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Towards an Operationalization of the Fundamental Dimensions of Agency and Communion.  
Trait Content Ratings in five Countries considering Valence and Frequency of Word Occurrence.

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## Abstract

Despite many convergences in theorizing and research on the two fundamental dimensions of social judgment the operationalizations differ considerably across studies and possible confounds (valence, frequency of word occurrence) are not always controlled. The present study was meant as a first step towards a more standardized operationalization by providing trait words which are clearly distinct in content (agency and communion) but comparable in valence and frequency of word occurrence in written language across different countries. We created a pool of 304 trait adjectives and reduced this pool in several pretests to a list of 69 trait words. These were clearly different in content and covered a large range of valence. In the main study  $N = 548$  participants from five countries (Belgium, Germany, Italy, Poland, USA) rated the 69 trait words on agency, communion and valence. The results were quite consistent across countries. The trait adjectives' agency ratings and communion ratings were negatively correlated; valence was correlated with communal content, but not with agentic content; word frequency was barely related to the content ratings. Cluster analyses suggest four clusters of trait words. Based on these findings we propose sets of agentic and communal trait words which do not differ in valence and word frequency. These item-sets can serve as a first step towards a standardized operationalization of the two fundamental content dimensions across languages.

There has been considerable convergence in studies on the fundamental dimensions of social judgment (Abele & Wojciszke, 2007; Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Wojciszke, 2005). Researchers usually operationalize them with adjective-scales covering the two content domains. However, the specific trait words used differ considerably between studies. Furthermore, the measures used often do not control for the possibly confounding influence of valence (see Suitner & Maas, 2008) and of frequency of word occurrence. These methodological problems complicate the integration of findings of different lines of research and may decelerate progress in the field. The present study was therefore meant as a first step towards establishing sets of agentic and communal trait words that clearly capture the content of the two fundamental dimensions and at the same time do not differ regarding valence and frequency of word occurrence in written language. We collected trait ratings (content and valence) in five different countries and languages (English, USA; German, Germany; French, Belgium; Italian, Italy; and Polish, Poland). We examined the correlations between these ratings within and across languages, and we compared the classification of the trait words via cluster-analyses across languages. The study was specifically designed for this Special Issue of the European Journal of Social Psychology on Fundamental Dimensions of Social Judgment. Since most of the papers in this issue broadly discuss the theoretical notion of the fundamental dimensions, we will not repeat this here. We will rather focus on the empirical data.

We chose “agency” and “communion” as denominations of the two fundamental dimensions. This, of course, does not mean that these are the ultimately correct names of the fundamental dimensions of social judgment. The denomination issue is beyond the scope of this paper. We have tried to provide broad definitions of the two fundamental dimensions and used the conceptualization of Bakan (1966) as the theoretical frame.

## Method

### *Pretest: Selection of trait words*

In a first step, we reviewed studies that assess the fundamental dimensions by means of trait words (Abele & Wojciszke, 2007; Anderson, 1968; Bem, 1974; Cuddy, et al., 2007; Diehl, Owen, & Youngblade, 2004; Fiske, et al., 2002; Heilbrun, 1976; Judd, et al., 2005; Meadows, 2005; Spence,

Helmreich, & Stapp, 1974; Tausch, Kenworthy, & Hewstone, 2007; Wentura, Rothermund, & Bak, 2000; Wiggins, 1979; Wojciszke, 2005) and created an item-pool of 304 adjectives. In a second step, we reduced this pool to a list of 69 trait words. We did this by means of expert ratings with regard to the representativeness of the trait words for the fundamental dimensions. We also conducted several questionnaire studies with altogether  $N = 613$  students of the University of Erlangen-Nuremberg. These participants rated subsets of the 304 trait words with respect to valence, agency, and communion on the basis of definitions provided by the researchers. Based upon the work of Bakan (1966; see also Meadows, 2005) we created a definition of agency, which comprised the three facets “individuality”, “self-assertion”, and “achievement”. The definition of communion also encompassed three facets, namely “social relationships/warmth”, “empathy”, and “morality”.

