, 2006). An incomplete bifactor model with a general factor overarching all items (PWIs and NWIs) and an additional orthogonal factor including only NWIs is often needed to achieve reasonable fit (Scherer & Teo, 2020). In such an incomplete bifactor model, the general factor represents the substantive construct that the scale was designed to assess, whereas the additional factor is often referred to as a negative wording factor (Arias & Arias, 2017). We note that the negative wording factor is not an independently measured construct (i.e., there are no scales specifically designed to assess the negative wording factor). Instead, researchers can model a negative wording factor in any scale that has at least three NWIs. For a given scale, the modeled negative wording factor is viewed as well-defined when it has substantial positive loadings across all the NWIs.

While the presence of a negative wording factor is a robust finding that has been

replicated in many theoretically unidimensional scales, much remains to be learned regarding its impact (e.g., how does it affect the factor structure of an instrument?), dimensionality (e.g., is there a general negative wording factor across different subscales?), and correlates (e.g., how is it related to external variables?) for multidimensional scales such as measures of the five-factor model of personality (Soto & John, 2017). Moreover, given the potential impact of NWIs on the factor structure of a scale, the theoretical structure of a multidimensional scale may be distorted in analyses of empirical data because of the inclusion of NWIs. It is unknown whether fitting a negative wording factor helps with the recovery of the hypothesized multidimensional structures. These questions are particularly urgent in cross-cultural contexts as respondents with different cultural backgrounds have been found to respond to NWIs differently (Gnambs et al., 2018; Wong et al., 2003). For example, people in eastern cultures are more likely to agree with both NWIs and PWIs (Hamamura et al., 2008).

Using responses to the Big Five Inventory-2 (BFI-2; Soto & John, 2017) from nationally representative samples of seven countries speaking six languages, the present study aims to investigate 1) if and how NWIs distort the factor structure and criterion-related validity of the BFI-2, 2) whether the negative wording factors extracted from different subscales (e.g., subscales for neuroticism and extraversion) reflect the same entity, 3) whether modeling a negative wording factor can help recover the five-factor structure and improve criterion-related validity, and 4) how the negative wording factor correlates with external variables. The first and third questions are particularly relevant for cross-culture studies because such studies are contingent on finding the same factor structure in different cultures. Researchers may erroneously conclude that the five-factor structure or predictive validity of personality cannot be replicated cross-

culturally, which may in fact be merely masked by NWIs. The second and fourth questions can help researchers achieve a deeper understanding of the nature of the negative wording factor. Overall, we aim to provide researchers with a comprehensive picture of the impact, dimensionality, and correlates of the negative wording factor, as well as a practical solution to correct the impact of NWIs.

The impact of NWIs on factor structure

For many theoretically unidimensional scales, it has been found that a single-factor model fails to show acceptable model fit due to additional covariances among NWIs (e.g., Arias & Arias, 2017; DiStefano & Motl, 2006; Gnambs & Schroeders, 2020; Maydeu-Olivares & Coffman, 2006). Moreover, a close review of the literature reveals that the negative wording effect is particularly salient among non-English-speaking samples. For instance, Alessandri and colleagues (2015) found that the average standardized factor loadings on the negative wording factor of the Rosenberg Self-Esteem Scale (RESE; Rosenberg, 1965) was smaller in an American sample (.38) than in three non-English-speaking samples (Italy [.51], Poland [.42], and Serbia [.46]). A recent cross-cultural item-level meta-analysis of the RESE further showed that the negative wording factor was more salient (i.e., the negative wording factor accounted for more variance of scale scores) in samples from non-English-speaking countries than those from the United States (Gnambs et al., 2018). Similarly, while a one-factor model fitted the responses to the Core Self-Evaluation Scale well in American samples (Judge et al., 2003), an additional negative wording factor was needed to achieve reasonable fit in Chinese and Chilean samples (average standardized factor loadings on the negative wording factor were .48 and .44 for the Chinese and Chilean samples, respectively; Arias & Arias, 2017; Gu et al., 2015). Interestingly, many studies that included criterion measures showed that the criterion-validity of these scales was

largely unaffected, such that validity estimates based on a one-factor model were similar to those based on an incomplete bifactor model (e.g., Alessandri et al., 2015; Schmitt & Allik, 2005).

Though researchers have reported consistent findings regarding the impact of NWIs on the factor structure and criterion-validity of unidimensional scales, there is still a lack of knowledge on how NWIs impact the factor structure and criterion-related validity of multidimensional scales, such as the BFI-2, in different countries. In unidimensional scales, the ways in which NWIs can impact the factor structure are limited because there is only one substantive factor being measured. The impact of NWIs shows up in the form of either lower item loadings on the substantive factors or correlated residuals, which can be accounted for by modeling a negative wording factor. However, there are multiple ways in which NWIs can impact the factor structure of multidimensional scales. For example, for a certain scale, NWIs may change the loading pattern such that items designed to measure factor A are found to load on factor B. Or, rather than loading on their designated factors, all NWIs across subscales may load together on a single factor. In addition to affecting the factor structure, NWIs may also affect discriminant validity of a scale by altering the correlation pattern among latent factors. As previous studies have predominantly relied on the use of unidimensional scales, the impact of NWIs on multidimensional scales is poorly understood. Among the few studies that used multidimensional scales (e.g., Kam, 2018; Kam & Meyer, 2015; Wong et al., 2003), confirmatory factor analysis (CFA) was adopted to study the effects of modeling a negative wording factor. Such practice precludes the examination of potential loading pattern changes because the factor loading pattern in CFA is predetermined. Moreover, as people from different cultures may respond to NWIs differently, it is largely unknown whether the impact of NWIs

on the factor structure of a certain multidimensional scale differs across cultures. Without cross-cultural comparisons, we do not know how the criterion-related validity will be affected, either. Therefore, we propose our first research question (RQ).

***RQ 1:** How will NWIs affect the factor structure and criterion-related validity of the multidimensional BFI-2 across seven countries?*

Generality of the negative wording factor

Another understudied topic is the generality of the negative wording factor. Though researchers have found the presence of robust negative wording factors in many theoretically unidimensional scales, there is still a lack of understanding regarding whether the negative wording factors extracted from different unidimensional subscales of a multidimensional instrument (the BFI-2) share the same theoretical or empirical meaning. For example, we do not know to what extent the negative wording factor from the extraversion subscale is correlated with the negative wording factor from the neuroticism subscale; is the correlation large enough such that they can be considered as approximately the same entity? Some studies have implicitly assumed that there was a general negative wording factor in their models by forcing all NWIs across subscales to load on a single factor without reporting loadings for individual items (Kam, 2013; Kam & Meyer, 2015; Kam & Sun, 2020; Wong et al., 2003), making it impossible to evaluate the plausibility of this assumption. Tullao and colleagues (2020) constrained negatively worded items from different subscales of the Toronto Alexithymia Scale to load on a general wording factor and found that these items had comparable moderate loadings in an American sample (.41 – .70) but more varying loadings (.10 – .70) in a Philippine sample, providing indirect evidence for the existence of a general negative wording factor in the former sample but not in the latter. DiStefano and colleagues estimated the correlations among negative wording factors in scales measuring different

constructs (e.g., self-esteem, school attitude, and locus of control) and found that they were moderately correlated with one another in a positive direction (Horan et al., 2003; DiStefano & Motl, 2006), tentatively suggesting the possibility of the existence of a general negative wording factor. On the other hand, Kam (2018) found that the negative wording factor across seven scales (five subscales measuring the Big Five personality factors, two scales measuring social dominance and attitude towards meeting) displayed distinct correlations with one another (though most correlations were positive) and with external variables, thus refuting the idea of a general negative wording factor. We note that most studies reviewed above used samples of convenience (middle school students and undergraduates), which may lead to the observed inconsistencies.

These inconsistent findings indicate that more studies are required to provide insight into the generality of the negative wording factor both within and between cultures. Although the findings reported by Tuliao and colleagues (2020) for Toronto Alexithymia Scale from America and Philippines suggest that the answer to this inquiry may differ across cultures, studies that involve more countries and other multidimensional scales are needed. Therefore, we propose our second research question.

RQ 2: Is there a general negative wording factor across subscales of the BFI-2 in the seven countries?

Does modeling negative wording factor(s) improve factor structure and criterion-related validity?

If NWIs substantially distort the factor structure of multidimensional scales (e.g., the Five-Factor structure of the Big Five cannot be identified), then an urgent question is whether researchers can still recover the hypothesized factors after taking into consideration of the impact of NWIs (e.g., by modelling one or more additional

negative wording factors). Further, does the improved factor structure produce better criterion-related validity that is more aligned with theory? To our knowledge, the only study that explicitly examined this question is Zhang et al. (2020). Zhang and colleagues found that the Five-Factor structure of the BFI-2 was blurry in a Chinese clinical sample and a Chinese high school student sample when the effects of NWIs were not modelled. However, after modelling an additional negative wording factor (under the assumption that there was a general negative wording factor across subscales of the five factors), the factor structure was substantially improved (e.g., increased major loadings, decreased cross-loadings, and increased factor congruence when compared to factor solutions obtained from American samples in which the five-factor structure was apparent).

Despite the promising results reported in Zhang et al. (2020), it is hard to tell whether these findings can be generalized to the general population and other cultures. Moreover, they did not examine whether the improved factor structure resulted in better criterion-related validity. Therefore, we propose our third research question.

***RQ 3.** Does modeling one or more negative wording factors improve the factor structure and criterion-related validity?*

Correlates of the negative wording factor

Although the existence of a negative wording factor is well-documented, much remains to be learned about its nature. As it emerges in many different scales, negative wording factors were considered as methodological artifacts caused by careless responding (Carmines & Zeller, 1979). However, accumulating evidence suggests that negative wording factors display properties of a substantive trait. For example, several studies have found that the negative wording factor is moderately stable over time (e.g., $r = .44$ across two years in Horan et al. [2003]; $r = .33$ across three years in Vecchione

et al. [2014]; $r = .39$ across four years in Marsh et al. [2010]). Alessandri and colleagues (2015) and Kam and Sun (2020) found that the negative wording factors from self-report and peer ratings of the Rosenberg Self-Esteem Scale and the HEXACO Personality Inventory were moderately correlated ($r = .39$ and $.40$). These correlations are comparable to those among substantive factors. Negative wording factors have also been shown to be significantly related to some substantive variables such as depression (Lindwall et al., 2012), fear of negative evaluation (DiStefano & Motl, 2009), and neuroticism (Quilty et al., 2006). Moreover, Kam (2013) even found that the negative wording factor was heritable. Taken together, the evidence suggests that negative wording factor may possess substantive meanings.

As previous studies have only examined a limited number of external correlates based on samples from a single country, a consensus on the nature of the negative wording factor has not emerged. Is it related to other unexamined but important life outcomes (e.g., life satisfaction, job satisfaction, education attainment, health)? Are the correlations between the negative wording factor and life outcomes generalizable across cultures? A cross-cultural investigation of the generalizability of its nomological network can offer us important information about whether the negative wording factor has a universal meaning, thus deepening our understanding of its nature. Therefore, we propose our fourth research question.

***RQ 4:** How is the negative wording factor related to other important variables across the seven countries, and whether there is a shared the pattern of correlates across the countries?*

Overview of the present study

The present study employed the BFI-2 to explore the impact, dimensionality, and whether modeling a negative wording factor improves the factor structure and

criterion-related validity of the BFI-2, and further explored the nature of the negative wording factor by examining its external correlates. Nationally representative samples from seven countries speaking six different languages were used. We adopted exploratory structural equation modeling (ESEM; Asparouhov & Muthén, 2009) as it allows for the examination of potential changes in factor loading patterns. The BFI-2 is well-suited for the current study because it contains an equal number of PWIs and NWIs for each of the five personality factors. Such balanced scale composition avoids the issue of scales dominated by PWIs, where the impact of NWIs may not be easily detectable and the negative wording factor's correlation with external variables may not be stable because of inadequate measurement. The use of multi-cultural nationally representative samples can deepen our understanding of the commonality and distinctiveness of negative wording factor(s) in cross-cultural contexts. Overall, we aim to provide a comprehensive picture of the negative wording factor.

Methods

Participants

The sample used was part of “The Programme for the International Assessment of Adult Competencies (PIAAC) –English / International Pilot Study on Non-Cognitive Skills” (OECD, 2018a, 2018b). Participants were adult residents from the following seven countries: Germany, Spain, France, Japan, Poland, America, and England. As a part of a large-scale project aimed at validating a set of personality measures across cultures, all measures were translated by a professional translation agency to ensure accuracy. Table 1 presents detailed information about sample size, age, gender composition, education level and income for all seven samples. Both the raw sample sizes (the total number of respondents who took the survey) and the valid sample sizes

(the number of respondents who passed the internal quality controls¹) are reported. All subsequent analyses were conducted on the valid samples.

Insert Table 1 about here

Measures

The Big Five Inventory-2 (BFI-2). The 60-item BFI-2 was administered to all respondents. They were instructed to indicate their degree of agreement with each item using a 5-point Likert-type scale (1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree). Negatively worded items were reverse coded. Detailed information about the means, standard deviations and Cronbach's alphas can be found in Table 2.

Education. In the five non-English-speaking countries, education was measured on a 4-point ordinal scale (1 = Primary school; 2 = High school or equivalent; 3 = Some college or vocational school (2 years); 4 = Tertiary education). In the two English-speaking countries, education was measured on a 6-point ordinal scale (1 = Primary school; 2 = High school or equivalent; 3 = Some college or vocational school; 4 = Bachelor or equivalent; 5 = Master or equivalent; 6 = Doctoral or Professional degree).

Income. In the five non-English-speaking countries, income was measured on a 6-point ordinal scale by asking "How much would you estimate your usual gross pay per year is?" (*Germany*: 1 = Less than 5000 €; 2= 5000 € to less than 16000 €; 3 = 16000 € to less than 28000 €; 4 = 28000 € to less than 40000 €; 5 = 40000 € to less than 56000 €; 6= 56000 € or more. *Spain*: 1 = Less than 9000 €; 2= 9000 € to less than 12500

¹ The data collection agency excluded respondents who did not meet any of the following criteria: 1) response time greater than 600s; 2) less than 11 unanswered questions; 3) passed internal quality check (e.g., responses to impossible items).

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€; 3 = 12500 € to less than 17000 €; 4 = 17000 € to less than 23500 €; 5 = 23500 € to less than 33000 €; 6 = 33000 € or more. *France*: 1 = Less than 3300 €; 2 = 3300 € to less than 13000 €; 3 = 13000 € to less than 22000 €; 4 = 22000 € to less than 33000 €; 5 = 33000 € to less than 50000 €; 6 = 50000 € or more. *Japan*: 1 = Less than 192 m¥; 2 = 193 m¥ to 240 m¥; 3 = 241 m¥ to less than 314 m¥; 4 = 315 m¥ to less than 430 m¥; 5 = 431 m¥ to less than 580 m¥; 6 = 581 m¥ or more. *Poland*: 1 = Less than 14500 zł; 2 = 14500 zł to less than 21500 zł; 3 = 21500 zł to less than 36000 zł; 4 = 36000 zł to less than 54000 zł; 5 = 54000 zł to less than 72000 zł; 6 = 72000 zł or more). In the two English-speaking countries, income was measured on a 9-point ordinal scale (1 = Under \$10,000; 2 = \$10,000-\$19,999; 3 = \$20,000-\$29,999; 4 = \$30,000-\$39,999; 5 = \$40,000-\$49,999; 6 = \$50,000-\$74,999; 7 = \$75,000-\$99,999; 8 = \$100,000-\$150,000; 9 = Over \$150,000).

Life Satisfaction. Life satisfaction was measured by four items on a 10-point scale (1 = Not at all; 10 = Completely). The four items were “Overall, how satisfied are you with your life nowadays?”, “Overall, to what extent do you feel the things you do in your life are worthwhile?”, “Overall, how happy did you feel yesterday?”, “Overall, how anxious did you feel yesterday?”. Cronbach’s alphas were .72 (Germany), .77 (Spain), .73 (France), .82 (Japan), .76(Poland), .77 (America) and .93 (England) in the seven countries.

Overall Job Satisfaction. Overall job satisfaction was measured by a single item “All things considered, how satisfied are you with your current job?” using a 5-point scale (1 = Extremely satisfied; 2 = Satisfied; 3 = Neither satisfied nor dissatisfied; 4 = Dissatisfied; 5 = Extremely dissatisfied). It was reverse coded so that higher scores indicate higher level of satisfaction.

Subjective Health. Subjective health was measured by a single item “In general, how would you describe your health?” using a 5-point scale (1 = Excellent; 2 = Very good; 3 = Good; 4 = Fair; 5 = Poor). It was reverse coded so that higher scores indicate better health condition.

Statistical analysis

As noted by Wirth and Edwards (2007), Likert-type data are better treated as categorical, especially when the item score distribution is skewed or kurtotic (Muthén & Kaplan, 1985). Many item score distributions in the current samples had such problems. Therefore, we treated the items as categorical variables. A series of exploratory factor analyses were conducted in Mplus 8.0 (Muthén & Muthén, 1998-2017) with the weighted least square mean and variance adjusted (WLSMV) estimator. As we had some prior knowledge about the BFI-2 structure, we used target rotation.

To examine the impact of NWIs on the factor structure of the BFI-2 (RQ1), for each sample, we fitted a five-factor ESEM model to PWIs (M1) and NWIs (M2) separately. If the Big Five factors can be recovered from M1 but not M2, we could preliminarily conclude that NWIs distorted the factor structure of the BFI-2. We further fitted a five-factor ESEM model to all items (M3)² and examined the loading patterns. Results from M3 could provide a more direct answer to the first research question as it allows us to examine the potential interaction between PWIs and NWIs that cannot be studied with M1 or M2 alone. Regarding the generality of negative wording factor (RQ2), for each sample, we fitted a ten-factor model where there were five substantive factors (potentially the five personality domains) and five negative wording factors for

² We also fitted a random-intercept ESEM model with five correlated factors to control for the potential impact of acquiescence (Aichholzer, 2014). However, it did not show any substantial improvement for the factor structure.

each of the five substantive factors (M4) and a six-factor model where there were five substantive factors and only one general negative wording factor overarching all NWIs (M5). We examined the correlations among the five negative wording factors in M4 and compared the fit between M4 and M5 to study whether there was a general negative wording factor. The potential beneficial effect of modeling a negative wording factor (RQ3) and external correlates of the negative wording factor (RQ4) and were studied by extending M3 and M5 with external variables (e.g., life satisfaction) included. Graphic illustrations of fitted models are shown in Figure 1.

Insert Figure 1 about here

In terms of model fit evaluation, the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) have been found to perform unsatisfactorily with ordinal variables (Nye & Drasgow, 2011). The Root Mean Square Error of Approximation (RMSEA) performs relatively well and has been recommended for ordinal factor analysis models (Nye et al., 2020). Therefore, we report CFI, TLI, and RMSEA but decisions regarding model fit were mainly based on RMSEA. All other analyses were conducted in R3.2.4 (R Core Team, 2016) using the *psych* package (Revelle, 2016). All negatively worded items were reverse-coded such that higher scores indicated higher level of the designated construct. When interpreting criterion-related validity, we used Bonferroni corrections to control for inflated family-wise type I error due to multiple testing. Specifically, we divided .05 by seven and used this value (.007) as the critical value for statistical significance.

We used .30 as a cutoff for substantial factor loadings. A factor was treated as recovered if at least half of the designated items displayed substantial primary loadings

on this factor and fewer than 6 items from other domains had substantial cross-loadings on this factor. We note that the cutoff was arbitrary and was used only to facilitate results description. In addition, we also calculated Tucker's congruence coefficients (TCC; Tucker, 1951) to quantify factor similarity across countries. Specifically, we used US as the reference group for the following reasons: 1) the Big Five structure was first identified and has been consistently validated in America, 2) the BFI-2 was originally developed and validated mainly using American respondents, and 3) as shown later, the Big Five structure was robust to different modelling strategies in the American sample. According to Lorenzo-Seva and ten Berge (2006), a TCC greater than 0.95 can be interpreted as evidence for identical factor solutions and a TCC between 0.85 and 0.94 can be interpreted as evidence for similar factor solutions. Apart from TCC, we also performed formal measurement invariance test to examine whether modeling a negative wording factor can improve the comparability of substantive factors across cultures. We treated $RMSEA \leq .055$ for good-fitting model and $\Delta RMSEA < .01$ for measurement invariance testing as they are based on simulations of many-group measurement invariance test with categorical variables (Rutkowski & Svetina, 2017), which more closely matches the current study than the commonly cited criterion by Cheung and Rensvold (2002). It should be noted that measurement invariance testing for categorical ESEM is complicated in that (1) we cannot separately test factor loading invariance and threshold invariance (Muthén & Muthén, 2013, p.8-9); and (2) we cannot specify partial invariance if full invariance is not achieved. The cutoff for change in RMSEA is also based on only one preliminary simulation study. Therefore, results for measurement invariance testing should be interpreted with caution.

Results

Descriptive statistics

Means, standard deviations, and Cronbach's alphas of each personality domain across the seven countries are presented in Table 2. All domain scores had good reliabilities in all countries. It is worth noting that the two English-speaking samples had larger observed score variance compared to the five non-English-speaking samples on all Big Five domains. The only exception was Germany, which had a slightly larger variance on Openness than the American sample.

RQ1: The impact of NWIs on factor structure and criterion-related validity

Factor structure. Goodness of fit for each model in each sample can be found in Table 3 and factor congruence between the American sample and each of the remaining samples for M1, M2, M3, and M5 can be found in Table 5. According to RMSEA, the five-factor model for PWIs (M1) and NWIs (M2) did not fit the data well in all samples. Nonetheless, as shown in supplementary Table A1-A7, when only PWIs were used as indicators, the Big Five factors were well recovered across the seven countries with most items displaying moderate to large major loadings and only a few items showing cross-loadings greater than .30. More importantly, the factor solutions recovered from the Germany, Spain, France, Japan, Poland and England highly resembled those recovered in the American sample (average TCC = .94 ~ .96). However, results from the models for NWIs only (M2) were less satisfactory. Supplementary Table B1-B7 show that although the Big Five structure was still clearly present in the American sample, it was blurry in other samples as the number of large cross-loadings increased. The most problematic factor was agreeableness in Germany, France, and Japan (TCC = .70, .72, and .77), followed by extraversion in Germany and Japan (TCC = 0.83 and 0.85). Judging from TCC, other factors seemed to be fine. In

sum, the comparison between M1 and M2 tentatively suggested that NWIs may distort the factorial validity to some degree and such effects differed across countries. More direct evidence came from the five-factor model for all items (M3).

Insert Table 3-4 about here

As can be seen from Table 3, M3 did not fit the data well ($RMSEA = .057\sim.069$) except in England ($RMSEA = .050$). Further, examination of factor loadings revealed that NWIs had a strong impact on the factorial structure of the BFI-2 and the impact differed across countries. Table 5 summarizes the factor loading patterns: 1) the number of primary loadings with magnitude greater than .30; 2) the number of cross-loadings with magnitude greater than .30; 3) the average primary loadings; 4) the average absolute cross-loadings. Factor loadings for each sample can be found in supplementary Table C1-C7. As Table 4 and 5 show, it is clear that the Big Five factors were well recovered in the American and the English samples without taking into consideration of the NWIs. Specifically, in both the American and the English samples, most items had substantial loadings on their designated factors and small cross-loadings. However, the five-factor structure was less clear in samples from the other countries. For example, in Germany, while Conscientiousness, Neuroticism, and Openness were recovered, Agreeableness and Extraversion were not. Specifically, only 6 of the original Agreeableness items had substantial loadings ($M = .33$) on this factor while there were 10 substantial cross-loadings ($M = .19$) from other domains. Although 9 of the original Extraversion items loaded substantially ($M = .44$) on this factor, there were 12 substantial cross-loadings present ($M = .18$). TCCs for Agreeableness, Extraversion, and Openness were only .58-.80. A similar pattern was found in Spain and France. In Japan, all factors but Agreeableness were recovered. For Agreeableness, there were

only 6 substantial primary loadings ($M = .27$) but 13 substantial cross-loadings from other domains ($M = .22$). TCC was only .44 for Agreeableness. The same pattern held for Poland such that all the domains but Agreeableness were recovered ($TCC = .28$). Unsurprisingly, formal measurement invariance testing did not support configural invariance³, either ($\text{Chi-square} = 50114.005$, $df = 9247$, $RMSEA = .062$, $CFI = .86$, $TLI = .83$). Therefore, we did not proceed with metric and scalar invariance testing.

In sum, Conscientiousness and Neuroticism were successfully recovered in all the seven countries, and they had factor loading patterns similar to the American sample. Openness was also successfully recovered in all the 7 countries, but factor loading patterns of other countries differed from those of the American sample. Agreeableness and Extraversion were found to have the lowest rates of recovery across countries.

Insert Table 5 about here

Criterion-related validity. As shown in the columns named M5 of Table 6, most validity coefficients have the direction and effect size range largely consistent with meta-analytic findings (Anglim et al., 2020; Judge et al., 2002). Specifically, neuroticism showed a strong correlation with life satisfaction and moderate correlations with subjective health and job satisfaction, with the strength of the effects followed by those for extraversion, conscientiousness and agreeableness. In line with Feingold

³ Due to the small sample size in England, some categories in item 43, 52 and 53 had zero endorsement, which precluded the examination of measurement invariance across the seven countries. Therefore, the three items were excluded for measurement invariance test. We also conducted measurement invariance testing using all items and excluding the English sample. The pattern remained the same. We did not choose to collapse categories because such practice has been shown to lead to artificial fit improvement (Rutkowski et al., 2019).

(1994), females were higher in neuroticism than males. Openness was consistently related to educational level, which is also aligned with previous meta-analytic findings (Poropat, 2009). We did note a few unexpected results as well. For instance, gender differences in agreeableness were not observed in Germany, Japan and Poland. However, overall, criterion-validity was consistent with previous findings.

Insert Table 6 about here

Taken together, results from the five-factor models for only PWIs (M1), only NWIs (M2) and all items (M3) lead to the conclusion that NWIs distorted the factor structure of the BFI-2 in the five non-English-speaking countries by changing factor loading patterns. This effect differed across countries. However, criterion-related validity was largely intact and consistent with previous findings.

RQ2: Generality of the negative wording factor

As Table 3 shows, in each of the 7 countries, the five personality factors plus five negative wording factors model (M4) and the five personality factors plus a general negative wording factor model (M5) demonstrated comparable model fit except that M4 did not converge in the English sample, suggesting the existence of the general negative wording factor. Moreover, Mplus had the same warning message for M4 in Germany, Spain, Japan, Poland, and America saying that the estimated latent factor correlation matrix was nonpositive definite. A close examination of the output revealed that in M4, several estimated correlations between negative wording factors from different subscales were above 1.00. The lowest correlation between negative wording factors were .63, .81, .88, .99, and .69 in Germany, Poland, Japan, Spain, and America, respectively. These findings indicate that having five negative wording factors

unnecessarily complicated the model and produced problematic results. A model with a general negative wording factor was preferable because it was more parsimonious and resulted in no model fit loss. In addition, most NWIs had moderate positive loadings on the negative wording factor in both M4 and M5, which was consistent with most findings from other unidimensional scales, suggesting that the general negative wording factor was well-defined.

We note that the French sample had some unusual results. For the five personality factors plus five negative wording factors model (M4), while the negative wording factors were well-defined for Agreeableness, Conscientiousness, and Extraversion scales (small to moderate positive loadings), the negative wording factors for Neuroticism and Openness subscales were not well-defined, with some items displaying moderately negative or zero loadings. Therefore, the three negative wording factors from agreeableness, conscientiousness, and extraversion subscales were moderately to strongly correlated ($r = .44 \sim .66$) but they showed small to moderate negative correlations with the negative wording factors from the Neuroticism and Openness subscales. However, in the French sample, all NWIs displayed moderate positive loadings on the general negative wording factor in the five personality factors plus a general negative wording factor model (M5), suggesting that it is more reasonable to model a general negative wording factor than to model the factors separately for each subscale.

In sum, we found strong evidence that there is a general negative wording factor overarching NWIs in different subscales and the presence of the general negative wording factor can be generalized across cultures.

RQ3: Does modeling the negative wording factor improve factorial and criterion-related validity of substantive factors?

Factor structure. As Table 4, 5, and supplementary Table D1-D7 show, the five-factor structure was successfully recovered across the 7 countries after modelling the negative wording factor (M5) and fitted the data well (RMSEA = .044-.056). Specifically, across the 7 countries, Agreeableness had 9~11 substantial primary loadings ($M = .41-.53$), 1-5 substantial but much smaller cross-loadings ($M = .11-.14$), and TCC = .82-.96. Conscientiousness had 11-12 substantial primary loadings ($M = .51-.64$) and only 0-3 substantial cross-loadings ($M = .09-.13$), with TCC = .89-.97. Extraversion had 8-12 substantial primary loadings ($M = .44-.58$), 0-3 substantial cross-loadings ($M = .09-.13$), and TCC = .89-.96. Neuroticism had 11-12 substantial primary loadings ($M = .54-.71$), 0-4 substantial cross-loadings ($M = .09-.13$), and TCC = .89-.98. Openness had 10-12 substantial primary loadings ($M = .50-.65$), only 0-1 substantial cross-loadings ($M = .06-.11$), and TCC = .89-.97. In sum, the five-factor structure was much clearer after we explicitly modelled the negative wording factor. Improvement in factor structure was especially salient in non-English speaking countries. We further calculated the proportion of the variance in each domain that was due to the focal factor following Raykov and Shrout's (2002) approach. This quantity can be understood as model-based reliability. As shown in Table 7, reliabilities were higher in America and the England ($M_{US} = .76$, $M_{UK} = .78$) than the other five countries ($M_{DEU} = .71$, $M_{ESP} = .69$, $M_{FRA} = .70$, $M_{JPN} = .68$, $M_{POL} = .67$). Among the five traits, Neuroticism and Openness were the most reliably measured ($M_N = .75$; $M_O = .73$), followed by Conscientiousness ($M_C = .73$), Extraversion ($M_E = .66$), and Agreeableness ($M_A = .65$).

Insert Table 7 about here

Table 7 additionally summarizes average loadings of NWIs from each domain

on the negative wording factor. As the table indicates, the NWIs from each domain all had non-negligible loadings on the negative wording factor ($M_A = .36-.48$, $M_C = .26-.44$, $M_E = .18-.44$, $M_N = -.52 - -.10$, $M_O = .16-.46$). We further calculated the percentage of variance in each domain that is due to the negative wording factor. Two patterns emerged. First, the influence of the negative wording factor on all domains in the two English-speaking countries was substantially smaller than the other five non-English speaking countries. Specifically, across the five domains, the average proportion of variance due to the negative wording factor in the five non-English speaking countries was around 10%-13%. In America and England, the average proportions were 6% and 3%, respectively. Second, Agreeableness was the most vulnerable domain to the impact of NWIs. In Germany, Spain, France, Japan and Poland, the proportion of variance due to negative wording exceeded 10%. Given that there were only six NWIs per factor, this was quite high.

Further, formal measurement invariance testing showed that the configural model fitted the data reasonably well (Chi-square = 37531.848, $df = 9037$, RMSEA = .052, CFI = .90, TLI = .88), which means that the Big Five structure, augmented by adding the negative wording factor, was invariant across countries. We next tested scalar invariance because separate test of metric invariance was not allowed for categorical ESEM (Muthén & Muthén, 2013). Since our primary interest was on the Big Five, we did not constrain loadings on the negative wording factor to be invariant. Model fit dropped slightly (Chi-square = 52725.812, $df = 11587$, RMSEA = .056, CFI = .86, TLI = .86). DIFFTEST (Asparouhov & Muthén, 2006) showed that chi-square change was significant (Δ Chi-square = 20125.66, $df = 2250$, $p < .001$), but this was expected due to our large sample size. Importantly, Δ RMSEA = .004, which was below the recommended cutoff of .01. Thus, after modeling a negative wording factor, scalar

invariance was supported, and the five personality factors are comparable across cultures.

Criterion-related validity. Though modeling a negative wording factor improved the factor structure of the BFI-2, it did not alter the criterion-related validity substantially (see Table 6 for details). We plotted the criterion-related validities based on M3 and M5 for each country, shown in Figure 2. It is clear that the general validity pattern is almost identical across the two modeling strategies as most data points lie close to the diagonal ($Y=X$) and the correlations between the two sets of validities ranged from .90 to .99. The reason that modeling a negative wording factor did not improve criterion-related validity substantially is that criterion-validity based on M3 was already well aligned with previous findings and not substantially distorted (even though the factor structure was distorted). There was not too much room for improvement. For the few unexpected results, such as the finding of no gender difference on agreeableness, modeling a negative wording factor can help unmask gender differences (correlation between gender and agreeableness: $r_{M3} = -0.01, 0.00,$ and 0.04 ; $r_{M5} = 0.13, 0.11,$ and 0.31 in Germany, Japan, and Poland), results of which are well aligned with previous findings (Feingold, 1994).

Insert Figure 2 about here

To sum up, modelling a general negative wording factor led to considerable improvement in factor structure (e.g., higher major loadings, lower cross-loadings, higher factor congruence, and thus scalar invariance) but did not substantially change criterion-related validity because criterion-related validity was not severely distorted in the first place.

RQ4: External correlates of the negative wording factor

Before expanding on the results, we note that the negative wording factor should be viewed as a residualized factor reflecting additional covariances among the NWIs after controlling for the substantive factors, which is similar to the interpretation of specific factors in bifactor models (Zhang et al., 2020). Therefore, a correct interpretation of the negative wording factor of personality scales should be followed by “given the same levels of personality traits” to take the influences of the substantive personality factors into account (Eid, 2020).

As Table 8 shows, the general negative wording factor (higher standing on this factor means more positive) was consistently correlated with age across all countries such that among individuals with the same levels of personality traits, older people scored positively higher on the negative wording factor ($r = .14 \sim .22$) except that the correlation was not statistically significant in the English sample ($r = .15$). Females were also more likely to be positive on the negative wording factor than males in Germany ($r = .08$), France ($r = .11$), Japan ($r = .14$), Poland ($r = .09$), and America ($r = .14$). The trend was the same in Spain and England though not statistically significant. Aside from demographic variables, the negative wording factor was also related to some important life outcomes. For example, it was positively correlated with education level in Spain ($r = .10$) and Poland ($r = .10$) such that individuals who were more positive on the negative wording factor were more educated. The negative wording factor was also significantly correlated with life satisfaction across all countries ($r = .06 \sim .18$) except England ($r = .13$). In addition, the negative wording factor was significantly correlated with income and subjective health in Spain ($r = .12$ and $.11$), meaning that people higher on the negative wording factor earn more and are healthier given the same level of personality traits.

Though these correlations were small in an absolute sense, they were net effects independent of personality factors. As many of the significant correlations could be replicated and most of them were in the same direction across countries, the relations between the negative wording factor and the external variables should not be ignored. In sum, these findings speak to the idea that the negative wording factor has a substantive nature. We discussed potential explanations for our findings below.

Discussion

The present study reported on a comprehensive cross-cultural examination of the impact, dimensionality, and external correlates of negative wording factors using the multidimensional BFI-2 administered to nationally representative samples from seven countries. We further investigated whether modeling a negative wording factor affected the factor structure and criterion-related validity of the BFI-2. It was found that NWIs blurred the factor structure of the BFI-2 in non-English-speaking countries such that factors like agreeableness were not recovered. The results also strongly support the idea that there is a general negative wording factor across subscales of the BFI-2 and this factor was consistently related to age, gender, educational attainment and life satisfaction across countries. Moreover, modeling a negative wording factor improved the factor structure of the BFI-2 so that scalar invariance can be reached.

Impact on factor structure and criterion-related validity

Using theoretically unidimensional scales, previous studies have shown that the adverse impact of NWIs is stronger in non-English-speaking samples than English-speaking samples (Gnambs et al., 2018; Wong et al., 2003). Our study further supports this conclusion by showing that NWIs distorted the structure of the multidimensional BFI-2 more severely in the five non-English-speaking countries than in America and England. Without considering the impact of the NWIs, we cannot even find adequate

support for configural invariance across cultures. Multiple potential mechanisms have been proposed to explain the negative wording factor phenomenon. For example, inaccurate translation may introduce ambiguity in item content and result in negative wording factors (Wong et al., 2003). However, this reason may not apply to the current study as the translation was led by a professional agency and went through multiple rounds of revisions by linguists and personality experts. Careless responding is another factor that researchers often use to explain the emergence of negative wording factor (Kam & Meyer, 2015; Schmitt & Stuits, 1989; Woods, 2006). Nonetheless, we applied multiple criteria to exclude careless respondents so that the influence of careless responding should have been minimized. Moreover, it seems unreasonable to assume that non-English-speaking respondents are more careless than English-speaking respondents. A more plausible explanation would be dialectical thinking, defined as *“the cognitive tendency toward acceptance of contradictions”* (p.742, Peng & Nisbett, 1999). For example, people higher in dialectical thinking are more likely than others to agree with both of the two seemingly opposing statements (e.g., “I am the life of the party” and “I am a quiet person”; Hamamura et al., 2008). It has been shown that agreement with opposing statements would statistically result in a negative wording factor (Schmitt & Stuits, 1989). Eastern Asians have been found to be higher than Americans and British in dialectical thinking (Peng & Nisbett, 1999; Zhang et al., 2015), which may explain why the factor structure of the BFI-2 was more evident in the two English-speaking samples but distorted in the Japanese sample (in the current study) and Chinese samples (in Zhang et al., 2020). However, previous studies on dialectical thinking primarily focused on comparisons between eastern and western countries and did not compare among different western countries. We cannot find empirical evidence to show that Americans and British are less dialectical in their

thinking than other European countries. Therefore, the dialectical thinking explanation remains to be further tested.