The selected 69 adjectives covered a wide range of valence (Range: -2.25 to 2.66; on a scale with endpoints -3 = negative to +3 = positive) and were rated as clearly different with regard to agency and communion (agentic traits: agency rating  $M = 4.57$ ; communion rating  $M = 2.37$ ; communal traits: agency rating  $M = 1.85$ ; communion rating  $M = 4.32$ ; on 7-point scales from 0 [has nothing to do with agency/communion] to 6 [has a lot to do with agency/communion]). Thus, we did not select a representative sample of adjectives, but rather a sample of trait words which clearly refer to one of the two dimensions. Pretest participants' feedback helped us to enhance the clarity of the definitions. We also modified the anchoring of the rating scales (see below). The final 69 items were translated into English by two native English speakers and independently back-translated by two native German speakers. The resulting English version was translated into French, Italian, and Polish by native speakers. The list of the 69 items and the translations can be seen in Appendix 1.

## Main Study

### *Participants*

In total, 548 students from five different countries (Belgium, Germany, Italy, Poland, and the USA) participated. We excluded participants who were not native speakers (Belgium: 10; Germany: 3; Italy: 1; USA: 3) and participants with conspicuous response-patterns, e.g. only

positive scale-values, limited range, high number of missing values (Belgium: 7; Poland: 5; Germany: 9; Italy: 1; USA: 9). This left us with a final sample of  $N = 500$  (345 women, 155 men; age range: 18-45; mean age = 21.45,  $SD = 3.02$ ; Belgium:  $N = 173$  students [152 women, 21 men; age range 18-45.  $M = 20.45$ ,  $SD = 2.91$ ; all studying psychology]; Germany:  $N = 80$  students [46 women, 34 men; age range 18-39;  $M = 24.10$ .  $SD = 3.13$ ; 16% psychology students]; Italy:  $N = 78$  students [39 women, 39 men; age range 19-35,  $M = 22.77$ ,  $SD = 3.04$ ; 23% studying psychology]; Poland:  $N = 86$  students [44 women, 42 men; age range 19-24.  $M = 21.74$ ,  $SD = 1.36$ ; various fields of study]; US:  $N = 83$  students [64 women, 19 men, age range 18-29,  $M = 19.45$ ,  $SD = 1.71$ ; 81% psychology students]).

#### *Questionnaire and measures*

Participants received a questionnaire in the respective country's language. On the first page we asked them to provide demographic information (gender, age, study major, native language) and gave a brief introduction describing the study. On the second page participants rated the trait items with regard to valence and on the third and fourth page they rated the items' content (either agency or communion first). We constructed four versions of the questionnaire (one with 34 items, the other with the remaining 35 items; one with agency ratings prior to communion ratings, the other with communion ratings prior to agency ratings; valence ratings always came first) and assigned our participants randomly to one of these versions.

Participants answered the valence rating on a 7-point scale ranging from -3 (*negative*) through 0 (*neutral*) to +3 (*positive*). They answered the agency/communion ratings on scales which ranged from -3 = *lack of agency/communion* through 0 = *has nothing to do with agency/communion* to +3 = *presence of agency/communion*. The definition of agency reads as follows (cf. Bakan, 1966; Diehl et al., 2004; Meadows, 2005):

“Agency” refers to a person's striving to be independent, to control one's environment, and to assert, protect, and expand one's self. Agentic individuals are usually capable of high performance and are autonomous and individualistic; they like to lead and to dominate, are aspiring and strive to achieve their goals, even if they have to conquer obstacles. In an excessive fashion, agency shows up as a “hunger for power and superiority” and can manifest itself in aggressive and rude behavior, alienation, and rejection. A lack of “agency” manifests itself in, for instance, inactivity and apathy.

We also provided examples for the different facets of agency (presence of agency: *inquiring, aggressive*; lack of agency: *slow, aimless*; has nothing to do with agency: *funny*)

The definition of communion reads as follows (cf. Bakan, 1966; Diehl et al., 2004; Meadows, 2005):

“Communion” refers to a person’s striving to be part of a community, to establish close relationships with others, and to subordinate individual needs to the common good. “Communion” manifests itself in empathy and understanding, in cooperation and caring for others, as well as in moral behavior. In an excessive fashion, “communion” shows up as dependence of others, as lack of autonomy, and as self-neglect. A lack of “communion” manifests itself in, for instance, callousness and repellent behavior.