It is surprising that criterion-related validity was largely unaffected even when the impact of NWIs was not modeled. In hindsight, this finding seems to be consistent with the literature on predictor weighting showing that validity is robust to different approaches to weighting predictors, especially when the sample size is relatively large and predictors are positively correlated with each other (Stanley & Wang, 1968, 1970).

Generality of the negative wording factor

In contrast to Kam (2018), which reported evidence against the existence of a general negative wording factor, we found strong evidence that there is a general negative wording factor across subscales of the BFI-2 and this finding can be generalized across all countries involved in the current study. We identified two potential explanations for the contradicting findings. First, while the current study used samples representative of the general population, Kam (2018) used two restricted undergraduate samples. Gnambs et al. (2020) showed that the variance of the negative wording factor steadily decreases with increasing cognitive ability, which is robustly related to education level (Ritchie & Tucker-Drob, 2018). Therefore, the variance of the negative wording factor in undergraduate samples is likely to be smaller than in the general population, thus precluding the emergence of a general negative wording factor due to range restriction. This is analogous to the finding that the strength of the general intelligence factor is substantially lower among gifted samples than normative samples (Swanson et al., 1989; Watkins et al., 2002) because range restriction on subtest scores leads to lower correlations among subtests in gifted samples, which then result in lower g-factor saturation. Second, while we used stringent criteria to screen out potential inattentive respondents, Kam (2018) did not take any quality control measures. If some

respondents were careless in the way that they overlooked the reverse wording of NWIs and responded as if they were all positively worded, five distinct negative wording factors would be likely to emerge. If some respondents were so careless that they answered randomly, no interpretable factors should emerge, thus ruling out the possibility of a general negative wording factor. In sum, difference in sample characteristics and data quality may jointly account for the difference between our findings and those of Kam (2018).

Advantages of modeling the negative wording factor

To our knowledge, the current study is the first one to examine the potential beneficial effects of modeling a negative wording factor on the factor structure and criterion-related validity of multidimensional scales using ESEM across cultures. It is reassuring to find that the Big Five personality factors were well recovered in all countries and scalar invariance can be reached after taking the negative wording factor into consideration. This finding has several implications for cross-cultural personality studies. First, if the original factor structure cannot be recovered, it does not necessarily mean that the constructs are not equivalent across cultures. It may just be masked by the influence of NWIs. Researchers should explicitly model the negative wording factor and reexamine their factor structures. Accounting for the effect of NWIs is particularly important when researchers are interested in cross-cultural mean comparisons because such comparisons require scalar invariance (Drasgow, 1982; Tay et al., 2015). As shown in the current study, if we do not account for the effect of NWIs, it may be difficult to establish configural equivalence across cultures, a prerequisite for scalar invariance. Second, ESEM should be used more frequently in cross-culture personality research because it offers opportunities to observe potential factor loading pattern changes. If the true structure is simple (e.g., no substantial cross-loadings), ESEM will

preserve such patterns; if the true structure is complex (e.g., several nonzero cross loadings etc.), ESEM can properly account for such complexity (Morin et al., 2020). Given that commonly used fit indices like CFI and TLI tend to favor models with more parameters, we recommend examination of factor loadings to ensure that all factors modeled are well-defined when choosing the final model rather than solely relying on model fit indices. Third, researchers may be confident about their criterion-related validity even if they do not control for the effect of NWIs. Distorted factor structure does not apparently lead to distorted criterion-related validity. Our findings showed that criterion-related validity was robust. Nonetheless, we recommend researchers compare validity coefficients obtained from models without a negative wording factor (M3) and models with a negative wording factor (M5). If there is a discrepancy, researchers should place more confidence on findings from models with a negative wording factor.

External correlates of the negative wording factor

Echoing the substantive account of negative wording factor, we found robust evidence that the negative wording factor was related to age, gender, education, and life satisfaction in multiple countries. Older, female, educated, and more satisfied respondents were more likely to disagree with NWIs given the same of levels of personality traits. This pattern suggests that the negative wording factor (after reverse coding) has a positive and mature nature, which is consistent with previous findings. For example, Quilty and colleagues (2006) found that the negative wording factor on the Ronsenberg Self-Esteem Scale was positively correlated with conscientiousness and emotional stability⁴. Alessandri et al. (2015) and Lindwall et al. (2012) also found that the negative wording factor in RESE was negatively correlated with depression.

⁴ However, we were not able to examine correlations between the negative wording factor and the five personality factors because the negative wording factor was modeled as orthogonal to the five personality factors.

Kam and Sun (2020) reported that the general negative wording factor in self-reported HEXACO was positively related to peer ratings of agreeableness and conscientiousness. Although it is still too early to draw definitive conclusions about the nature of the negative wording factor, the current study added several unique pieces of evidence to the literature supporting a substantive interpretation.

Limitations and future directions

In spite of the many strengths (e.g., nationally representative samples, multiple countries, a balanced multidimensional scale with an equal number of PWIs and NWIs), the present study is limited in several ways. First, we only considered the agreement type of Likert scale. It is unknown whether we can still find such a general negative wording factor using a frequency scale. If so, whether the general negative wording factors from the two types of rating scales reflect the same entity or distinct factors is unknown, either. More studies using different rating scales are needed to examine these questions. Second, the number of criterion measures included in the present study is limited and they are all self-reported in a cross-sectionally manner. Common method bias and systematic transient errors may inflate the observed correlations. Researchers are encouraged to employ informant ratings or longitudinal designs and more criterion measures to test the robustness of our findings and shed light on the nature of the negative wording factor. Third, future studies should also include other countries (e.g., Russia, Turkey) that have distinct cultures but are not included in psychology studies as often.

Conclusion

Using nationally representative samples from Germany, Spain, France, Japan, Poland, the United States and UK, we found that NWIs distorted the factor structure of the multidimensional BFI-2 in five non-English-speaking countries. We also found

strong evidence that there is a general negative wording factor across scales in all the countries studied and this general negative wording factor displayed robust correlations with important external variables. Modeling a general negative wording factor substantially improved the recovery of the factor structure of the BFI-2.

References

- Aichholzer, J. (2014). Random intercept EFA of personality scales. *Journal of Research in Personality*, 53, 1-4.
- Alessandri, G., Vecchione, M., Eisenberg, N., & Laguna, M. (2015). On the factor structure of the Rosenberg (1965) General Self-Esteem Scale. *Psychological Assessment*, 27(2), 621.
- Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality: A meta-analysis. *Psychological Bulletin*, 146(4), 279-323.
- Arias, V. B., & Arias, B. (2017). The negative wording factor of Core Self-Evaluations Scale (CSES): Methodological artifact, or substantive specific variance?. *Personality and Individual Differences*, 109, 28-34.
- Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), 397-438.
- Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment*. Thousand Oaks, CA: Sage.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233-255.
- DiStefano, C., & Motl, R. W. (2006). Further investigating method effects associated with negatively worded items on self-report surveys. *Structural Equation Modeling: A Multidisciplinary Journal*, 13(3), 440-464.
- Drasgow, F. (1984). Scrutinizing psychological tests: Measurement equivalence and equivalent relations with external variables are the central issues. *Psychological Bulletin*, 95(2), 134-135.
- Eid, M. (2020). Multi-Faceted Constructs in Abnormal Psychology: Implications of the Bifactor S-1 Model for Individual Clinical Assessment. *Journal of Abnormal Child Psychology*, 48, 895-900.
- Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin*, 116(3), 429-456.
- Gu, H., Wen, Z., & Fan, X. (2015). The impact of wording effect on reliability and validity of the Core Self-Evaluation Scale (CSES): A bi-factor perspective. *Personality and Individual Differences*, 83, 142-147.
- Gnambs, T., Scharl, A., & Schroeders, U. (2018). The structure of the Rosenberg Self-Esteem Scale. *Zeitschrift für Psychologie*, 226(1), 14-29.
- Gnambs, T., & Schroeders, U. (2020). Cognitive abilities explain wording effects in the Rosenberg Self-Esteem Scale. *Assessment*, 27(2), 404-418.
- Hamamura, T., Heine, S. J., & Paulhus, D. L. (2008). Cultural differences in response styles: The role of dialectical thinking. *Personality and Individual Differences*, 44(4), 932-942.

- Horan, P. M., DiStefano, C., & Motl, R. W. (2003). Wording effects in self-esteem scales: Methodological artifact or response style?. *Structural Equation Modeling: A Multidisciplinary Journal*, 10(3), 435-455.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3), 530-541.
- Kam, C. C. S. (2018). Why do we still have an impoverished understanding of the item wording effect? An empirical examination. *Sociological Methods & Research*, 47(3), 574-597.
- Kam, C. C. S., & Meyer, J. P. (2015). How careless responding and acquiescence response bias can influence construct dimensionality: The case of job satisfaction. *Organizational Research Methods*, 18(3), 512-541.
- Kam, C., Schermer, J. A., Harris, J., & Vernon, P. A. (2013). Heritability of acquiescence bias and item keying response style associated with the HEXACO Personality Scale. *Twin Research and Human Genetics*, 16(4), 790-798.
- Kam, C. C. S., & Sun, S. (2020). Method factor due to the use of reverse-keyed items: Is it simply a response style artifact?. *Current Psychology*. Advanced online publication. <https://doi.org/10.1007/s12144-020-00645-z>.
- Lindwall, M., Barkoukis, V., Grano, C., Lucidi, F., Raudsepp, L., Liukkonen, J., & Thøgersen-Ntoumani, C. (2012). Method effects: The problem with negatively versus positively keyed items. *Journal of Personality Assessment*, 94(2), 196-204.
- Lorenzo-Seva, U., & Ten Berge, J. M. (2006). Tucker's congruence coefficient as a meaningful index of factor similarity. *Methodology*, 2(2), 57-64.
- Maydeu-Olivares, A., & Coffman, D. L. (2006). Random intercept item factor analysis. *Psychological Methods*, 11(4), 344-362.
- Maydeu-Olivares, A., & Joe, H. (2014). Assessing approximate fit in categorical data analysis. *Multivariate Behavioral Research*, 49(4), 305-328.
- Morin, A. J. S., Myers, N. D., & Lee, S. (2020). Modern factor analytic techniques: Bifactor models, exploratory structural equation modeling (ESEM) and bifactor-ESEM. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (4th ed.). Hoboken, NJ: Wiley.
- Muthén, B., & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of non - normal Likert variables. *British Journal of Mathematical and Statistical Psychology*, 38(2), 171-189.
- Muthén, B. O. (2013). *Version 7.1 Mplus Language Addendum*. Retrieved from <http://www.statmodel.com/download/Version7.1xLanguage.pdf>
- Muthén, L. K., & Muthén, B. O. (2017). 1998–2017. *Mplus user's guide*. Muthén & Muthén: Los Angeles, CA.
- Nye, C. D., Joo, S. H., Zhang, B., & Stark, S. (2020). Advancing and evaluating IRT model data fit Indices in organizational research. *Organizational Research Methods*, 23(3), 457-486.

- Nye, C. D., & Drasgow, F. (2011). Assessing goodness of fit: Simple rules of thumb simply do not work. *Organizational Research Methods, 14*(3), 548-570.
- Organisation for Economic Co-operation and Development (2018a): *Programme for the International Assessment of Adult Competencies (PIAAC), International Pilot Study on Non-Cognitive Skills*. GESIS Data Archive, Cologne. ZA6941 Data file Version 1.0.0, <https://doi.org/10.4232/1.13063>
- Organisation for Economic Co-operation and Development (2018b). *Programme for the International Assessment of Adult Competencies (PIAAC), English Pilot Study on Non-Cognitive Skills*. Data file Version 1.0.0 [ZA6940]. Cologne: GESIS Data Archive. doi: 10.4232/1.13062
- Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist, 54*(9), 741-754.
- Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*(2), 322-338.
- Primi, R., Santos, D., De Fruyt, F., & John, O. P. (2019). Comparison of classical and modern methods for measuring and correcting for acquiescence. *British Journal of Mathematical and Statistical Psychology, 72*(3), 447-465.
- Quilty, L. C., Oakman, J. M., & Risko, E. (2006). Correlates of the Rosenberg self-esteem scale method effects. *Structural Equation Modeling: A Multidisciplinary Journal, 13*(1), 99-117.
- Revelle, W. R. (2017). *psych: Procedures for personality and psychological research*.
- Ritchie, S. J., & Tucker-Drob, E. M. (2018). How much does education improve intelligence? A meta-analysis. *Psychological Science, 29*(8), 1358-1369.
- Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance and Commitment Therapy, Measures Package, 61*.
- Rutkowski, L., & Svetina, D. (2017). Measurement invariance in international surveys: Categorical indicators and fit measure performance. *Applied Measurement in Education, 30*(1), 39-51.
- Rutkowski, L., Svetina, D., & Liaw, Y. L. (2019). Collapsing categorical variables and measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 26*(5), 790-802.
- Scherer, R., & Teo, T. (2020). A tutorial on the meta-analytic structural equation modeling of reliability coefficients. *Psychological Methods*. Advanced online publication. <http://dx.doi.org/10.1037/met0000261>.
- Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology, 89*(4), 623-642.
- Soto, C. J., & John, O. P. (2017). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology, 113*(1), 117-143.

- Swanson, H. L. (1989). The effects of central processing strategies on learning disabled, mildly retarded, average, and gifted children's elaborative encoding abilities. *Journal of Experimental Child Psychology*, 47(3), 370-397.
- Tay, L., & Jebb, A. T. (2018). Establishing construct continua in construct validation: The process of continuum specification. *Advances in Methods and Practices in Psychological Science*, 1(3), 375-388.
- Tay, L., Meade, A. W., & Cao, M. (2015). An overview and practical guide to IRT measurement equivalence analysis. *Organizational Research Methods*, 18(1), 3-46.
- Tucker, L. R. (1951). *A method for synthesis of factor analysis studies* (No. PRS-984). Educational Testing Service Princeton, NJ.
- Tuliao, A. P., Klanecky, A. K., Landoy, B. V. N., & McChargue, D. E. (2020). Toronto alexithymia scale–20: Examining 18 competing factor structure solutions in a US sample and a Philippines sample. *Assessment*, 27(7), 1515-1531.
- Watkins, M. W., Greenawalt, C. G., & Marcell, C. M. (2002). Factor structure of the Wechsler Intelligence Scale for Children–Third Edition among gifted students. *Educational and Psychological Measurement*, 62(1), 164-172.
- Wirth, R. J., & Edwards, M. C. (2007). Item factor analysis: current approaches and future directions. *Psychological Methods*, 12(1), 58-79.
- Wong, N., Rindfleisch, A., & Burroughs, J. E. (2003). Do reverse-worded items confound measures in cross-cultural consumer research? The case of the material values scale. *Journal of Consumer Research*, 30(1), 72-91.
- Woods, C. M. (2006). Careless responding to reverse-worded items: Implications for confirmatory factor analysis. *Journal of Psychopathology and Behavioral Assessment*, 28(3), 186-194.
- Zhang, B., Galbraith, N., Yama, H., Wang, L., & Manktelow, K. I. (2015). Dialectical thinking: A cross-cultural study of Japanese, Chinese, and British students. *Journal of Cognitive Psychology*, 27(6), 771-779.
- Zhang, B., Li, Y., Li, J., Luo, J., Ye, Y., Yin, L., Chen, Z., Soto, C., & Oliver, J. (2020). *The Big Five Inventory-2 in China: A comprehensive psychometric evaluation in four diverse samples* [Manuscript submitted for publication]. Department of Psychological and Brain Sciences, Texas A & M University.
- Zhang, B., Sun, T., Cao, M., & Drasgow, F. (2020). Using bifactor models to examine the predictive validity of hierarchical constructs: Pros, cons, and solutions. *Organizational Research Methods*. Advanced online publication. <https://doi.org/10.1177/1094428120915522>.

Table 1

Demographic Information

Countries	Raw sample size	Valid sample size	Age		Gender		Education		Income	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Germany	1591	1538	43.80	12.53	1.49	0.50	2.79	0.92	3.40	1.52
Spain	1427	1384	41.71	11.91	1.50	0.50	3.15	0.88	3.29	1.71
France	1376	1324	42.33	13.13	1.57	0.50	2.53	0.70	3.12	1.50
Japan	1516	1243	43.93	12.44	1.51	0.50	3.08	0.89	2.63	1.93
Poland	1517	1455	40.23	13.03	1.51	0.50	2.90	0.99	2.96	1.53
America	1193	951	37.91	13.57	1.58	0.49	3.07	1.10	4.06	2.03
England	253	191	43.41	13.21	1.52	0.50	3.30	1.03	5.13	2.15

Note: Males are coded as 1 and females are coded as 2 in all countries. Education in the first five countries are measured on such a scale where "1=Primary school; 2=High school or equivalent; 3=Some college or vocational school (2 years)' 4=Tertiary education" while it is measured on another scale where "1=Primary school; 2=High school or equivalent; 3=Some college or vocational school (2 years)' 4=Bachelor or equivalent; 5=Master or equivalent; 6=Doctoral or Professional degree;" in the USA and the UK. In the five non-English-speaking countries, income was measured on a 5-point ordinal scale by asking "How much would you estimate your usual gross pay per year is?" (Germany: 1 = Less than 5000 €; 2= 5000 € to less than 16000 €; 3 = 16000 € to less than 28000 €; 4 = 28000 € to less than 40000 €; 5 = 40000 € to less than 56000 €; 6= 56000 € or more. Spain: 1 = Less than 9000 €; 2= 9000 € to less than 12500 €; 3 = 12500 € to less than 17000 €; 4 = 17000 € to less than 23500 €; 5 = 23500 € to less than 33000 €; 6 = 33000 € or more. France: 1 = Less than 3300 €; 2 = 3300 € to less than 13000 €; 3 = 13000 € to less than 22000 €; 4 = 22000 € to less than 33000 €; 5 = 33000 € to less than 50000 €; 6 = 50000 € or more. Japan: 1 = Less than 192 m¥; 2 = 193 m¥ to 240 m¥; 3 = 241 m¥ to less than 314 m¥; 4 = 315 m¥ to less than 430 m¥; 5 = 431 m¥ to less than 580 m¥; 6 = 581 m¥ or more. Poland: 1 = Less than 14500 zł; 2= 14500 zł to less than 21500 zł; 3 = 21500 zł to less than 36000 zł; 4 = 36000 zł to less than 54000 zł; 5 = 54000 zł to less than 72000 zł; 6 = 72000 zł or more). In the two English-speaking countries, income was measured on a 9-point ordinal scale (1 = Under \$10,000; 2 = \$10,000-\$19,999; 3 = \$20,000-\$29,999; 4 = \$30,000-\$39,999; 5 = \$40,000-\$49,999; 6 = \$50,000-\$74,999; 7 = \$75,000-\$99,999; 8 = \$100,000-\$150,000; 9 = Over \$150,000).

Table 2

Means, standard deviations, and Cronbach's alpha of the Big Five domains across seven countries

Domain	Germany			Spain			France			Japan			Poland			America			England		
	M	SD	α	M	SD	α	M	SD	α	M	SD	α	M	SD	α	M	SD	α	M	SD	α
E	3.14	0.62	0.85	3.36	0.54	0.79	3.29	0.53	0.77	2.74	0.56	0.82	3.29	0.57	0.85	3.16	0.71	0.86	2.99	0.70	0.87
A	3.63	0.51	0.79	3.77	0.50	0.80	3.78	0.48	0.78	3.22	0.45	0.74	3.54	0.46	0.76	3.81	0.54	0.81	3.67	0.56	0.83
C	3.65	0.65	0.88	3.62	0.60	0.87	3.81	0.61	0.86	3.09	0.56	0.83	3.68	0.57	0.87	3.86	0.66	0.89	3.69	0.67	0.89
N	2.72	0.67	0.88	2.83	0.55	0.82	2.86	0.70	0.88	3.21	0.60	0.85	2.86	0.60	0.85	2.73	0.84	0.92	2.94	0.83	0.93
O	3.35	0.63	0.84	3.63	0.59	0.85	3.45	0.57	0.81	3.14	0.54	0.80	3.56	0.51	0.78	3.69	0.61	0.83	3.54	0.68	0.87

Note. =Agreeableness; C=Conscientiousness; E=Extraversion; N=Neuroticism; O=Openness.

Table 3
Model fit (Item-level analysis)

Countries	Model	Chi square	df	RMSEA	CFI	TLI
Germany	M1	2488.67	295	0.070	0.930	0.896
	M2	2497.26	295	0.070	0.930	0.897
	M3	12167.03	1480	0.069	0.839	0.808
	M4	8090.12	1440	0.055	0.900	0.877
	M5	8263.04	1450	0.055	0.897	0.875
Spain	M1	2210.75	295	0.068	0.941	0.912
	M2	1734.64	295	0.059	0.938	0.908
	M3	9879.33	1480	0.064	0.863	0.836
	M4	7112.66	1440	0.053	0.907	0.886
	M5	7183.04	1450	0.053	0.906	0.886
France	M1	2167.73	295	0.069	0.929	0.895
	M2	1816.23	295	0.062	0.943	0.916
	M3	8949.83	1480	0.062	0.867	0.841
	M4	8179.24	1440	0.059	0.880	0.852
	M5	7141.55	1450	0.054	0.898	0.876
Japan	M1	1822.50	295	0.065	0.934	0.902
	M2	1404.73	295	0.055	0.942	0.914
	M3	9226.31	1480	0.065	0.810	0.773
	M4	7131.31	1440	0.056	0.860	0.829
	M5	7188.50	1450	0.056	0.859	0.828
Poland	M1	2310.60	295	0.069	0.932	0.900
	M2	1331.49	295	0.049	0.953	0.930
	M3	8390.89	1480	0.057	0.881	0.858
	M4	5461.75	1440	0.044	0.931	0.915
	M5	5500.06	1450	0.044	0.930	0.915
America	M1	2074.99	295	0.080	0.918	0.880
	M2	1161.39	295	0.056	0.961	0.942
	M3	7061.87	1480	0.063	0.877	0.853
	M4	5166.83	1440	0.052	0.918	0.899
	M5	5233.77	1450	0.052	0.917	0.898
England	M1	615.05	295	0.075	0.923	0.886
	M2	461.86	295	0.054	0.956	0.935
	M3	2187.10	1480	0.050	0.916	0.900
	M4	Nonconvergence				
	M5	2099.68	1450	0.048	0.923	0.906

Note. M1 = Five-factor model with only positively worded items; M2 = Five factor model with only negatively worded items; M3 = Five-factor model with both positively and negatively worded items; M4 = Five-factor incomplete bifactor model with five domain-specific negative wording factors; M5 = Five-factor model with one domain-general negative wording factor.

Table 4

Tucker's congruence coefficients (America as the reference group)

Countries	M1					M2				
	A	C	E	N	O	A	C	E	N	O
Germany	0.95	0.97	0.97	0.94	0.98	0.70	0.98	0.83	0.98	0.92
Spain	0.96	0.92	0.95	0.98	0.97	0.90	0.98	0.95	0.99	0.94
France	0.95	0.95	0.94	0.97	0.98	0.72	0.96	0.92	0.96	0.95
Japan	0.91	0.89	0.90	0.88	0.93	0.77	0.91	0.85	0.92	0.91
Poland	0.97	0.96	0.92	0.94	0.97	0.91	0.96	0.93	0.98	0.94
America	0.96	0.97	0.95	0.97	0.95	0.89	0.97	0.93	0.97	0.96
Countries	M3					M5				
	A	C	E	N	O	A	C	E	N	O
Germany	0.57	0.93	0.70	0.93	0.68	0.90	0.97	0.92	0.94	0.92
Spain	0.85	0.91	0.31	0.92	0.76	0.92	0.94	0.95	0.96	0.96
France	0.86	0.94	0.26	0.91	0.81	0.89	0.96	0.95	0.94	0.95
Japan	0.25	0.83	0.86	0.87	0.77	0.83	0.87	0.89	0.90	0.87
Poland	0.51	0.95	0.86	0.95	0.38	0.95	0.96	0.92	0.95	0.96
America	0.93	0.96	0.94	0.97	0.92	0.96	0.97	0.95	0.98	0.95

Note. A=Agreeableness; C=Conscientiousness; E=Extraversion; N=Neuroticism; O=Openness. M1 = Five-factor model with only positively worded items; M2 = Five factor model with only negatively worded items; M3 = Five-factor model with both positively and negatively worded items; M5 = Five-factor model with one domain-general negative wording factor.

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Table 5
Factor loadings pattern summaries

Domain		M3							M5						
		Germany	Spain	France	Japan	Poland	America	England	Germany	Spain	France	Japan	Poland	America	England
No. of primary loadings >.30	A	6	11	10	6	6	11	10	10	10	10	9	10	10	9
	C	12	9	11	11	12	12	12	12	12	10	11	11	12	12
	E	8	4	5	11	10	10	10	12	8	9	11	10	10	10
	N	12	12	12	11	12	12	12	12	12	12	11	12	12	12
	O	11	12	12	9	8	12	12	11	12	11	9	10	12	12
No. of cross-loadings with absolute value >.30	A	6	1	3	10	10	1	2	4	4	2	5	0	0	2
	C	0	1	1	2	1	0	0	0	0	1	1	0	0	0
	E	10	11	11	3	5	0	2	0	0	0	3	2	0	1
	N	5	2	3	3	1	1	2	0	0	0	1	0	0	2
	O	4	6	2	2	5	0	1	0	0	0	0	0	0	1
Mean of primary loadings	A	0.32	0.45	0.43	0.21	0.30	0.48	0.50	0.43	0.45	0.43	0.39	0.40	0.47	0.49
	C	0.61	0.53	0.56	0.49	0.57	0.59	0.60	0.56	0.52	0.51	0.44	0.53	0.59	0.59
	E	0.40	0.14	0.11	0.48	0.48	0.52	0.53	0.50	0.41	0.41	0.48	0.47	0.51	0.53
	N	0.60	0.53	0.61	0.52	0.55	0.67	0.67	0.55	0.51	0.57	0.52	0.51	0.66	0.68
	O	0.48	0.52	0.52	0.45	0.29	0.50	0.60	0.50	0.52	0.47	0.45	0.44	0.52	0.59
Mean of absolute cross-loadings	A	0.16	0.12	0.12	0.22	0.18	0.11	0.12	0.10	0.10	0.13	0.13	0.10	0.09	0.12
	C	0.10	0.08	0.12	0.15	0.11	0.10	0.10	0.07	0.08	0.11	0.13	0.10	0.09	0.10
	E	0.17	0.22	0.24	0.12	0.14	0.07	0.11	0.12	0.09	0.07	0.11	0.12	0.07	0.11
	N	0.13	0.12	0.11	0.12	0.10	0.10	0.12	0.10	0.08	0.09	0.11	0.09	0.09	0.12
	O	0.14	0.14	0.10	0.07	0.17	0.11	0.09	0.06	0.10	0.08	0.08	0.10	0.09	0.09

Note. A=Agreeableness; C=Conscientiousness; E=Extraversion; N=Neuroticism; O=Openness. M3 = Five-factor model with both positively and negatively worded items; M5 = Five-factor model with one domain-general negative wording factor.

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Table 6
Criterion-related validity

Personality	Criteria	Germany		Spain		France		Japan		Poland		America		England	
		M3	M5	M3	M5	M3	M5	M3	M5	M3	M5	M3	M5	M3	M5
A	Age	0.03	0.10	-0.05	0.01	0.03	0.03	-0.05	0.01	0.01	0.22	0.14	0.08	0.11	0.09
	Gender	-0.01	0.13	0.08	0.13	0.16	0.22	0.00	0.11	0.04	0.31	0.25	0.21	0.31	0.30
	Education	-0.04	-0.08	-0.02	-0.04	-0.06	-0.06	0.06	0.03	-0.06	-0.06	-0.10	-0.11	-0.09	-0.11
	Income	0.02	-0.01	-0.09	-0.08	-0.13	-0.14	0.03	-0.03	-0.03	-0.06	0.02	0.01	-0.12	-0.13
	SH	0.08	0.01	0.10	0.03	-0.02	-0.04	0.12	0.18	0.02	0.04	0.06	0.07	-0.06	0.02
	Jsat	0.12	0.08	0.05	0.01	0.06	0.03	0.15	0.20	0.08	0.11	0.13	0.14	0.12	0.11
	Lsat	0.26	0.29	0.21	0.18	0.15	0.13	0.33	0.40	0.21	0.27	0.32	0.30	0.23	0.25
C	Age	0.21	0.16	0.23	0.15	0.22	0.19	0.32	0.28	0.17	0.10	0.16	0.14	0.15	0.14
	Gender	0.13	0.06	0.08	0.03	0.10	0.04	-0.10	-0.19	0.20	0.11	-0.04	-0.05	-0.04	-0.04
	Education	-0.08	-0.09	-0.01	-0.04	0.01	0.01	0.17	0.19	0.05	0.04	0.07	0.07	0.09	0.09
	Income	0.12	0.14	0.13	0.10	0.09	0.08	0.18	0.24	0.03	0.03	0.20	0.20	0.23	0.23
	SH	0.06	0.11	0.08	0.18	-0.03	-0.02	0.11	0.06	0.10	0.12	0.21	0.23	0.26	0.31
	Jsat	0.08	0.11	0.14	0.18	-0.07	-0.04	0.10	0.07	0.14	0.13	0.22	0.25	0.28	0.28
	Lsat	0.37	0.29	0.32	0.31	0.22	0.14	0.23	0.15	0.31	0.28	0.36	0.36	0.38	0.39
E	Age	-0.07	-0.05	-0.10	0.00	-0.10	0.03	0.04	0.03	-0.07	-0.03	0.01	-0.01	-0.11	-0.11
	Gender	-0.13	-0.02	-0.03	0.11	-0.17	0.03	-0.05	0.00	-0.08	0.01	-0.05	-0.08	-0.04	-0.05
	Education	0.08	0.05	0.01	-0.01	0.03	0.03	0.10	0.08	-0.01	-0.05	0.01	0.01	0.08	0.07
	Income	0.21	0.21	0.07	0.13	0.07	0.14	0.21	0.19	0.09	0.08	0.14	0.14	0.24	0.23
	SH	0.22	0.21	0.25	0.14	0.14	0.11	0.17	0.20	0.16	0.15	0.26	0.25	0.24	0.22
	Jsat	0.20	0.20	0.22	0.24	0.18	0.16	0.22	0.24	0.19	0.23	0.19	0.20	0.29	0.26
	Lsat	0.38	0.44	0.28	0.37	0.18	0.34	0.37	0.38	0.41	0.42	0.49	0.46	0.49	0.49
N	Age	-0.18	-0.12	-0.18	-0.10	-0.17	-0.10	-0.21	-0.18	-0.16	-0.06	-0.14	-0.08	-0.03	-0.02
	Gender	0.16	0.27	0.14	0.22	0.16	0.27	0.06	0.16	0.12	0.23	0.21	0.26	0.15	0.16
	Education	-0.09	-0.11	-0.08	-0.07	-0.04	0.00	-0.09	-0.11	-0.03	-0.02	-0.14	-0.12	-0.28	-0.26
	Income	-0.24	-0.27	-0.22	-0.20	-0.21	-0.21	-0.13	-0.19	-0.17	-0.18	-0.17	-0.17	-0.31	-0.30
	SH	-0.30	-0.36	-0.24	-0.34	-0.25	-0.31	-0.34	-0.29	-0.20	-0.24	-0.37	-0.40	-0.34	-0.37
	Jsat	-0.25	-0.32	-0.23	-0.29	-0.19	-0.25	-0.28	-0.29	-0.24	-0.25	-0.26	-0.30	-0.22	-0.23
	Lsat	-0.64	-0.59	-0.56	-0.55	-0.66	-0.56	-0.49	-0.42	-0.55	-0.51	-0.69	-0.67	-0.60	-0.58
O	Age	0.07	0.01	0.06	-0.07	0.08	0.02	0.06	-0.01	0.21	0.09	-0.17	-0.21	0.00	-0.02
	Gender	0.12	0.02	0.16	0.08	0.09	-0.06	0.24	0.15	0.25	0.09	0.01	-0.01	-0.02	-0.03
	Education	0.14	0.20	0.14	0.15	0.10	0.09	0.07	0.10	0.06	0.08	0.11	0.11	0.19	0.19
	Income	0.06	0.10	0.06	0.02	0.02	-0.02	-0.07	-0.01	-0.01	0.02	0.06	0.05	0.17	0.17
	SH	0.04	0.09	-0.04	0.08	0.00	0.02	0.06	0.02	-0.05	-0.02	0.14	0.15	0.12	0.14
	Jsat	0.03	0.05	0.06	0.08	0.00	0.02	0.14	0.12	0.05	0.03	0.12	0.12	-0.06	-0.05
	Lsat	0.22	0.18	0.17	0.18	0.16	0.08	0.22	0.19	0.18	0.19	0.19	0.19	0.14	0.16

Note. SH=Subjective health; Jsat=Job Satisfaction; Lsat=Life Satisfaction. A= Agreeableness; C= Conscientiousness; E=Extraversion; N=Neuroticism; O=Openness. M3 = Five-factor model with both positively and negatively worded items; M5 = Five-factor model with one domain-general negative wording factor.

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Table 7

Average standardized loadings on the negative wording factor and variance decomposition from M3

Countries	Average loadings on the negative wording factor					Percentage of variance due to substantive factors					Percentage of variance due to the negative wording factor				
	A	C	E	N	O	A	C	E	N	O	A	C	E	N	O
Germany	0.45	0.42	0.39	-0.49	0.34	0.57	0.74	0.65	0.69	0.73	0.19	0.12	0.11	0.16	0.09
Spain	0.39	0.41	0.40	-0.37	0.41	0.60	0.70	0.55	0.75	0.71	0.16	0.13	0.14	0.11	0.13
France	0.40	0.42	0.41	-0.45	0.42	0.57	0.67	0.62	0.74	0.67	0.17	0.14	0.16	0.13	0.14
Japan	0.39	0.43	0.31	-0.36	0.35	0.55	0.59	0.70	0.69	0.71	0.16	0.16	0.07	0.09	0.10
Poland	0.39	0.42	0.36	-0.41	0.36	0.56	0.68	0.60	0.70	0.66	0.17	0.13	0.10	0.12	0.13
America	0.32	0.29	0.26	-0.30	0.31	0.63	0.77	0.69	0.83	0.76	0.11	0.06	0.04	0.05	0.08
England	0.32	0.23	0.16	-0.15	0.12	0.66	0.78	0.68	0.83	0.84	0.09	0.04	0.02	0.01	0.01

Note. DEU=Germany; ESP=Spain; FRA=France; JPN=Japan; POL=Poland; US=United States; UK=England. A= Agreeableness; C= Conscientiousness; E=Extraversion; N=Neuroticism; O=Openness.

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Table 8

External correlates of the negative wording factor

	Germany		Spain		France		Japan		Poland		America		England	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Age	0.143	<.001	0.198	<.001	0.162	<.001	0.170	<.001	0.168	<.001	0.218	<.001	0.125	0.153
Gender	0.078	0.004	0.045	0.097	0.114	<.001	0.141	<.001	0.088	0.001	0.144	<.001	0.117	0.120
Education	0.050	0.068	0.101	0.001	0.051	0.095	0.024	0.437	0.104	<.001	0.066	0.073	0.122	0.085
Income	0.060	0.016	0.116	<.001	0.059	0.037	-0.029	0.334	0.062	0.024	0.048	0.187	0.131	0.085
SH	-0.031	0.151	0.111	<.001	0.016	0.523	-0.065	0.044	-0.022	0.437	-0.010	0.765	0.029	0.671
Jsat	-0.014	0.641	0.022	0.465	0.071	0.028	-0.073	0.089	0.062	0.024	0.048	0.187	-0.128	0.105
Lsat	0.184	<.001	0.058	0.003	0.168	<.001	0.120	<.001	0.118	<.001	0.119	<.001	0.134	0.012

Note. Values in bold are significant at $p < .007$. DEU=Germany; ESP=Spain; FRA=France; JPN=Japan; POL=Poland; US=United States; UK=England. SH=Subjective health; Jsat=Job Satisfaction; Lsat=Life Satisfaction.

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Figure 1. Graphic illustration of fitted models. Squares in green represent positively worded items; squares in grey represent negatively worded items. Green circles represent personality factors; grey circles represents negative wording factors. Solid arrows indicate major loadings; Dotted lines indicate cross-loadings; Item uniqueness was not depicted.

Figure 2. Criterion-related validity based on M3 (X-axis) and M5 (Y-axis) across the seven countries. Each dot represents correlations between a personality factor and a criterion (e.g., the correlation between agreeableness and life satisfaction).