Again, we provided examples for the different facets (presence of communion: *likeable, sacrificially*; lack of communion: *cold, unscrupulous*; has nothing to do with communion: *sportive*).

The frequency of word occurrence of the 69 trait words was assessed on the basis of different national corpora for written language (Belgium: New, Pallier, Ferrand, & Matos, 2001; Germany: Belica & Keibel, 2007; Italy: CoLFIS [Corpus and Frequency Lexicon of Written Italian] available at [http://alphalinguistica.sns.it/CoLFIS/CoLFIS\\_Presentation.htm](http://alphalinguistica.sns.it/CoLFIS/CoLFIS_Presentation.htm), see also Laudanna, Thornton, Brown, Burani, and Marconi, 1995; Poland: Korpus Jezyka Polskiego Wydawnictwa Naukowego PWN [PWN corpus of Polish] available at <http://korpus.pwn.pl/>; USA: Davies, 2008). These corpora are not completely comparable across countries. However, rank order correlations showed that the frequencies correlated significantly across countries (exception: Polish – French,  $r_s = .15$ , *ns*; all others:  $.24 < r_s < .72$ ,  $ps < .06$ ).

## Results

### *Preliminary analyses*

*Order and gender effects.* We computed mean scores across all trait words for each participant and every rating dimension. We found no effect of order (agency first vs. communion first), all  $F_s(1, 480) < 1.20$ , *ns*. We also did not find any effects of gender, all  $F_s(1, 480) < 2.30$ , *ns*. We therefore pooled the data across gender and rating order.

### *Findings within countries*

For every country we computed the means and standard deviations for each trait word and for the valence and content ratings (see Table 1). Then we computed the intercorrelations between

the ratings both on the level of participants and on the level of items (trait words). Additionally we examined the associations between word frequencies and the trait-word ratings on the item level.

*Intercorrelations between the ratings on the level of participants.* Table 2 shows the intercorrelations per country between participants' ratings pooled across the two item lists ( $r$ s Fisher z-transformed). Participants' agency- and communion-ratings were positively correlated, most so in Poland and least in Germany. Across countries, the correlation of participants' agency- and communion-ratings was  $r = .29, p < .001$ . The positive correlation of both content ratings with valence is trivial. It means that positive agency ratings and positive communion ratings were accompanied by positive valence ratings (and vice versa). We also computed partial correlations between the agency and communion ratings controlling for valence (see also Table 2). Now the association between participants' agency- and communion-ratings became non-significant in three of the five countries.

*Interrater agreement.* We determined interrater agreement within countries by computing intraclass coefficients. These were all highly significant and ranged from a minimum of  $r = .47$  to a maximum of  $r = .78$  (all  $ps < .001$ ). The average interrater agreement was  $r = .54$  for agency,  $r = .51$  for communion, and  $r = .64$  for valence. Because of the satisfactory interrater agreement we decided to use the averaged ratings per item and country. The agency- and communion-ratings were normally distributed (Kolmogorov-Smirnov-tests,  $ns$ ). However, the valence ratings showed negatively skewed distributions for all countries ( $ps < .05$ , Kolmogorov-Smirnov-tests).

*Intercorrelations between the ratings on the level of trait words.* The intercorrelations of content and valence ratings on item level are reported in Table 3. We found negative correlations between the ratings of agency and communion. The more a trait was rated as agentic, the less was it rated as communal (only for Poland this relationship was not significant). Whereas studies with more representative samples of trait words showed positive first-order correlations (e.g. valence not controlled) of agency- and communion-ratings (cf. Abele & Wojciszke, 2007; Suitner & Maass, 2008; see also Yzerbyt, Kervyn & Judd, 2008, for ratings of behaviors), the present negative correlations are probably the result of our item selection, since we had specifically selected traits that were clearly distinct on the fundamental dimensions in the pretest.