Supplementary Material

Table A1

Factor loadings for M1.P (Germany)

Item	A	C	E	N	O
2	0.56	0.17	0.12	0.10	0.16
7	0.56	0.26	-0.01	-0.08	0.06
27	0.52	-0.20	0.02	-0.20	0.03
32	0.60	0.15	0.13	0.02	0.00
52	0.61	0.38	-0.03	-0.02	0.00
57	0.52	-0.27	0.22	-0.11	-0.03
13	0.09	0.47	-0.06	-0.26	0.04
18	-0.03	0.76	0.00	0.05	0.02
33	0.12	0.71	0.08	0.22	0.02
38	-0.12	0.59	0.11	-0.15	0.07
43	0.34	0.55	-0.01	-0.05	-0.01
53	0.14	0.59	-0.02	-0.15	0.08
1	0.28	-0.10	0.71	-0.05	-0.02
6	-0.17	0.18	0.61	-0.11	0.01
21	-0.22	0.07	0.63	-0.05	0.11
41	0.08	0.09	0.51	-0.22	0.09
46	0.24	-0.06	0.69	0.08	0.04
56	0.14	-0.01	0.65	-0.01	0.18
4	0.05	-0.03	-0.02	0.76	-0.04
9	-0.10	-0.02	-0.23	0.53	-0.04
24	0.01	-0.11	-0.38	0.40	0.01
29	-0.04	0.02	0.15	0.89	-0.03
44	-0.21	-0.03	0.19	0.63	-0.04
49	0.11	0.02	-0.10	0.62	0.03
10	0.13	0.16	0.12	-0.08	0.44
15	-0.19	0.09	0.20	-0.05	0.59
20	0.09	-0.21	-0.22	0.08	0.92
35	0.15	-0.10	-0.16	0.14	0.88
40	-0.08	0.19	0.03	-0.21	0.45
60	-0.20	0.06	0.30	-0.05	0.63

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A2

Factor loadings for M1.P (Spain)

Item	A	C	E	N	O
2	0.66	0.02	0.15	0.10	0.08
7	0.64	0.19	-0.10	-0.07	0.16
27	0.66	0.04	0.02	-0.03	0.12
32	0.67	0.10	0.13	0.05	0.02
52	0.67	0.24	-0.09	-0.05	0.10
57	0.31	-0.09	0.24	-0.24	-0.04
13	0.26	0.48	-0.06	-0.12	0.01
18	-0.19	0.93	-0.10	0.07	-0.04
33	-0.07	0.85	0.00	0.03	-0.11
38	0.02	0.36	0.24	-0.12	0.19
43	0.50	0.23	0.14	0.04	0.11
53	0.29	0.47	0.15	-0.06	0.01
1	0.32	-0.03	0.60	-0.04	-0.05
6	-0.22	0.18	0.42	0.06	0.24
21	-0.37	0.04	0.41	-0.10	0.18
41	0.05	0.21	0.50	-0.23	-0.03
46	0.01	-0.05	0.67	0.12	0.01
56	0.19	0.07	0.50	-0.11	0.11
4	-0.03	0.03	0.11	0.80	0.05
9	-0.07	0.08	-0.17	0.59	-0.06
24	0.01	-0.13	-0.25	0.49	-0.05
29	-0.01	0.01	0.12	0.77	-0.03
44	0.02	-0.12	0.05	0.54	-0.05
49	0.18	0.02	0.03	0.50	0.03
10	0.18	-0.01	0.10	-0.11	0.52
15	0.00	0.11	0.20	-0.16	0.50
20	-0.02	-0.10	-0.21	0.00	0.93
35	0.06	-0.03	-0.16	0.03	0.89
40	-0.02	0.02	0.02	0.20	0.45
60	-0.02	0.04	0.40	-0.04	0.49

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A3

Factor loadings for M1.P (France)

Item	A	C	E	N	O
2	0.67	0.07	0.13	0.08	0.12
7	0.57	0.26	-0.06	-0.02	0.13
27	0.49	-0.12	-0.08	-0.15	0.13
32	0.59	0.21	0.03	0.08	0.10
52	0.60	0.36	0.01	0.07	0.03
57	0.48	-0.10	0.17	-0.23	0.03
13	0.40	0.35	0.15	0.00	-0.03
18	-0.20	0.80	-0.04	-0.02	-0.02
33	-0.09	0.74	0.01	-0.05	0.00
38	0.04	0.72	0.04	-0.08	0.04
43	0.48	0.45	0.16	0.08	-0.06
53	0.13	0.75	0.03	-0.03	0.08
1	0.39	0.01	0.49	-0.04	0.00
6	-0.29	0.12	0.67	-0.14	0.08
21	-0.32	0.16	0.64	-0.03	0.08
41	0.11	0.13	0.45	-0.18	-0.02
46	0.02	-0.20	0.59	0.17	-0.01
56	0.24	0.01	0.47	-0.10	0.08
4	-0.09	0.14	-0.04	0.76	0.01
9	-0.20	0.05	-0.13	0.53	-0.07
24	0.16	-0.10	-0.38	0.52	-0.02
29	0.06	-0.08	0.10	0.76	0.02
44	0.01	-0.21	0.16	0.79	-0.02
49	0.03	0.15	0.01	0.68	0.03
10	0.26	0.08	0.08	-0.09	0.42
15	-0.01	0.02	0.19	-0.10	0.56
20	-0.04	-0.11	-0.13	0.01	0.82
35	0.04	0.05	-0.16	0.01	0.81
40	-0.02	-0.06	-0.05	0.23	0.38
60	-0.03	-0.05	0.20	0.01	0.69

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A4
Factor loadings for M1.P (Japan)

Item	A	C	E	N	O
2	0.61	0.04	0.22	-0.01	-0.01
7	0.62	0.08	0.10	0.06	0.08
27	0.51	-0.06	-0.14	-0.38	0.06
32	0.67	0.04	-0.02	-0.14	0.10
52	0.66	0.21	-0.05	0.14	-0.01
57	0.40	0.02	0.17	-0.07	0.18
13	0.16	0.53	0.01	-0.10	0.07
18	-0.04	0.73	-0.02	-0.02	0.12
33	0.05	0.57	-0.01	-0.09	0.00
38	-0.03	0.62	0.07	-0.18	0.07
43	0.14	0.26	0.41	-0.12	0.08
53	0.37	0.45	0.04	0.04	0.06
1	0.15	-0.08	0.72	-0.08	0.00
6	-0.25	0.10	0.57	0.10	0.07
21	-0.24	0.18	0.57	-0.11	0.09
41	0.21	-0.06	0.59	-0.24	-0.08
46	0.15	-0.06	0.69	0.17	0.02
56	0.13	0.14	0.54	-0.02	0.09
4	-0.08	-0.01	-0.10	0.72	-0.01
9	0.04	0.23	-0.16	0.70	-0.08
24	-0.26	-0.01	-0.05	0.48	-0.08
29	-0.08	-0.35	0.16	0.43	0.03
44	-0.25	-0.29	0.09	0.48	-0.03
49	0.13	-0.13	-0.10	0.68	0.10
10	0.09	-0.01	0.29	-0.10	0.37
15	-0.08	0.44	0.12	-0.20	0.35
20	0.00	-0.19	-0.15	0.05	0.93
35	0.02	-0.13	-0.13	0.00	0.93
40	0.14	0.26	-0.05	0.54	0.21
60	-0.06	0.23	0.19	-0.03	0.50

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A5

Factor loadings for M1.P (Poland)

Item	A	C	E	N	O
2	0.66	0.05	0.09	0.22	0.07
7	0.62	0.14	0.07	-0.10	0.03
27	0.55	0.01	-0.08	-0.14	0.08
32	0.58	0.14	0.06	0.09	0.18
52	0.67	0.24	-0.04	-0.09	0.01
57	0.43	-0.11	0.20	-0.22	0.08
13	0.16	0.57	0.06	-0.07	0.08
18	-0.09	0.95	-0.10	0.06	-0.02
33	-0.01	0.92	-0.09	0.03	0.00
38	0.02	0.54	0.23	-0.10	0.07
43	0.28	0.43	0.09	-0.16	0.09
53	0.23	0.60	0.07	-0.10	0.03
1	0.28	0.01	0.76	0.11	-0.02
6	-0.20	0.14	0.40	-0.33	0.08
21	-0.31	0.16	0.47	-0.09	0.19
41	0.06	0.14	0.60	-0.20	0.03
46	0.17	0.00	0.71	0.14	0.07
56	0.11	-0.06	0.57	-0.28	0.07
4	0.08	-0.01	-0.18	0.64	0.00
9	-0.22	0.12	-0.31	0.38	-0.10
24	0.02	-0.12	-0.16	0.34	-0.03
29	-0.04	-0.03	0.13	0.75	-0.01
44	-0.15	-0.23	0.17	0.71	0.02
49	0.15	0.07	-0.15	0.50	-0.01
10	0.12	0.04	0.23	-0.04	0.43
15	-0.06	0.16	0.30	0.01	0.45
20	0.01	-0.20	-0.28	-0.02	0.88
35	0.11	-0.14	-0.26	-0.01	0.85
40	0.02	0.27	-0.03	0.14	0.49
60	-0.13	0.12	0.35	0.06	0.57

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A6

Factor loadings for M1.P (America)

Item	A	C	E	N	O
2	0.79	-0.02	0.10	0.23	0.05
7	0.59	0.31	-0.13	-0.03	0.13
27	0.63	-0.09	0.11	-0.12	-0.01
32	0.57	0.21	0.03	0.04	0.10
52	0.65	0.29	-0.16	-0.03	0.10
57	0.56	-0.15	0.27	-0.20	-0.02
13	0.28	0.56	-0.07	-0.15	-0.05
18	-0.15	0.83	0.01	0.06	-0.02
33	-0.05	0.73	0.11	-0.03	-0.06
38	0.00	0.73	0.16	-0.06	0.05
43	0.33	0.65	-0.06	-0.09	-0.02
53	0.18	0.57	0.09	-0.07	0.09
1	0.19	-0.08	0.75	-0.10	-0.04
6	-0.26	0.14	0.67	0.03	0.13
21	-0.27	0.18	0.60	-0.04	0.17
41	0.09	0.12	0.46	-0.27	0.00
46	0.16	-0.11	0.79	0.21	-0.04
56	0.28	0.06	0.54	-0.17	0.07
4	0.04	0.05	-0.03	0.82	-0.02
9	-0.12	0.06	-0.20	0.61	-0.10
24	0.01	-0.15	-0.22	0.58	0.00
29	-0.01	-0.04	0.06	0.86	0.02
44	0.04	-0.13	0.18	0.78	-0.07
49	0.10	0.05	0.01	0.65	0.06
10	0.08	0.04	0.06	-0.06	0.53
15	-0.11	0.15	0.15	-0.04	0.61
20	0.07	-0.24	-0.14	-0.01	0.91
35	0.15	-0.16	-0.13	0.00	0.83
40	-0.05	0.08	0.02	0.13	0.57
60	-0.07	0.13	0.26	-0.06	0.61

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table A7

Factor loadings for M1.P (England)

Item	A	C	E	N	O
2	0.73	0.04	0.15	0.15	0.02
7	0.70	0.15	0.15	-0.02	-0.05
27	0.68	-0.19	-0.01	-0.15	0.15
32	0.56	0.29	0.13	0.08	0.14
52	0.64	0.39	-0.20	-0.01	-0.01
57	0.56	-0.12	0.15	-0.22	0.11
13	0.23	0.35	0.01	-0.16	-0.06
18	-0.07	0.72	0.07	0.07	-0.04
33	0.12	0.78	-0.08	0.07	-0.06
38	-0.10	0.78	0.11	-0.17	0.01
43	0.35	0.56	0.04	-0.16	0.09
53	0.10	0.71	-0.06	-0.13	0.04
1	0.29	-0.16	0.69	-0.18	-0.13
6	-0.18	0.07	0.77	-0.02	-0.01
21	-0.27	0.16	0.71	0.00	0.11
41	0.01	0.06	0.45	-0.29	0.05
46	0.22	-0.12	0.78	0.17	-0.05
56	0.25	0.10	0.54	-0.12	0.18
4	-0.03	0.02	-0.08	0.85	0.00
9	-0.14	0.12	-0.28	0.52	-0.16
24	0.05	-0.20	-0.27	0.47	-0.14
29	0.01	-0.18	0.15	0.81	0.04
44	-0.08	-0.19	0.03	0.65	0.00
49	0.10	0.03	-0.04	0.74	0.11
10	0.16	-0.04	0.13	0.02	0.60
15	-0.35	0.13	0.07	-0.12	0.83
20	0.17	-0.18	-0.26	-0.12	0.79
35	0.26	-0.13	-0.19	0.03	0.75
40	0.17	0.07	0.04	0.42	0.57
60	-0.24	0.09	0.17	-0.06	0.81

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B1

Factor loadings for M1.N (Germany)

Item	A	C	E	N	O
12	0.13	0.09	-0.29	-0.35	0.19
17	0.55	0.11	0.02	0.02	0.27
22	0.35	0.26	-0.21	-0.32	0.09
37	0.35	0.27	-0.15	-0.28	0.11
42	0.03	-0.13	0.06	-0.48	0.13
47	0.53	0.15	0.11	-0.04	0.23
3	-0.24	1.00	-0.06	0.15	-0.06
8	-0.16	0.75	0.04	0.00	0.08
23	-0.12	0.71	0.11	-0.10	0.00
28	0.01	0.71	0.07	-0.06	0.03
48	0.03	0.88	0.05	0.09	-0.06
58	0.23	0.50	0.00	-0.10	-0.03
11	0.02	-0.05	0.34	-0.04	0.27
16	-0.03	0.00	0.61	0.08	0.01
26	-0.05	0.23	0.30	-0.23	0.19
31	0.02	0.12	0.57	-0.23	0.01
36	0.09	0.08	0.49	-0.13	0.12
51	-0.01	0.09	0.51	-0.15	0.18
14	0.05	-0.14	0.20	0.64	-0.09
19	-0.08	0.00	0.05	0.69	-0.05
34	0.24	0.10	-0.14	0.80	0.03
39	0.05	-0.01	-0.31	0.80	0.10
54	0.05	-0.06	-0.28	0.80	0.13
59	-0.16	-0.10	0.14	0.64	-0.14
5	-0.32	-0.02	-0.11	0.10	0.83
25	-0.07	-0.05	0.09	0.04	0.60
30	0.17	0.15	0.32	0.01	0.40
45	0.16	0.07	0.32	0.06	0.52
50	-0.16	-0.04	-0.06	0.04	0.74
55	0.01	-0.07	0.07	-0.04	0.57

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B2
Factor loadings for M1.N (Spain)

Item	A	C	E	N	O
12	0.41	0.08	0.12	-0.24	0.14
17	0.38	0.07	0.16	0.10	0.32
22	0.40	0.25	-0.12	-0.20	0.01
37	0.44	0.23	-0.01	-0.21	0.15
42	0.13	-0.08	0.21	-0.34	0.02
47	0.52	0.14	0.16	-0.05	0.10
3	-0.19	0.86	-0.07	0.01	-0.09
8	-0.02	0.67	0.26	-0.01	-0.14
23	-0.03	0.63	0.27	-0.04	-0.08
28	-0.10	0.80	0.01	0.00	-0.09
48	-0.03	0.77	-0.05	0.03	0.16
58	0.18	0.56	-0.11	-0.15	0.11
11	0.14	0.03	0.22	0.00	0.38
16	0.06	-0.05	0.78	0.07	-0.04
26	-0.07	0.40	0.31	-0.05	0.13
31	-0.04	-0.02	0.79	-0.06	-0.13
36	-0.13	0.02	0.26	-0.12	0.26
51	-0.07	0.23	0.32	-0.09	0.27
14	-0.06	-0.16	0.01	0.54	-0.10
19	-0.13	0.08	0.06	0.63	0.20
34	0.15	0.33	-0.02	0.59	0.16
39	0.22	0.02	-0.11	0.77	-0.05
54	0.20	-0.13	-0.14	0.71	-0.09
59	-0.16	-0.16	0.18	0.55	-0.10
5	-0.12	-0.10	-0.04	-0.02	0.71
25	-0.05	-0.06	0.11	-0.03	0.66
30	-0.13	0.04	0.08	-0.05	0.64
45	-0.02	0.02	0.11	-0.02	0.60
50	0.11	0.02	0.08	0.08	0.59
55	-0.04	-0.01	0.06	-0.08	0.60

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B3

Factor loadings for M1.N (France)

Item	A	C	E	N	O
12	0.21	0.27	-0.06	-0.15	0.15
17	0.45	0.10	0.17	0.03	0.18
22	0.32	0.31	-0.09	-0.09	0.34
37	0.36	0.30	-0.12	-0.20	0.21
42	0.22	-0.21	0.16	-0.29	0.00
47	0.48	0.37	-0.10	-0.11	0.14
3	-0.12	0.69	0.11	-0.05	-0.10
8	-0.11	0.77	0.18	-0.05	-0.10
23	-0.03	0.73	0.18	-0.01	0.04
28	-0.02	0.67	0.06	-0.07	0.01
48	0.04	0.66	-0.06	-0.05	0.13
58	0.17	0.51	-0.05	-0.17	0.07
11	0.15	0.00	0.27	0.20	0.20
16	0.20	-0.07	0.79	0.02	-0.12
26	0.03	0.48	0.25	-0.01	0.18
31	-0.14	0.09	0.57	-0.19	-0.01
36	-0.17	0.08	0.22	-0.24	0.28
51	-0.08	0.27	0.32	-0.02	0.32
14	-0.20	-0.28	-0.08	0.52	0.05
19	0.22	0.09	-0.04	0.77	0.10
34	0.18	0.13	-0.04	0.82	-0.05
39	0.00	0.06	-0.11	0.83	0.03
54	0.03	0.05	-0.02	0.89	-0.03
59	-0.26	-0.19	0.09	0.58	-0.04
5	0.08	-0.14	0.11	0.15	0.51
25	0.12	-0.18	0.15	-0.04	0.50
30	-0.35	0.13	0.05	-0.07	0.96
45	-0.20	0.05	0.04	0.03	0.78
50	0.22	-0.16	0.09	0.01	0.57
55	0.10	-0.22	-0.01	-0.09	0.60

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B4

Factor loadings for M1.N (Japan)

Item	A	C	E	N	O
12	0.28	0.14	-0.13	-0.35	0.10
17	0.41	0.07	0.21	0.17	0.32
22	0.36	0.14	-0.37	-0.19	0.02
37	0.28	0.44	0.01	-0.16	0.00
42	0.14	0.01	0.01	-0.53	-0.12
47	0.49	0.15	0.21	-0.08	0.14
3	-0.07	0.66	-0.03	0.03	0.14
8	-0.03	0.75	0.16	0.01	-0.05
23	-0.04	0.61	0.19	-0.06	-0.05
28	-0.27	0.42	-0.10	-0.26	0.02
48	0.08	0.54	0.04	0.00	0.06
58	0.23	0.53	-0.01	-0.08	0.14
11	0.14	-0.12	0.21	0.08	0.39
16	0.14	-0.12	0.74	0.07	-0.12
26	0.06	0.15	0.49	-0.20	0.06
31	-0.05	0.12	0.59	-0.29	-0.01
36	-0.01	0.07	0.41	-0.13	0.10
51	-0.29	0.22	0.32	-0.19	0.17
14	-0.05	-0.55	0.12	0.19	-0.10
19	0.25	-0.10	-0.40	0.43	-0.01
34	0.13	0.13	-0.17	0.77	-0.01
39	-0.06	0.02	-0.09	0.77	-0.01
54	-0.06	0.03	-0.12	0.80	-0.03
59	-0.11	-0.12	0.13	0.61	-0.08
5	-0.07	-0.18	-0.09	-0.02	0.82
25	-0.20	0.23	0.01	-0.05	0.43
30	-0.04	0.19	0.20	-0.02	0.49
45	0.02	0.23	0.04	0.05	0.52
50	0.05	-0.20	0.02	-0.08	0.62
55	-0.06	-0.09	0.02	0.00	0.49

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B5
Factor loadings for M1.N (Poland)

Item	A	C	E	N	O
12	0.30	0.05	0.06	-0.12	0.04
17	0.19	0.18	0.00	0.11	0.33
22	0.26	0.27	-0.24	-0.26	0.21
37	0.49	0.23	-0.07	-0.24	0.04
42	0.33	-0.17	0.22	-0.27	0.09
47	0.37	0.32	0.10	-0.05	0.16
3	-0.20	0.73	0.07	-0.04	-0.07
8	0.07	0.70	0.17	0.03	-0.05
23	-0.12	0.41	0.21	-0.11	0.20
28	0.04	0.68	0.08	-0.06	-0.04
48	-0.01	0.70	0.01	0.03	0.05
58	0.12	0.50	-0.07	-0.19	-0.01
11	0.02	0.08	0.22	-0.07	0.33
16	0.11	-0.03	0.78	0.11	0.04
26	-0.08	0.35	0.25	-0.08	0.20
31	0.14	0.08	0.73	-0.13	-0.12
36	-0.18	0.10	0.49	-0.16	0.13
51	-0.11	0.13	0.49	-0.10	0.13
14	0.02	-0.19	0.13	0.59	-0.10
19	-0.02	-0.04	-0.22	0.58	0.09
34	0.08	0.24	-0.09	0.80	0.07
39	0.06	0.13	-0.16	0.79	0.02
54	0.05	-0.07	-0.11	0.76	0.03
59	-0.03	-0.23	0.33	0.60	-0.12
5	0.07	-0.09	-0.02	0.03	0.46
25	-0.19	-0.09	0.06	-0.03	0.66
30	-0.12	0.21	0.19	0.06	0.45
45	-0.16	0.05	0.08	-0.13	0.51
50	0.21	-0.01	0.02	0.14	0.62
55	0.01	-0.22	0.07	-0.07	0.54

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B6

Factor loadings for M1.N (America)

Item	A	C	E	N	O
12	0.33	0.12	0.03	-0.28	0.14
17	0.28	0.09	-0.02	0.18	0.28
22	0.38	0.29	-0.22	-0.23	0.08
37	0.50	0.29	-0.01	-0.20	0.06
42	0.30	-0.07	0.12	-0.42	0.08
47	0.62	0.22	0.04	-0.07	0.14
3	-0.18	0.79	0.00	0.05	-0.08
8	-0.04	0.72	0.16	-0.01	-0.02
23	-0.12	0.58	0.10	-0.14	0.10
28	0.04	0.69	0.03	-0.01	0.03
48	-0.07	0.77	0.00	0.10	-0.02
58	0.14	0.58	0.02	-0.11	-0.04
11	0.13	-0.05	0.21	0.03	0.33
16	0.17	-0.11	0.88	0.10	-0.08
26	-0.13	0.36	0.18	-0.16	0.07
31	0.11	0.04	0.94	-0.03	-0.18
36	-0.15	0.13	0.37	-0.12	0.30
51	-0.29	0.20	0.39	-0.02	0.24
14	-0.07	-0.09	0.03	0.75	-0.01
19	-0.13	0.04	-0.01	0.71	-0.04
34	0.11	0.10	-0.05	0.79	0.01
39	0.18	0.02	-0.10	0.90	0.02
54	0.15	-0.02	-0.09	0.88	0.00
59	-0.03	-0.11	0.06	0.71	0.00
5	0.04	-0.06	-0.08	0.02	0.50
25	-0.18	0.05	0.09	-0.03	0.47
30	-0.02	0.04	0.03	0.08	0.70
45	-0.05	0.07	0.07	0.00	0.62
50	0.05	-0.07	0.04	0.04	0.58
55	-0.07	-0.12	0.05	-0.09	0.70

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table B7

Factor loadings for M1.N (England)

Item	A	C	E	N	O
12	0.50	0.11	0.13	-0.20	0.17
17	0.30	0.00	0.12	0.27	0.40
22	0.42	0.17	-0.41	-0.27	0.06
37	0.58	0.41	-0.05	-0.07	-0.06
42	0.35	-0.15	0.25	-0.31	0.31
47	0.55	0.35	0.23	0.08	0.16
3	-0.20	0.74	0.00	0.03	-0.06
8	-0.14	0.78	0.13	0.03	0.09
23	-0.10	0.56	0.18	-0.27	-0.05
28	-0.09	0.74	-0.11	-0.13	0.09
48	0.09	0.75	0.10	0.15	0.06
58	0.15	0.68	-0.06	-0.18	-0.16
11	0.06	0.03	0.33	-0.02	0.20
16	0.12	-0.04	0.85	0.04	-0.12
26	-0.18	0.31	0.22	-0.13	0.08
31	0.06	0.03	0.81	-0.12	-0.09
36	-0.04	0.05	0.33	-0.29	0.29
51	-0.27	0.20	0.40	-0.16	0.14
14	-0.17	-0.07	0.27	0.77	-0.12
19	-0.12	-0.08	-0.20	0.69	0.09
34	0.16	-0.04	-0.16	0.78	0.02
39	0.14	0.01	-0.23	0.80	0.05
54	0.15	0.03	-0.16	0.83	0.03
59	-0.02	-0.15	0.15	0.75	-0.03
5	-0.14	0.12	-0.06	0.21	0.57
25	-0.15	0.06	0.15	0.03	0.60
30	-0.38	0.12	-0.02	0.06	0.76
45	0.01	-0.02	0.02	-0.03	0.57
50	0.28	-0.04	0.02	0.05	0.54
55	0.10	-0.23	-0.02	-0.20	0.77

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C1
Factor loadings for M1.PN (Germany)

Item	A	C	E	N	O
2	0.54	0.20	-0.02	0.04	0.29
7	0.59	0.23	-0.09	-0.12	0.16
12	0.13	0.05	-0.39	-0.36	0.15
17	0.19	0.21	-0.34	-0.08	0.42
22	0.16	0.30	-0.45	-0.35	0.14
27	0.49	-0.16	-0.05	-0.18	0.06
32	0.60	0.20	0.01	0.03	0.10
37	0.20	0.30	-0.36	-0.34	0.17
42	-0.09	-0.14	-0.12	-0.47	0.19
47	0.11	0.27	-0.27	-0.15	0.39
52	0.61	0.36	-0.12	-0.08	0.12
57	0.39	-0.19	0.02	-0.19	0.08
3	-0.10	0.93	0.00	0.15	-0.14
8	-0.07	0.66	0.04	-0.06	0.07
13	0.35	0.37	0.17	-0.14	-0.12
18	0.17	0.82	0.21	0.18	-0.17
23	-0.18	0.66	0.05	-0.15	-0.01
28	-0.16	0.71	-0.08	-0.10	0.04
33	0.25	0.74	0.16	0.27	-0.05
38	0.16	0.52	0.38	-0.04	-0.07
43	0.44	0.48	0.03	-0.05	0.02
48	-0.05	0.89	-0.06	0.06	-0.01
53	0.35	0.53	0.16	-0.09	-0.02
58	-0.02	0.54	-0.19	-0.15	0.04
1	0.11	0.04	0.51	-0.25	0.17
6	-0.03	0.18	0.70	-0.12	0.00
11	-0.22	0.00	0.15	-0.07	0.36
16	-0.47	0.06	0.33	0.08	0.23
21	-0.09	0.05	0.74	-0.06	0.10
26	-0.15	0.24	0.19	-0.28	0.26
31	-0.32	0.15	0.37	-0.31	0.22
36	-0.31	0.19	0.27	-0.20	0.22
41	0.14	0.13	0.52	-0.30	0.11
46	0.10	0.04	0.51	-0.10	0.22
51	-0.35	0.16	0.37	-0.22	0.28
56	0.11	0.08	0.58	-0.15	0.27
4	-0.27	0.09	-0.33	0.59	0.13
9	-0.25	0.01	-0.37	0.51	0.04
14	-0.04	-0.10	0.20	0.63	-0.01
19	0.05	0.00	0.16	0.73	-0.02
24	-0.11	-0.08	-0.48	0.46	0.07
29	-0.33	0.12	-0.17	0.72	0.16
34	0.29	0.11	-0.07	0.76	0.06
39	0.25	-0.10	-0.12	0.75	-0.02
44	-0.42	0.06	0.03	0.55	0.10
49	-0.07	0.08	-0.31	0.57	0.15
54	0.20	-0.14	-0.14	0.77	0.02
59	-0.12	-0.10	0.23	0.67	-0.13
5	0.01	-0.15	-0.05	0.14	0.76
10	0.30	0.11	0.27	-0.08	0.41
15	0.17	-0.01	0.50	0.04	0.41
20	0.28	-0.26	0.07	0.19	0.79
25	-0.12	-0.03	-0.01	0.02	0.54
30	-0.13	0.25	0.09	-0.07	0.49
35	0.32	-0.12	0.10	0.23	0.77
40	0.26	0.05	0.34	-0.08	0.31
45	-0.12	0.16	0.11	0.01	0.63
50	0.03	-0.10	-0.08	0.08	0.70
55	-0.03	-0.02	-0.01	-0.08	0.51
60	0.15	-0.01	0.58	0.01	0.47

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C2
Factor loadings for M1.PN (Spain)

Item	A	C	E	N	O
2	0.65	0.06	0.09	0.07	0.14
7	0.68	0.13	0.02	-0.06	0.14
12	0.27	0.10	-0.37	-0.27	0.22
17	0.35	0.10	-0.28	0.05	0.37
22	0.32	0.20	-0.50	-0.10	0.02
27	0.66	0.05	0.01	-0.03	0.18
32	0.66	0.14	0.09	0.03	0.07
37	0.40	0.21	-0.39	-0.23	0.12
42	-0.04	-0.05	-0.22	-0.38	0.18
47	0.32	0.17	-0.36	-0.07	0.25
52	0.69	0.18	0.02	-0.04	0.11
57	0.30	-0.04	0.12	-0.32	0.04
3	-0.12	0.88	-0.04	0.08	-0.19
8	-0.08	0.68	-0.03	-0.13	-0.01
13	0.35	0.42	0.15	-0.08	-0.10
18	0.06	0.75	0.30	0.21	-0.29
23	-0.11	0.67	-0.07	-0.12	0.05
28	-0.06	0.78	-0.05	0.01	-0.10
33	0.08	0.85	0.25	0.15	-0.27
38	0.15	0.31	0.39	-0.12	0.17
43	0.55	0.20	0.17	0.02	0.15
48	0.07	0.81	-0.09	0.09	0.05
53	0.34	0.49	0.26	-0.05	0.02
58	0.22	0.53	-0.25	-0.10	0.03
1	0.14	0.18	0.32	-0.20	0.28
6	-0.07	0.13	0.54	0.07	0.23
11	0.12	0.11	-0.10	-0.08	0.42
16	-0.39	0.22	0.16	-0.11	0.47
21	-0.24	-0.07	0.61	-0.11	0.13
26	-0.09	0.44	0.01	-0.17	0.25
31	-0.44	0.23	0.15	-0.24	0.36
36	-0.14	0.10	0.04	-0.20	0.32
41	0.10	0.31	0.45	-0.29	0.06
46	-0.20	0.11	0.41	-0.04	0.35
51	-0.09	0.31	0.03	-0.19	0.38
56	0.22	0.16	0.41	-0.20	0.22
4	-0.16	0.11	-0.24	0.67	0.24
9	-0.15	0.07	-0.35	0.56	0.01
14	-0.11	-0.15	0.21	0.55	-0.04
19	0.01	0.09	0.29	0.54	0.14
24	-0.08	-0.12	-0.40	0.51	-0.04
29	-0.17	0.10	-0.19	0.71	0.17
34	0.32	0.32	0.12	0.56	0.09
39	0.10	-0.04	0.04	0.73	-0.05
44	-0.17	-0.01	-0.31	0.43	0.16
49	0.04	0.12	-0.25	0.43	0.22
54	0.06	-0.17	0.03	0.71	-0.09
59	-0.20	-0.08	0.35	0.49	0.01
5	0.03	-0.12	-0.03	0.05	0.68
10	0.32	-0.07	0.28	-0.09	0.45
15	0.21	0.03	0.44	-0.16	0.36
20	0.17	-0.21	0.20	0.15	0.72
25	0.04	-0.01	-0.08	-0.04	0.63
30	0.02	0.05	0.03	-0.06	0.62
35	0.21	-0.12	0.20	0.16	0.71
40	0.18	-0.12	0.26	0.37	0.32
45	0.05	0.09	-0.11	-0.03	0.56
50	0.13	0.04	-0.13	0.11	0.65
55	0.04	0.04	-0.06	-0.06	0.58
60	0.12	0.01	0.46	-0.10	0.49

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C3
Factor loadings for M1.PN (France)

Item	A	C	E	N	O
2	0.68	0.04	0.16	0.02	0.15
7	0.62	0.17	0.13	0.01	0.09
12	0.28	0.18	-0.28	-0.15	0.09
17	0.39	0.06	-0.29	-0.02	0.21
22	0.43	0.26	-0.43	-0.04	0.18
27	0.49	-0.18	0.12	-0.08	0.04
32	0.63	0.17	0.15	0.08	0.07
37	0.39	0.26	-0.38	-0.14	0.11
42	0.05	-0.22	-0.22	-0.31	0.10
47	0.48	0.27	-0.42	-0.07	0.07
52	0.67	0.26	0.07	0.04	0.09
57	0.48	-0.12	0.27	-0.26	-0.01
3	-0.20	0.75	-0.11	-0.01	-0.07
8	-0.06	0.66	-0.13	-0.11	0.03
13	0.47	0.28	0.22	-0.03	0.02
18	-0.06	0.78	0.30	0.16	-0.17
23	0.06	0.63	-0.17	-0.10	0.11
28	-0.02	0.64	-0.20	-0.04	0.03
33	0.04	0.77	0.32	0.08	-0.16
38	0.17	0.67	0.33	0.00	-0.03
43	0.55	0.38	0.20	0.04	0.03
48	0.13	0.69	-0.18	0.02	0.04
53	0.26	0.67	0.33	0.03	0.00
58	0.19	0.48	-0.28	-0.12	0.02
1	0.35	0.07	0.26	-0.28	0.20
6	-0.26	0.18	0.55	-0.29	0.25
11	-0.03	0.02	-0.21	0.16	0.29
16	-0.17	-0.05	-0.02	-0.22	0.30
21	-0.29	0.23	0.56	-0.13	0.23
26	0.02	0.48	-0.13	-0.10	0.25
31	-0.30	0.12	0.05	-0.40	0.28
36	-0.19	0.16	-0.06	-0.30	0.32
41	0.09	0.21	0.34	-0.33	0.10
46	-0.05	-0.14	0.34	-0.03	0.18
51	-0.16	0.33	-0.05	-0.13	0.42
56	0.24	0.06	0.37	-0.25	0.19
4	-0.09	0.18	-0.32	0.71	0.09
9	-0.18	0.07	-0.30	0.53	-0.05
14	-0.17	-0.24	0.28	0.51	-0.01
19	0.11	0.09	0.07	0.79	0.09
24	0.14	-0.13	-0.49	0.54	-0.07
29	0.02	-0.04	-0.36	0.57	0.18
34	0.07	0.08	0.11	0.83	-0.03
39	-0.02	0.00	0.21	0.81	-0.01
44	-0.06	-0.12	-0.36	0.59	0.17
49	0.05	0.19	-0.28	0.63	0.16
54	-0.07	-0.01	0.19	0.83	-0.03
59	-0.29	-0.17	0.29	0.50	0.00
5	0.01	-0.07	-0.16	0.16	0.51
10	0.32	-0.03	0.26	-0.06	0.45
15	0.05	0.02	0.43	-0.03	0.50
20	0.12	-0.28	0.21	0.14	0.65
25	0.04	-0.09	-0.17	-0.05	0.49
30	-0.13	0.24	-0.08	-0.06	0.88
35	0.21	-0.15	0.22	0.15	0.65
40	0.05	-0.17	0.24	0.47	0.30
45	-0.06	0.13	-0.10	0.03	0.72
50	0.17	-0.11	-0.21	0.03	0.59
55	0.11	-0.10	-0.15	-0.05	0.51
60	0.02	-0.06	0.39	0.05	0.67

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C4
Factor loadings for M1.PN (Japan)

Item	A	C	E	N	O
2	0.52	0.12	0.09	-0.15	0.18
7	0.54	0.14	0.01	-0.08	0.24
12	0.04	0.11	-0.26	-0.46	0.19
17	0.07	0.08	-0.02	-0.04	0.44
22	0.12	0.10	-0.59	-0.29	0.12
27	0.57	-0.03	-0.09	-0.36	0.06
32	0.70	0.07	-0.02	-0.16	0.16
37	-0.10	0.37	-0.19	-0.31	0.14
42	-0.20	-0.02	-0.07	-0.53	-0.02
47	-0.01	0.13	-0.06	-0.29	0.32
52	0.55	0.26	-0.15	0.03	0.17
57	0.47	0.06	0.16	-0.10	0.18
3	-0.18	0.63	-0.03	-0.01	0.12
8	-0.21	0.62	0.04	-0.15	0.04
13	0.33	0.51	0.06	-0.02	0.02
18	0.25	0.63	0.14	0.19	-0.04
23	-0.32	0.54	0.07	-0.15	0.04
28	-0.27	0.40	-0.04	-0.19	-0.10
33	0.15	0.73	0.05	0.08	-0.12
38	0.25	0.54	0.22	0.01	-0.04
43	0.31	0.24	0.43	-0.12	0.06
48	-0.14	0.70	-0.07	-0.02	0.02
53	0.41	0.46	0.02	0.02	0.10
58	-0.03	0.54	-0.15	-0.20	0.19
1	0.15	-0.04	0.62	-0.25	0.13
6	-0.03	0.01	0.63	0.16	-0.06
11	-0.03	-0.06	0.16	0.06	0.46
16	-0.35	-0.16	0.53	-0.04	0.11
21	0.01	0.13	0.69	-0.01	-0.08
26	-0.19	0.13	0.44	-0.31	0.17
31	-0.37	0.12	0.47	-0.34	0.12
36	-0.25	0.08	0.37	-0.15	0.17
41	0.25	-0.01	0.49	-0.37	0.03
46	0.14	-0.06	0.57	0.01	0.15
51	-0.29	0.26	0.47	-0.12	0.06
56	0.24	0.16	0.50	-0.09	0.09
4	-0.34	0.02	-0.20	0.64	0.06
9	-0.28	0.31	-0.27	0.63	0.08
14	0.12	-0.52	0.16	0.25	-0.09
19	0.30	-0.11	-0.40	0.41	0.00
24	-0.49	0.05	-0.12	0.44	0.01
29	-0.32	-0.34	0.03	0.27	0.21
34	0.28	0.08	-0.18	0.68	0.01
39	0.17	-0.06	-0.08	0.75	0.01
44	-0.47	-0.28	0.01	0.40	0.05
49	-0.13	-0.09	-0.23	0.60	0.26
54	0.10	-0.08	-0.14	0.78	0.01
59	-0.02	-0.17	0.16	0.64	-0.04
5	-0.02	-0.11	-0.02	0.09	0.84
10	0.31	-0.05	0.35	-0.08	0.30
15	0.30	0.37	0.30	0.01	0.15
20	0.26	-0.20	0.01	0.16	0.78
25	-0.23	0.29	0.03	0.04	0.32
30	-0.11	0.26	0.24	-0.01	0.48
35	0.30	-0.15	0.03	0.15	0.78
40	0.24	0.20	0.00	0.71	0.09
45	-0.07	0.29	0.02	0.02	0.45
50	-0.08	-0.11	-0.02	0.00	0.63
55	-0.12	-0.05	0.02	0.04	0.44
60	0.24	0.19	0.36	0.14	0.34