We also checked whether our within-participants design, in which each participant rated the words both on agency and communion might have led to a contrast effect, hence inflating the negative relationship between agency and communion. Since we had varied the order of the ratings we could create a “quasi” between-participants design. We computed the correlations between the agency-ratings of participants who first rated the words on agency and the communion-ratings of participants who first rated the words on communion. These correlations between agency- and communion-ratings were smaller (Belgium:  $r_s = -.21$ ; Germany:  $r_s = -.30^{**}$ ; Italy:  $r_s = -.33^{**}$ ; Poland:  $r_s = -.04$ ; USA:  $r_s = -.15$ ) and became non-significant in three of the five countries. Therefore, the present negative correlations between the agency- and communion-ratings on item level have to be ascribed to the item-selection and to some extent also to a contrast-effect induced by the within-participants’ design.

Valence was positively correlated with communion (all  $ps < .001$ ), but it was not associated with agency, except for the Polish sample.

Table 4 shows the correlations between the item ratings and word frequencies. Since word frequencies are often reported on an ordinal level (word frequency classes) we computed rank-order correlations. In all countries, frequency of word occurrence was positively correlated with valence. In accord with the “Pollyanna Hypothesis” (Boucher & Osgood, 1969; Matlin & Stang, 1978) more frequent words were rated as more positive. The communion- and agency-ratings were not consistently correlated with word frequency. The small correlations between communion and frequency found for some of the samples can be accounted for by the association between communion and valence (see Table 3).

#### *Comparison between countries*

*Overall differences between countries.* The overall means for valence, agency, and communion differed significantly between countries; valence:  $F(4, 480) = 6.01$ ;  $p < .001$ ,  $\eta^2 = .09$ ; agency:  $F(4, 480) = 11.85$ ,  $p < .001$ ,  $\eta^2 = .05$ ; communion:  $F(4, 480) = 3.75$ ,  $p < .01$ ,  $\eta^2 = .03$ . The variances explained by country, however, were relatively small. Because of the differences in scale usage across countries we decided not to analyze means but ordinal-level data in form of ranks when comparing between countries.

*Rank order correlations.* The rank-order correlations (Spearman-rho) between the ratings in the five countries are listed in Table 5. Overall, we found highly significant correlations (all  $r_s > .77$ ,  $p_s < .001$ ) showing that the ratings of the trait words across the five countries were very similar, despite the significant cross-national differences in mean levels.

#### *Construction of item sets within and across the five languages*

In order to find out which items best represent the two content dimensions we followed a procedure suggested by Fiske et al. (2002). We computed cluster-analyses per country in order to determine the number of best-fitting clusters of traits (hierarchical cluster analyses; Ward's method). Although the ratings for valence, communion, and agency were correlated (see Table 3) we decided to include them all into the analyses. The most reasonable solution for all countries was a four-cluster solution (see Figure 1). which accounted for 52 of the 69 adjectives (75%).

One cluster comprised six negative adjectives ( $M = -1.34$  to  $-1.01$ ) which for all countries clearly express a lack of agency ( $M = -2.24$  to  $-1.65$ ): *insecure, shy, lazy, vulnerable, gullible, and chaotic*. It is interesting to note that some of these words (e.g. shy) were originally included as traits expressing a lack of communion.

The second cluster comprised eight negative trait words ( $M = -1.76$  to  $-.71$ ) which express a lack of communion ( $M = -2.13$  to  $-1.34$ ): *egoistic, obstinate, hardhearted, dogmatic, conceited, boastful, competitive, and dominant*. Again, it is noteworthy that words which were originally included as exaggerated forms of agency (*egoistic, dominant*) were rather rated as expressing a lack of communion.

The third cluster comprised 17 positive words ( $M = 1.63$  to  $2.00$ ) which clearly express the presence of agency ( $M = 2.15$  to  $2.39$ ): *active, determined, assertive, independent, persistent, rational, striving, industrious, able, intelligent, creative, capable, energetic, self-confident, ambitious, competent, and self-reliant*.

The fourth cluster included 21 traits ( $M = 1.72$  to  $2.23$ ) which express the presence of communion ( $M = 1.94$  to  $2.20$ ): *friendly, sensitive, moral, altruistic, warm, affectionate, caring, not hide emotions, seek harmony, trustworthy, loyal, honest, fair, sympathetic, sociable, tolerant, helpful, understanding, supportive, polite, and open*.

The 17 trait words belonging to different clusters across countries were *self-sacrificing*, *outgoing*, *reserved*, *communicative*, *considerate*, *broadminded*, *emotional*, *achievement-oriented*, *detached*, *vigorous*, *strong-minded*, *self-critical*, *perfectionist*, *consistent*, *reliable*, *makes decisions easily*, and *conscientious*.

From the trait words we then selected item sets which differed clearly in content, but which did not differ in valence and – if possible – also not in word frequency. We performed this selection both within and across languages.

*Belgium.* The set of positive agentic traits comprises *able*, *industrious*, *active*, *creative*, *independent*, *intelligent*, *rational*, *self-reliant*, *competent*, *vigorous*, and *perfectionist*; the set of positive communal traits comprises *polite*, *caring*, *helpful*, *loyal*, *sensitive*, *sympathetic*, *trustworthy*, *understanding*, *considerate*, *moral*, and *emotional*. Both sets did not differ in valence (agentic traits  $M = 1.99$ ; communal traits  $M = 1.97$ ;  $t < 1$ ), but in content (agency ratings: agentic traits  $M = 2.21$ ; communal traits  $M = -.21$ ;  $t(172) = 33.23$ ,  $p < .001$ ; communion ratings: agentic traits  $M = .35$ ; communal traits  $M = 2.03$ ;  $t(172) = 24.36$ ;  $p < .001$ ). The set of negative traits expressing a lack of agency comprises *self-sacrificing*, *shy*, *gullible*, and *lazy*; the set of negative traits expressing a lack of communion comprises *obstinate*, *dominant*, *dogmatic*, and *boastful* (valence: lack of agency traits  $M = -.85$ ; lack of communion traits  $M = -.83$ ;  $t < 1$ ; agency ratings: lack of agency traits  $M = -1.56$ ; lack of communion traits  $M = 1.29$ ;  $t(172) = 23.41$ ,  $p < .001$ ; communion ratings: lack of agency traits  $M = -.19$ ; lack of communion traits  $M = -1.17$ ,  $t(172) = 6.91$ ;  $p < .001$ ). Thus, trait words expressing a lack of agency were also rated as negative on the communion dimension, while trait words expressing a lack of communion were also rated as positive on the agency dimension.

*Germany.* The set of positive agentic traits comprises *able*, *active*, *creative*, *independent*, *intelligent*, *rational*, *self-reliant*, *perfectionist*, *persistent*, *strong-minded*, *assertive*, *consistent*, *capable*, *energetic*, and *determined*; the set of positive communal traits comprises *honest*, *polite*, *caring*, *helpful*, *loyal*, *sensitive*, *sympathetic*, *trustworthy*, *understanding*, *considerate*, *communicative*, *broadminded*, *sociable*, *supportive*, and *altruistic*. Both sets did not differ in valence (agentic traits  $M = 1.72$ ; communal traits  $M = 1.74$ ;  $t < 1$ ), but they differed in content

(agency ratings: agentic traits  $M = 2.11$ ; communal traits  $M = -.55$ ;  $t(79) = 26.26$ ,  $p < .001$ ; communion ratings: agentic traits  $M = .26$ ; communal traits  $M = 2.06$ ;  $t(79) = 18.47$ ;  $p < .001$ ). The set of negative traits expressing a lack of agency comprises *insecure*, *shy*, *gullible*, and *lazy*; the set of negative traits expressing a lack of communion comprises *detached*, *dominant*, *competitive*, and *egoistic* (valence ratings: lack of agency traits  $M = -1.28$ ; lack of communion traits  $M = -1.42$ ;  $t < 1$ ; agency ratings: lack of agency traits  $M = -1.99$ ; lack of communion traits  $M = 1.95$ ;  $t(79) = 24.42$ ,  $p < .001$ ; communion ratings: lack of agency traits  $M = -.17$ ; lack of communion traits  $M = -2.10$ ,  $t(79) = 11.47$ ;  $p < .001$ ).