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C5
Factor loadings for M1.PN (Poland)

Item	A	C	E	N	O
2	0.42	0.21	-0.10	0.17	0.36
7	0.43	0.29	-0.07	-0.14	0.29
12	-0.19	0.04	-0.14	-0.20	0.15
17	-0.05	0.20	-0.12	0.06	0.42
22	-0.05	0.25	-0.37	-0.36	0.28
27	0.46	0.10	-0.15	-0.15	0.24
32	0.46	0.26	-0.03	0.05	0.36
37	-0.12	0.22	-0.30	-0.35	0.25
42	-0.31	-0.11	0.03	-0.28	0.21
47	-0.10	0.30	-0.13	-0.18	0.37
52	0.50	0.37	-0.15	-0.11	0.27
57	0.37	0.00	0.06	-0.29	0.27
3	-0.23	0.70	0.07	-0.02	-0.10
8	-0.18	0.62	0.04	-0.09	0.07
13	0.27	0.63	0.13	-0.02	-0.03
18	0.12	0.91	0.06	0.15	-0.28
23	-0.22	0.38	0.20	-0.12	0.21
28	-0.27	0.66	0.01	-0.07	0.03
33	0.18	0.90	0.04	0.11	-0.22
38	0.26	0.54	0.32	-0.05	-0.10
43	0.41	0.48	0.13	-0.10	0.04
48	-0.18	0.76	-0.07	0.01	0.04
53	0.33	0.64	0.13	-0.05	-0.02
58	-0.21	0.45	-0.16	-0.22	0.07
1	0.20	0.15	0.55	-0.03	0.24
6	0.14	0.10	0.51	-0.29	-0.11
11	-0.15	0.09	0.24	-0.09	0.34
16	-0.39	-0.03	0.58	0.05	0.20
21	0.06	0.08	0.65	-0.03	-0.06
26	-0.19	0.30	0.28	-0.12	0.23
31	-0.40	0.02	0.54	-0.22	0.10
36	-0.35	0.13	0.50	-0.12	0.09
41	0.25	0.20	0.52	-0.24	0.03
46	0.15	0.09	0.60	0.03	0.24
51	-0.32	0.12	0.52	-0.10	0.12
56	0.26	0.02	0.47	-0.35	0.12
4	-0.21	0.04	-0.25	0.63	0.14
9	-0.32	0.04	-0.25	0.41	-0.16
14	0.15	-0.21	0.10	0.56	-0.06
19	0.23	0.02	-0.18	0.60	0.01
24	-0.24	-0.04	-0.20	0.35	0.08
29	-0.35	0.02	0.05	0.66	0.15
34	0.29	0.21	-0.14	0.70	0.12
39	0.28	0.09	-0.20	0.68	0.01
44	-0.40	-0.20	0.07	0.60	0.15
49	-0.19	0.16	-0.21	0.50	0.22
54	0.20	-0.06	-0.16	0.71	-0.01
59	0.09	-0.22	0.29	0.60	-0.05
5	-0.06	-0.07	0.01	0.03	0.45
10	0.36	0.03	0.30	-0.03	0.34
15	0.28	0.13	0.42	-0.01	0.25
20	0.32	-0.28	-0.01	0.02	0.67
25	-0.17	-0.01	0.19	0.06	0.48
30	-0.15	0.22	0.27	0.07	0.40
35	0.38	-0.19	-0.03	0.04	0.70
40	0.34	0.20	0.18	0.27	0.28
45	-0.16	0.10	0.19	-0.03	0.43
50	-0.02	-0.01	-0.05	0.06	0.70
55	-0.16	-0.12	0.11	-0.01	0.45
60	0.28	0.06	0.49	0.04	0.33

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C6
Factor loadings for M1.PN (America)

Item	A	C	E	N	O
2	0.74	0.04	0.07	0.30	0.11
7	0.53	-0.34	-0.08	0.09	0.19
12	0.47	-0.02	0.08	-0.28	-0.02
17	0.30	0.02	-0.08	0.12	0.08
22	0.51	0.16	-0.28	-0.24	-0.02
27	0.57	-0.03	0.10	0.01	0.10
32	0.54	0.24	0.06	0.12	0.16
37	0.56	0.12	-0.06	-0.23	-0.07
42	0.36	-0.16	0.11	-0.41	-0.09
47	0.70	0.07	0.01	-0.07	-0.06
52	0.62	-0.32	-0.10	0.10	0.17
57	0.58	-0.10	0.27	-0.10	0.06
3	-0.07	0.79	-0.02	-0.05	-0.12
8	0.12	0.58	0.13	-0.13	-0.10
13	0.23	0.55	-0.01	-0.05	0.05
18	-0.13	0.83	-0.02	0.09	-0.06
23	0.07	0.51	0.09	-0.22	0.03
28	0.14	0.55	-0.04	-0.15	-0.06
33	-0.02	0.83	0.09	0.03	-0.10
38	0.01	0.73	0.16	-0.03	0.09
43	0.29	0.62	0.01	0.01	0.08
48	0.12	0.71	0.01	0.03	-0.08
53	0.16	0.60	0.11	0.02	0.11
58	0.22	0.45	-0.07	-0.22	-0.14
1	0.20	-0.05	0.78	-0.04	-0.01
6	-0.29	0.17	0.64	0.03	0.14
11	0.22	-0.07	0.27	0.04	0.15
16	0.10	-0.18	0.91	0.08	-0.22
21	-0.37	0.20	0.58	-0.06	0.23
26	0.03	0.27	0.27	-0.20	0.06
31	0.02	-0.05	0.82	-0.14	-0.21
36	-0.07	0.10	0.35	-0.23	0.20
41	0.08	0.19	0.44	-0.20	0.08
46	0.13	-0.12	0.84	0.26	-0.05
51	-0.31	0.21	0.41	-0.14	0.25
56	0.25	0.11	0.52	-0.08	0.15
4	0.06	-0.04	-0.05	0.72	-0.13
9	-0.10	-0.04	-0.23	0.49	-0.21
14	-0.16	-0.04	0.05	0.74	0.05
19	-0.21	0.12	0.00	0.70	0.06
24	0.03	-0.21	-0.23	0.52	-0.11
29	0.02	-0.13	0.02	0.74	-0.12
34	0.10	0.10	-0.01	0.83	0.01
39	-0.03	0.01	-0.17	0.81	0.11
44	0.06	-0.21	0.15	0.67	-0.16
49	0.10	0.00	-0.01	0.61	-0.02
54	-0.08	-0.01	-0.18	0.81	0.10
59	-0.07	-0.09	0.14	0.76	0.02
5	0.13	-0.12	-0.12	-0.06	0.37
10	0.05	0.04	0.09	0.00	0.55
15	-0.09	0.16	0.14	-0.01	0.58
20	0.06	-0.22	-0.09	0.03	0.87
25	-0.09	0.02	0.03	-0.15	0.44
30	0.10	-0.03	0.00	-0.06	0.62
35	0.15	-0.15	-0.07	0.06	0.81
40	-0.11	0.10	0.01	0.19	0.57
45	0.12	0.00	0.03	-0.11	0.47
50	0.19	-0.17	0.01	-0.03	0.58
55	0.03	-0.14	0.00	-0.19	0.60
60	-0.06	0.14	0.27	-0.02	0.60

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table C7
Factor loadings for M1.PN (England)

Item	A	C	E	N	O
2	0.75	0.09	0.19	0.26	0.02
7	0.68	0.18	0.13	0.04	0.02
12	0.49	0.00	-0.02	-0.31	0.15
17	0.30	-0.08	-0.03	0.16	0.28
22	0.35	0.13	-0.50	-0.28	0.02
27	0.66	-0.18	0.06	-0.04	0.14
32	0.54	0.26	0.17	0.13	0.16
37	0.61	0.27	-0.13	-0.16	-0.13
42	0.27	-0.19	0.11	-0.38	0.22
47	0.72	0.20	0.17	0.01	0.00
52	0.57	0.35	-0.18	0.04	0.04
57	0.60	-0.16	0.23	-0.15	0.09
3	-0.09	0.79	0.05	0.06	-0.11
8	-0.01	0.68	0.07	-0.08	0.05
13	0.17	0.37	0.01	-0.11	0.05
18	-0.08	0.69	0.03	0.06	-0.03
23	0.01	0.52	0.14	-0.32	-0.07
28	0.11	0.65	-0.05	-0.15	0.02
33	0.10	0.88	-0.09	0.15	-0.04
38	-0.11	0.73	0.16	-0.14	0.04
43	0.32	0.50	0.06	-0.12	0.15
48	0.21	0.76	0.05	0.15	0.00
53	0.12	0.69	0.01	-0.06	0.05
58	0.22	0.56	-0.06	-0.21	-0.16
1	0.29	-0.11	0.69	-0.12	-0.08
6	-0.19	0.09	0.72	-0.03	0.05
11	0.15	-0.01	0.35	-0.01	0.17
16	0.16	-0.11	0.85	0.02	-0.18
21	-0.35	0.18	0.68	-0.01	0.21
26	-0.14	0.30	0.27	-0.17	0.05
31	0.11	-0.05	0.75	-0.22	-0.11
36	-0.06	0.12	0.30	-0.26	0.31
41	0.02	0.16	0.46	-0.26	0.08
46	0.24	-0.10	0.84	0.20	-0.07
51	-0.31	0.24	0.45	-0.15	0.24
56	0.29	0.12	0.53	-0.11	0.17
4	-0.07	0.01	-0.15	0.76	-0.04
9	-0.18	0.13	-0.31	0.52	-0.15
14	-0.16	-0.12	0.27	0.73	-0.08
19	-0.12	-0.02	-0.11	0.73	0.12
24	0.01	-0.16	-0.30	0.44	-0.15
29	0.00	-0.10	0.10	0.82	-0.02
34	0.16	-0.02	-0.12	0.83	0.05
39	0.06	-0.03	-0.24	0.77	0.11
44	-0.09	-0.18	0.04	0.64	-0.01
49	0.05	0.02	-0.10	0.71	0.09
54	0.02	-0.02	-0.18	0.79	0.09
59	-0.03	-0.14	0.19	0.80	-0.02
5	0.00	0.11	-0.09	0.18	0.49
10	0.14	-0.10	0.17	0.01	0.63
15	-0.26	0.08	0.12	-0.14	0.74
20	0.19	-0.20	-0.16	-0.10	0.75
25	-0.03	0.15	0.14	0.11	0.64
30	-0.14	0.16	0.01	0.08	0.67
35	0.24	-0.12	-0.11	0.07	0.74
40	0.08	0.01	0.05	0.41	0.58
45	0.14	0.02	0.02	0.02	0.54
50	0.31	-0.09	-0.08	0.00	0.55
55	0.05	-0.15	-0.12	-0.19	0.73
60	-0.19	0.05	0.20	-0.09	0.80

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D1
Factor loadings for M3 (Germany)

Item	NW	A	C	E	N	O
2		0.62	0.11	0.14	0.10	0.16
7		0.64	0.15	0.05	-0.08	0.07
12	0.40	0.28	-0.02	-0.27	-0.20	0.02
17	0.47	0.52	0.03	-0.01	0.19	0.09
22	0.51	0.37	0.19	-0.28	-0.16	-0.03
27		0.48	-0.22	0.03	-0.14	0.02
32		0.62	0.09	0.16	0.07	0.00
37	0.49	0.44	0.17	-0.14	-0.13	-0.05
42	0.46	0.16	-0.24	0.07	-0.23	-0.04
47	0.55	0.47	0.08	0.08	0.15	0.04
52		0.68	0.27	0.04	-0.02	0.01
57		0.50	-0.28	0.20	-0.09	-0.05
3	0.29	-0.14	0.88	-0.09	0.11	-0.06
8	0.40	-0.01	0.58	0.05	0.01	0.02
13		0.14	0.39	0.01	-0.24	0.05
18		-0.03	0.81	0.02	0.02	0.02
23	0.46	-0.14	0.59	0.02	-0.09	-0.02
28	0.51	-0.07	0.61	-0.07	-0.01	-0.01
33		0.17	0.69	0.10	0.18	0.02
38		-0.07	0.55	0.16	-0.18	0.12
43		0.41	0.44	0.06	-0.07	0.02
48	0.41	0.05	0.78	-0.01	0.13	-0.07
53		0.21	0.53	0.04	-0.18	0.10
58	0.44	0.10	0.45	-0.13	-0.04	-0.04
1		0.29	-0.05	0.67	-0.13	-0.02
6		-0.13	0.16	0.60	-0.15	0.06
11	0.35	0.04	-0.11	0.35	0.14	0.11
16	0.30	-0.10	-0.09	0.62	0.34	-0.10
21		-0.21	0.06	0.61	-0.10	0.16
26	0.46	0.06	0.13	0.33	-0.09	0.06
31	0.45	-0.04	0.03	0.54	-0.08	-0.03
36	0.44	-0.11	0.09	0.39	-0.02	0.04
41		0.10	0.12	0.48	-0.30	0.11
46		0.28	-0.06	0.68	0.02	0.03
51	0.44	-0.22	0.09	0.40	-0.07	0.15
56		0.18	0.03	0.64	-0.09	0.18
4		0.04	-0.02	-0.06	0.69	-0.13
9		-0.10	-0.02	-0.24	0.55	-0.06
14	-0.45	-0.05	-0.09	0.24	0.53	-0.02
19	-0.51	-0.06	0.04	0.11	0.55	0.05
24		-0.01	-0.11	-0.38	0.49	0.00
29		-0.01	-0.01	0.11	0.82	-0.10
34	-0.47	0.23	0.12	-0.05	0.61	0.09
39	-0.60	0.02	-0.01	-0.24	0.51	0.15
44		-0.22	-0.02	0.20	0.62	-0.07
49		0.13	-0.02	-0.11	0.63	-0.02
54	-0.57	0.02	-0.06	-0.23	0.55	0.16
59	-0.54	-0.22	-0.05	0.19	0.51	-0.05
5	0.28	-0.09	-0.10	-0.19	0.11	0.74
10		0.20	0.13	0.17	-0.13	0.45
15		-0.11	0.06	0.24	-0.11	0.55
20		0.07	-0.17	-0.14	0.05	0.84
25	0.35	-0.07	-0.05	-0.02	0.09	0.45
30	0.49	-0.06	0.19	0.08	0.02	0.39
35		0.14	-0.05	-0.08	0.10	0.80
40		-0.01	0.13	0.08	-0.22	0.48
45	0.47	-0.03	0.10	0.12	0.11	0.50
50	0.32	0.06	-0.11	-0.10	0.13	0.60
55	0.35	-0.05	-0.02	-0.08	-0.04	0.47
60		-0.12	0.05	0.33	-0.13	0.60

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D2
Factor loadings for M3 (Spain)

Item	NW	A	C	E	N	O
2		0.59	0.06	0.17	0.14	0.14
7		0.61	0.17	-0.01	-0.06	0.22
12	0.45	0.46	-0.06	-0.04	-0.15	-0.03
17	0.35	0.51	-0.06	0.07	0.17	0.10
22	0.34	0.49	0.10	-0.27	-0.05	-0.13
27		0.62	0.06	0.09	0.01	0.18
32		0.59	0.15	0.15	0.08	0.09
37	0.41	0.54	0.09	-0.13	-0.14	-0.03
42	0.38	0.17	-0.20	0.08	-0.25	-0.09
47	0.39	0.56	-0.02	0.05	0.06	-0.07
52		0.61	0.22	-0.01	-0.04	0.20
57		0.34	-0.07	0.23	-0.25	-0.03
3	0.39	-0.14	0.78	-0.09	0.05	-0.16
8	0.44	0.04	0.52	0.17	-0.05	-0.20
13		0.22	0.48	-0.01	-0.12	0.06
18		-0.21	0.82	-0.11	0.06	0.06
23	0.50	0.03	0.49	0.15	-0.04	-0.17
28	0.40	-0.04	0.67	-0.03	0.01	-0.13
33		-0.08	0.89	-0.01	0.03	-0.06
38		0.01	0.36	0.24	-0.15	0.28
43		0.46	0.22	0.16	0.04	0.20
48	0.45	0.10	0.68	-0.05	0.09	0.00
53		0.25	0.50	0.18	-0.07	0.10
58	0.43	0.28	0.43	-0.15	-0.07	-0.03
1		0.34	0.03	0.64	-0.06	-0.05
6		-0.25	0.17	0.39	0.08	0.30
11	0.39	0.25	-0.05	0.18	0.04	0.17
16	0.43	0.02	-0.12	0.74	0.14	-0.16
21		-0.46	0.00	0.40	-0.09	0.25
26	0.48	0.04	0.27	0.26	-0.06	0.01
31	0.44	-0.10	-0.07	0.62	-0.04	-0.16
36	0.38	-0.06	-0.02	0.22	-0.09	0.13
41		0.06	0.29	0.45	-0.25	0.04
46		0.06	-0.10	0.78	0.12	-0.06
51	0.50	0.01	0.15	0.24	-0.08	0.15
56		0.20	0.12	0.46	-0.14	0.16
4		0.05	-0.04	0.04	0.68	-0.05
9		-0.03	0.00	-0.22	0.53	-0.12
14	-0.45	-0.18	-0.08	0.11	0.47	0.02
19	-0.27	-0.10	0.14	0.17	0.47	0.21
24		0.01	-0.16	-0.29	0.50	-0.13
29		0.01	-0.05	0.09	0.74	-0.11
34	-0.18	0.25	0.33	0.11	0.52	0.11
39	-0.43	-0.03	0.06	-0.14	0.60	0.11
44		0.10	-0.16	0.04	0.47	-0.16
49		0.22	0.01	-0.01	0.43	0.00
54	-0.50	-0.07	-0.05	-0.17	0.57	0.09
59	-0.42	-0.26	-0.04	0.29	0.44	0.02
5	0.36	-0.02	-0.13	-0.12	0.01	0.65
10		0.16	0.02	0.11	-0.14	0.56
15		-0.01	0.14	0.15	-0.22	0.54
20		-0.01	-0.08	-0.12	-0.02	0.85
25	0.47	0.08	-0.11	0.04	0.02	0.47
30	0.43	0.02	-0.02	0.07	-0.04	0.50
35		0.07	0.00	-0.09	0.00	0.82
40		-0.11	0.01	-0.04	0.30	0.54
45	0.48	0.12	-0.03	0.05	0.04	0.38
50	0.41	0.18	-0.05	-0.04	0.12	0.50
55	0.45	0.07	-0.04	0.00	-0.03	0.45
60		-0.01	0.06	0.32	-0.13	0.55

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D3
Factor loadings for M3 (France)