*Italy*. The set of positive agentic traits comprises *able*, *active*, *creative*, *independent*, *intelligent*, *determined*, *rational*, *self-reliant*, *assertive*, *capable*, *competent*, *vigorous*, *striving*, and *ambitious*; the set of positive communal traits comprises *polite*, *caring*, *fair*, *open*, *helpful*, *loyal*, *sensitive*, *sympathetic*, *trustworthy*, *understanding*, *conscientious*, *self-sacrificing*, *supportive*, and *altruistic*. Both sets did not differ in valence (agentic traits  $M = 1.81$ ; communal traits  $M = 1.86$ ;  $t < 1$ ), but they differed in content (agency ratings: agentic traits  $M = 2.34$ ; communal traits  $M = -.39$ ;  $t(77) = 24.96$ ,  $p < .001$ ; communion ratings: agentic traits  $M = .39$ ; communal traits  $M = 2.18$ ;  $t(77) = 17.85$ ;  $p < .001$ ). The set of negative traits expressing a lack of agency comprises *shy*, *gullible*, and *vulnerable*; the set of negative traits expressing a lack of communion comprises *detached*, *egoistic*, and *dogmatic* (valence: lack of agency traits  $M = -.98$ ; lack of communion traits  $M = -1.10$ ;  $t < 1$ ; agency ratings: lack of agency traits  $M = -2.26$ ; lack of communion traits  $M = 1.27$ ;  $t(77) = 19.04$ ,  $p < .001$ ; communion ratings: lack of agency traits  $M = -.40$ ; lack of communion traits  $M = -1.74$ ,  $t(77) = 6.00$ ;  $p < .001$ ).

*Poland*. The set of positive agentic traits comprises *able*, *active*, *creative*, *independent*, *intelligent*, *rational*, *self-reliant*, *assertive*, *capable*, *competent*, *broadminded*, *ambitious*, *energetic*, *achievement oriented*, and *conscientious*; the set of positive communal traits comprises *polite*, *caring*, *open*, *helpful*, *loyal*, *sensitive*, *sympathetic*, *trustworthy*, *moral*, *affectionate*, *tolerant*, *warm*, *understanding*, *supportive*, and *altruistic*. Both sets did not differ in valence (agentic traits  $M = 2.03$ ; communal traits  $M = 2.04$ ;  $t(85) < 1$ ), but they differed in content (agency ratings: agentic traits  $M = 2.13$ ; communal traits  $M = .19$ ;  $t(85) = 17.33$ ,  $p < .001$ ; communion ratings: agentic traits  $M = .64$ ;

communal traits  $M = 2.12$ ;  $t(85) = 15.31$ ;  $p < .001$ ). The set of negative traits expressing a lack of agency comprises *shy*, *insecure*, *lazy*, and *vulnerable*; the set of negative traits expressing a lack of communion comprises *detached*, *egoistic*, *reserved* and *dogmatic* (valence: lack of agency traits  $M = -1.30$ ; lack of communion traits  $M = -1.22$ ;  $t < 1$ ; agency ratings: lack of agency traits  $M = -1.98$ ; lack of communion traits  $M = .48$ ;  $t(83) = 13.0$ ,  $p < .001$ ; communion ratings: lack of agency traits  $M = -.57$ ; lack of communion traits  $M = -1.65$ ,  $t(85) = 6.81$ ;  $p < .001$ ).

USA. The set of positive agentic traits comprises *able*, *active*, *creative*, *independent*, *intelligent*, *rational*, *self-reliant*, *striving*, *persistent*, *assertive*, and *determined*; the set of positive communal traits comprises *polite*, *caring*, *helpful*, *loyal*, *sensitive*, *sympathetic*, *trustworthy*, *tolerant*, *understanding*, *supportive*, and *altruistic* (valence: agentic traits  $M = 2.03$ ; communal traits  $M = 2.00$ ;  $t < 1$ ; agency ratings: agentic traits  $M = 2.21$ ; communal traits  $M = -.20$ ;  $t(82) = 18.68$ ,  $p < .001$ ; communion ratings: agentic traits  $M = .58$ ; communal traits  $M = 2.20$ ;  $t(82) = 12.65$ ;  $p < .001$ ). The set of negative traits expressing a lack of agency comprises *shy*, *detached*, and *vulnerable*; the set of negative traits expressing a lack of communion comprises *hardhearted*, *boastful*, and *obstinate* (valence: lack of agency traits  $M = -.87$ ; lack of communion traits  $M = -.75$ ;  $t < 1$ ; agency ratings: lack of agency traits  $M = -1.39$ ; lack of communion traits  $M = 1.13$ ;  $t(82) = 14.60$ ,  $p < .001$ ; communion ratings: lack of agency traits  $M = -1.10$ ; lack of communion traits  $M = -1.20$ ,  $t(82) < 1$ ).