Item	NW	A	C	E	N	O
2		0.67	0.02	0.19	0.05	0.15
7		0.58	0.17	0.02	-0.04	0.18
12	0.38	0.31	0.15	-0.12	-0.07	-0.01
17	0.38	0.47	-0.02	0.09	0.16	-0.04
22	0.51	0.47	0.22	-0.19	0.06	0.04
27		0.44	-0.19	-0.01	-0.11	0.14
32		0.61	0.14	0.12	0.07	0.11
37	0.47	0.43	0.22	-0.16	-0.04	-0.02
42	0.29	0.10	-0.24	-0.04	-0.20	-0.03
47	0.45	0.53	0.22	-0.15	0.04	-0.08
52		0.66	0.26	0.04	0.01	0.13
57		0.45	-0.15	0.22	-0.22	0.03
3	0.35	-0.21	0.69	-0.07	0.00	-0.10
8	0.42	-0.03	0.58	0.07	-0.01	-0.11
13		0.43	0.25	0.15	-0.05	0.08
18		-0.16	0.74	0.00	0.01	0.04
23	0.48	0.10	0.55	0.09	0.03	-0.07
28	0.43	0.02	0.57	0.00	0.05	-0.10
33		-0.05	0.73	0.06	-0.04	0.02
38		0.10	0.65	0.11	-0.10	0.11
43		0.52	0.35	0.19	0.04	0.06
48	0.40	0.14	0.63	-0.10	0.04	-0.01
53		0.20	0.65	0.12	-0.06	0.14
58	0.44	0.22	0.43	-0.11	-0.05	-0.08
1		0.42	0.03	0.53	-0.11	0.00
6		-0.24	0.13	0.61	-0.19	0.13
11	0.29	0.05	-0.04	0.17	0.33	0.02
16	0.39	0.01	-0.19	0.63	0.15	-0.20
21		-0.28	0.17	0.59	-0.05	0.12
26	0.50	0.08	0.40	0.20	0.07	0.00
31	0.43	-0.19	0.02	0.48	-0.13	-0.09
36	0.47	-0.14	0.11	0.20	-0.14	0.09
41		0.11	0.20	0.42	-0.25	0.02
46		0.06	-0.27	0.71	0.21	-0.12
51	0.53	-0.08	0.24	0.31	0.07	0.12
56		0.26	0.02	0.46	-0.15	0.10
4		-0.01	0.14	-0.06	0.74	-0.08
9		-0.15	0.04	-0.15	0.54	-0.13
14	-0.53	-0.22	-0.19	0.04	0.36	0.14
19	-0.34	0.11	0.08	0.03	0.69	0.13
24		0.17	-0.13	-0.37	0.52	-0.11
29		0.14	-0.07	0.02	0.66	-0.08
34	-0.45	0.07	0.07	0.05	0.71	0.03
39	-0.53	-0.09	0.03	-0.05	0.62	0.18
44		0.07	-0.17	0.06	0.70	-0.12
49		0.12	0.16	-0.04	0.65	0.00
54	-0.54	-0.11	0.01	0.00	0.67	0.11
59	-0.48	-0.30	-0.15	0.18	0.42	0.05
5	0.31	0.00	-0.06	-0.10	0.17	0.40
10		0.27	0.01	0.13	-0.11	0.48
15		-0.05	0.08	0.10	-0.16	0.61
20		0.02	-0.18	-0.10	-0.02	0.74
25	0.42	0.05	-0.11	-0.02	0.03	0.33
30	0.70	-0.15	0.22	0.03	0.00	0.67
35		0.12	-0.05	-0.10	-0.02	0.75
40		-0.06	-0.20	0.00	0.39	0.41
45	0.54	-0.06	0.11	0.03	0.10	0.52
50	0.43	0.17	-0.10	-0.12	0.06	0.45
55	0.38	0.10	-0.09	-0.10	-0.02	0.40
60		-0.07	0.01	0.12	-0.07	0.73

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D4
Factor loadings for M3 (Japan)

Item	NW	A	C	E	N	O
2		0.60	0.10	0.20	-0.03	0.03
7		0.58	0.11	0.10	0.01	0.13
12	0.41	0.25	0.00	-0.19	-0.33	-0.04
17	0.43	0.35	-0.06	0.11	0.16	0.10
22	0.27	0.34	0.00	-0.51	-0.17	-0.10
27		0.54	-0.06	-0.06	-0.30	0.08
32		0.69	0.04	0.05	-0.07	0.13
37	0.51	0.19	0.24	-0.08	-0.14	-0.17
42	0.31	-0.04	-0.09	-0.04	-0.44	-0.18
47	0.55	0.37	-0.04	0.11	-0.03	-0.12
52		0.64	0.23	-0.03	0.15	0.01
57		0.43	0.05	0.19	-0.06	0.18
3	0.42	-0.09	0.54	-0.06	0.00	0.04
8	0.46	-0.04	0.53	0.07	-0.06	-0.13
13		0.23	0.52	0.02	-0.07	0.12
18		0.05	0.65	0.04	0.07	0.18
23	0.46	-0.14	0.45	0.09	-0.08	-0.13
28	0.26	-0.29	0.37	-0.13	-0.24	-0.03
33		0.05	0.75	0.01	0.00	-0.01
38		0.08	0.56	0.14	-0.09	0.15
43		0.22	0.26	0.42	-0.12	0.13
48	0.35	-0.06	0.64	-0.08	-0.01	-0.06
53		0.36	0.46	0.03	0.01	0.12
58	0.53	0.21	0.40	-0.07	-0.05	-0.08
1		0.21	-0.02	0.69	-0.17	0.01
6		-0.13	0.04	0.60	0.15	0.04
11	0.28	0.08	-0.13	0.18	0.12	0.29
16	0.25	-0.10	-0.22	0.65	0.13	-0.18
21		-0.18	0.17	0.59	-0.09	0.14
26	0.39	-0.02	0.06	0.48	-0.20	-0.03
31	0.44	-0.19	0.04	0.50	-0.25	-0.07
36	0.34	-0.11	0.02	0.40	-0.07	0.01
41		0.31	0.00	0.56	-0.28	-0.07
46		0.23	-0.05	0.67	0.13	0.00
51	0.29	-0.33	0.23	0.38	-0.17	0.12
56		0.18	0.19	0.49	-0.09	0.12
4		-0.21	-0.01	-0.14	0.66	-0.08
9		-0.14	0.28	-0.19	0.63	-0.09
14	-0.45	-0.03	-0.43	0.16	0.20	0.05
19	-0.31	0.28	-0.08	-0.35	0.41	0.00
24		-0.39	0.04	-0.09	0.42	-0.09
29		-0.13	-0.35	0.14	0.36	-0.05
34	-0.30	0.27	0.10	-0.11	0.69	0.00
39	-0.37	0.08	-0.01	-0.05	0.70	0.08
44		-0.33	-0.29	0.07	0.44	-0.11
49		0.03	-0.13	-0.14	0.64	0.05
54	-0.36	0.05	-0.03	-0.10	0.73	0.05
59	-0.36	-0.12	-0.09	0.17	0.58	0.04
5	0.33	-0.13	-0.14	-0.18	-0.04	0.84
10		0.19	-0.03	0.29	-0.13	0.38
15		0.06	0.40	0.16	-0.14	0.38
20		0.02	-0.15	-0.15	-0.03	0.87
25	0.40	-0.18	0.21	-0.03	0.01	0.26
30	0.42	-0.10	0.19	0.16	-0.05	0.43
35		0.03	-0.09	-0.15	-0.06	0.90
40		0.17	0.16	-0.01	0.70	0.17
45	0.43	0.00	0.19	-0.02	0.02	0.35
50	0.38	0.00	-0.19	-0.05	0.00	0.50
55	0.30	-0.06	-0.12	-0.02	0.04	0.34
60		-0.01	0.22	0.22	-0.02	0.54

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D5
Factor loadings for M3 (Poland)

Item	NW	A	C	E	N	O
2		0.64	0.06	0.10	0.28	0.09
7		0.58	0.18	0.06	-0.08	0.11
12	0.32	0.25	-0.09	0.01	-0.05	-0.19
17	0.34	0.39	0.02	0.03	0.20	0.05
22	0.47	0.39	0.09	-0.27	-0.21	-0.04
27		0.50	0.03	-0.06	-0.09	0.14
32		0.55	0.15	0.08	0.10	0.22
37	0.47	0.39	0.05	-0.16	-0.18	-0.13
42	0.42	0.13	-0.23	0.14	-0.13	-0.12
47	0.48	0.49	0.08	0.08	0.03	-0.11
52		0.61	0.26	-0.03	-0.06	0.12
57		0.52	-0.09	0.19	-0.22	0.09
3	0.38	-0.15	0.65	0.00	-0.01	-0.07
8	0.43	0.15	0.49	0.10	0.01	-0.14
13		0.12	0.61	0.07	-0.08	0.12
18		-0.04	0.90	-0.02	0.07	-0.08
23	0.47	0.06	0.27	0.23	-0.02	0.02
28	0.48	0.00	0.55	0.00	0.00	-0.10
33		0.04	0.88	-0.03	0.03	-0.05
38		0.00	0.56	0.23	-0.11	0.13
43		0.22	0.46	0.09	-0.14	0.18
48	0.43	0.11	0.63	-0.04	0.08	-0.12
53		0.18	0.62	0.08	-0.09	0.12
58	0.47	0.04	0.36	-0.18	-0.15	-0.04
1		0.35	0.06	0.68	0.04	0.02
6		-0.16	0.17	0.40	-0.34	0.13
11	0.38	0.13	-0.02	0.29	0.01	0.12
16	0.34	-0.06	-0.12	0.67	0.17	-0.07
21		-0.32	0.17	0.49	-0.11	0.24
26	0.43	0.03	0.20	0.29	-0.04	0.07
31	0.41	-0.07	-0.07	0.61	-0.09	-0.15
36	0.40	-0.25	0.10	0.44	-0.07	0.06
41		0.14	0.20	0.53	-0.23	0.08
46		0.28	0.01	0.71	0.09	0.06
51	0.39	-0.28	0.10	0.43	-0.06	0.12
56		0.23	0.00	0.51	-0.32	0.08
4		0.03	-0.03	-0.17	0.66	-0.06
9		-0.26	0.06	-0.27	0.39	-0.16
14	-0.48	-0.06	-0.14	0.11	0.46	0.05
19	-0.41	-0.01	0.07	-0.22	0.48	0.16
24		-0.01	-0.10	-0.13	0.38	-0.10
29		-0.02	-0.07	0.17	0.70	-0.13
34	-0.37	0.17	0.21	-0.11	0.60	0.16
39	-0.46	0.05	0.13	-0.21	0.55	0.15
44		-0.09	-0.26	0.19	0.65	-0.12
49		0.11	0.07	-0.12	0.51	-0.02
54	-0.48	-0.06	0.01	-0.19	0.58	0.15
59	-0.47	-0.07	-0.17	0.35	0.52	0.00
5	0.28	-0.03	-0.10	-0.10	0.04	0.41
10		0.12	0.05	0.21	-0.08	0.47
15		0.00	0.16	0.29	-0.07	0.44
20		0.07	-0.23	-0.18	-0.07	0.77
25	0.39	-0.13	-0.04	0.06	0.08	0.45
30	0.40	-0.03	0.15	0.20	0.11	0.31
35		0.16	-0.15	-0.19	-0.05	0.78
40		-0.05	0.26	-0.02	0.17	0.56
45	0.42	0.00	0.02	0.14	0.03	0.31
50	0.41	0.18	-0.11	-0.10	0.11	0.52
55	0.35	-0.12	-0.15	0.00	0.01	0.41
60		-0.03	0.10	0.35	-0.03	0.53

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D6
Factor loadings for M3 (America)

Item	NW	A	C	E	N	O
2		0.76	0.03	0.07	0.25	0.10
7		0.56	0.30	-0.09	0.02	0.19
12	0.32	0.43	-0.02	0.07	-0.23	-0.05
17	0.31	0.25	0.05	-0.07	0.22	0.06
22	0.31	0.45	0.17	-0.29	-0.20	-0.04
27		0.60	-0.06	0.09	-0.06	0.09
32		0.57	0.22	0.05	0.07	0.16
37	0.41	0.50	0.13	-0.07	-0.16	-0.10
42	0.35	0.30	-0.16	0.10	-0.36	-0.12
47	0.41	0.64	0.08	0.01	0.01	-0.09
52		0.65	0.29	-0.11	0.03	0.16
57		0.61	-0.13	0.26	-0.17	0.04
3	0.20	-0.10	0.80	-0.02	0.01	-0.12
8	0.34	0.06	0.59	0.12	-0.06	-0.11
13		0.26	0.52	-0.02	-0.10	0.05
18		-0.11	0.82	-0.01	0.08	-0.04
23	0.34	0.02	0.51	0.08	-0.16	0.02
28	0.41	0.06	0.56	-0.04	-0.05	-0.07
33		0.01	0.82	0.09	0.01	-0.09
38		0.03	0.73	0.16	-0.06	0.10
43		0.32	0.59	0.01	-0.05	0.08
48	0.20	0.09	0.71	0.01	0.08	-0.07
53		0.19	0.58	0.10	-0.03	0.12
58	0.41	0.14	0.46	-0.08	-0.13	-0.16
1		0.23	-0.07	0.79	-0.09	-0.02
6		-0.27	0.16	0.63	0.01	0.15
11	0.24	0.18	-0.05	0.27	0.08	0.13
16	0.30	0.05	-0.15	0.90	0.16	-0.23
21		-0.35	0.20	0.58	-0.08	0.24
26	0.17	0.01	0.27	0.27	-0.19	0.06
31	0.31	-0.03	-0.02	0.80	-0.08	-0.21
36	0.36	-0.13	0.11	0.34	-0.15	0.18
41		0.11	0.17	0.43	-0.26	0.08
46		0.15	-0.12	0.83	0.23	-0.05
51	0.25	-0.35	0.23	0.40	-0.08	0.25
56		0.29	0.08	0.51	-0.14	0.15
4		0.01	0.01	-0.04	0.76	-0.11
9		-0.14	0.00	-0.21	0.55	-0.20
14	-0.35	-0.10	-0.04	0.07	0.70	0.08
19	-0.36	-0.16	0.12	0.02	0.65	0.09
24		-0.01	-0.18	-0.22	0.56	-0.10
29		-0.04	-0.09	0.03	0.78	-0.09
34	-0.25	0.14	0.11	0.01	0.80	0.03
39	-0.35	0.02	0.01	-0.14	0.77	0.13
44		0.01	-0.17	0.16	0.72	-0.15
49		0.07	0.03	0.00	0.64	0.00
54	-0.33	-0.03	-0.01	-0.16	0.77	0.12
59	-0.31	-0.02	-0.07	0.17	0.73	0.04
5	0.31	0.07	-0.09	-0.12	0.01	0.34
10		0.08	0.03	0.09	-0.04	0.55
15		-0.06	0.15	0.14	-0.05	0.59
20		0.09	-0.23	-0.09	-0.01	0.86
25	0.31	-0.14	0.04	0.03	-0.08	0.42
30	0.39	0.04	0.00	0.01	0.03	0.59
35		0.17	-0.16	-0.07	0.02	0.81
40		-0.08	0.09	0.01	0.17	0.57
45	0.44	0.04	0.04	0.03	-0.01	0.43
50	0.26	0.16	-0.16	0.01	0.01	0.56
55	0.41	-0.03	-0.11	0.00	-0.10	0.57
60		-0.02	0.12	0.27	-0.07	0.61

RUNNING HEAD: NEGATIVE WORDING FACTCTOR

Table D7
Factor loadings for M3 (England)

Item	NW	A	C	E	N	O
2		0.76	0.10	0.18	0.24	0.03
7		0.69	0.19	0.12	0.02	0.03
12	0.34	0.45	-0.03	-0.01	-0.30	0.13
17	0.41	0.25	-0.12	-0.02	0.19	0.25
22	0.30	0.31	0.10	-0.50	-0.27	0.00
27		0.67	-0.17	0.05	-0.05	0.15
32		0.55	0.26	0.16	0.11	0.17
37	0.29	0.58	0.24	-0.13	-0.16	-0.15
42	0.48	0.20	-0.24	0.13	-0.36	0.19
47	0.34	0.70	0.17	0.18	0.02	-0.02
52		0.58	0.35	-0.20	0.01	0.06
57		0.61	-0.15	0.21	-0.17	0.10
3	0.16	-0.09	0.77	0.05	0.06	-0.11
8	0.39	-0.05	0.64	0.08	-0.06	0.04
13		0.18	0.37	0.00	-0.12	0.06
18		-0.06	0.69	0.02	0.05	-0.02
23	0.26	-0.01	0.49	0.15	-0.32	-0.08
28	0.23	0.09	0.63	-0.04	-0.15	0.01
33		0.11	0.89	-0.09	0.14	-0.04
38		-0.10	0.73	0.16	-0.15	0.05
43		0.34	0.51	0.05	-0.14	0.16
48	0.30	0.18	0.74	0.05	0.16	-0.02
53		0.13	0.70	0.00	-0.07	0.05
58	0.25	0.20	0.53	-0.05	-0.21	-0.17
1		0.30	-0.10	0.69	-0.12	-0.08
6		-0.18	0.09	0.71	-0.02	0.05
11	0.14	0.14	-0.02	0.36	0.00	0.16
16	0.23	0.14	-0.13	0.86	0.04	-0.19
21		-0.34	0.18	0.68	-0.01	0.21
26	0.16	-0.15	0.28	0.28	-0.16	0.04
31	0.18	0.09	-0.06	0.75	-0.21	-0.11
36	0.19	-0.08	0.10	0.31	-0.25	0.30
41		0.03	0.17	0.46	-0.26	0.08
46		0.24	-0.10	0.84	0.20	-0.06
51	0.14	-0.32	0.23	0.46	-0.14	0.23
56		0.31	0.13	0.53	-0.12	0.17
4		-0.08	0.00	-0.14	0.76	-0.05
9		-0.18	0.12	-0.30	0.52	-0.16
14	-0.09	-0.16	-0.12	0.27	0.73	-0.08
19	-0.31	-0.08	0.01	-0.12	0.72	0.14
24		-0.01	-0.17	-0.30	0.45	-0.16
29		0.00	-0.11	0.11	0.82	-0.03
34	-0.18	0.19	0.00	-0.12	0.82	0.06
39	-0.04	0.06	-0.03	-0.23	0.77	0.11
44		-0.11	-0.19	0.05	0.65	-0.02
49		0.05	0.02	-0.10	0.71	0.09
54	0.05	0.00	-0.03	-0.17	0.80	0.08
59	-0.07	-0.03	-0.14	0.20	0.80	-0.02
5	0.17	-0.02	0.10	-0.08	0.18	0.47
10		0.15	-0.09	0.16	0.00	0.63
15		-0.25	0.09	0.11	-0.14	0.74
20		0.19	-0.19	-0.16	-0.10	0.76
25	0.07	-0.03	0.15	0.14	0.11	0.64
30	0.16	-0.15	0.14	0.01	0.08	0.66
35		0.24	-0.11	-0.11	0.06	0.74
40		0.10	0.02	0.04	0.40	0.58
45	0.09	0.13	0.02	0.02	0.01	0.54
50	0.19	0.29	-0.10	-0.08	0.00	0.54
55	0.30	0.00	-0.17	-0.12	-0.17	0.72
60		-0.18	0.06	0.20	-0.10	0.80