*Selection of item-sets across the five languages.* We used the cluster-analytical findings as well as the valence ratings and word frequencies as criteria and tried to match agentic and communal trait words with regard to these criteria. For the selection of *positive* agentic and communal trait words this procedure was quite successful. Table 8 shows the sets of the eight positive agentic and the eight positive communal trait words which were widely comparable regarding valence and frequency of word occurrence for the five countries and languages analyzed here. The sets of positive agentic and communal traits differed significantly in regard to agency and communion, but not in regard to valence for all countries (see Table 6). The two sets also did not differ regarding the frequency of word occurrence in all five countries (Mann-Whitney-U tests; all  $Z_s < 1.37$ , *ns*). However, between the countries the means for the two item-sets differed (Kruskal-

Wallis tests; agency:  $\chi^2s(4; N = 500) > 15.79$ ,  $ps < .01$ ; communion:  $\chi^2s(4; N = 500) > 9.91$ ,  $ps < .05$ ; valence:  $\chi^2s(4; N = 500) > 10.05$ ,  $ps < .05$ ).

The selection of negative adjectives was more difficult, because only a small number of negative trait words was available and because in all countries adjectives expressing a lack of communion received significantly lower valence-ratings than adjectives expressing a lack of agency (paired t-test: all  $ts > 3.8$ ,  $ps < .001$ ). Furthermore, trait words expressing a lack of agency were also rated as negative on the communion dimension, while trait words expressing a lack of communion were rated as positive on the agency dimension (see Table 8). Therefore, we selected only four negative adjectives for each dimension. The sets of negative agentic and negative communal traits differ significantly in regard to agency and communion for all countries, but not with respect to valence for three of the five countries (see Table 7; exception: Belgium, Germany). The two sets also did not differ regarding the frequency of word occurrence in all five countries (Mann-Whitney-U tests; all  $Zs < 1.80$ ,  $ns$ ). Between the countries the means for both negative item-sets did not differ regarding communion (Kruskal-Wallis tests  $\chi^2s(4; N = 500) < 9.50$ ,  $ps > .05$ ), but regarding agency (Kruskal-Wallis tests  $\chi^2s(4; N = 500) > 9.50$ ,  $ps < .05$ ). Regarding valence there was a significant cross-national difference for the “lack of communion”-set (Kruskal-Wallis tests  $\chi^2s(4; N = 500) > 20.60$ ;  $p < .001$ ) but not for the “lack of agency”-set (Kruskal-Wallis tests  $\chi^2s(4; N = 500) = 7.71$ ,  $ns$ ).

### Discussion

The present study was intended to be a first step towards establishing standardized operationalizations of agency and communion within and between languages. These should take the possible confounding role of valence and frequency of word occurrence into account.

The data collected in five countries with five different languages yielded quite consistent findings. We found a positive correlation of a trait word's communal content and its valence, whereas the respective association with agentic content was smaller and in most cases not significant. Throughout the countries valence was correlated with word frequency (the Pollyanna principle; Boucher & Osgood, 1969; Matlin & Stang, 1978). Most importantly, the rank-order correlations of the trait words' agency-, communion-, and valence-ratings across countries were

very high with  $r_s > .77$ . Finally, the cluster-analytical findings showed that 75% of the trait words fell into the same clusters in all five countries. In our opinion, this is a nice cross-language confirmation for the “fundamental” dimensions.

In contrast to findings in the literature (e.g. Suitner & Maass, 2008; Yzerbyt et al., 2008) the present study revealed a negative first-order correlation between the agency ratings and the communion ratings. We account for this divergent finding by our item selection which was not intended to be representative but rather to be distinct with respect to the two content dimensions. Hence, the negative relationship is somewhat artificial and we would not expect such a high negative association if a more representative sample of adjectives is chosen. We also think that our definitions of the agency and communion, based on the work of Bakan (1966), probably suggest a negative correlation. While the definition of agency emphasizes autonomy, the definition of communion expresses the idea of dependence. Furthermore, “exaggerated” agency, for instance, *egoistic*, could also be regarded as a lack of communion and vice versa. Finally, our within-participants design, in which each participant rated the words both on agency and communion (as well as valence) led to a contrast effect, hence inflating the negative association between agency and communion. When we only analyzed answers that were given first (e.g. agency ratings first and communion ratings first), then the negative correlation between the agency and communion ratings of the trait words was considerably reduced. Despite these restrictions, the finding that agency and communion are negatively related if valence is controlled for is in line with previous research.

We chose items for the final item-sets which were comparable regarding valence, and clearly distinct regarding content. We also considered frequency of word occurrence in written language but we weighted this criterion less for several reasons. First, the word frequencies are assessed differently across countries, and hence their comparability is limited. Second, frequency of word occurrence is highly dependent on which corpus of written language is chosen. The corpora also differ between countries. Third, possibly not frequency of word occurrence in written language is crucial, but rather word frequency in spoken language. There are, however, only few data on word frequency in spoken language. Finally, as has been shown above (see Table 4) word frequency is

only marginally related to trait content and, hence, it is less important as a possible confounding variable than valence.

For each country we created item-sets of 11 to 15 positive agentic and communal trait-words, which are comparable regarding valence and are clearly related to only one of the fundamental dimension. Despite the above mentioned ambiguities in the definition of the fundamental dimensions it seems that the item ratings cover the fundamental dimensions quite well. There are traits belonging to competence and assertiveness, and there are traits belonging to warmth and morality.

We also created sets of 3-4 negative agentic and communal trait words, which were comparable regarding valence. However, the assignment of these negative trait words to the two fundamental dimensions was not as clear-cut: Whereas adjectives expressing a lack of agency were also rated as negative on the communion dimension, trait words expressing a lack of communion were also rated high on the agency dimension. Thus, on this negative pole, the two fundamental dimensions seemed to be confounded. As mentioned above, this could be due to our definitions of the two fundamental dimensions.

Integrating the findings for the different countries, we finally came up with a list of 24 trait words covering the fundamental dimensions. These cover the communion/warmth/morality dimension with positive items like “sensitive”, “caring”, “loyal”, or “understanding” and with negative items like “egoistic”, “hardhearted”. And they cover the agency/competence dimension with positive items like “assertive”, “intelligent”, “able”, or “self-reliant” and negative items like “shy” and “lazy”. The positive items suggested for agency and for communion do not differ in valence, and they also do not differ with respect to frequency of word occurrence in written language. Therefore they can serve as a basis for future operationalizations of the two fundamental dimensions. Regarding negative trait words the agreement was less good and further research is needed to create comparable sets of negative agentic and communal trait words.

Although the items in the final selection were not identical with the examples provided in the definitions, there is some overlap with the formulations in the definitions (e.g. “to be independent”, “assertive”, “caring for others”). Therefore, it is not surprising that the agreement was especially

high regarding these trait words. However, as these traits describe essential facets of the basic dimensions, we decided to keep them in the final selection.

Finally, we have to address two limitations. First, we performed the initial selection of trait words in the German language. Even though we thoroughly analyzed the trait words used in predominantly English studies, we nevertheless translated them into German and started with a German item-pool. Perhaps starting with an English or French item pool may have led to a slightly different selection of items. Second, albeit the definitions of agency and communion were derived from a well-established theory (Bakan, 1966) we think that future research should use definitions that exclude the implicit negative association between agency and communion suggested in the present definitions. Hence, the present findings are a first step towards establishing standard operationalizations but further steps have to follow.

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Table 1: Means and Standard Deviations of Trait Words in Five Countries and Languages.

Item	Belgium (French)						Germany						Italy						Poland						USA						
	V		A		C		V		A		C		V		A		C		V		A		C		V		A		C		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M
able	2.45	0.74	1.88	0.97	0.43	1.07	2.39	0.67	1.15	0.96	0.37	0.89	2.21	0.70	2.32	0.84	0.66	0.94	2.48	0.63	2.00	0.93	0.67	1.04	2.14	0.90	2.10	0.88	1.17	1.03	
achievement-oriented	0.11	1.24	2.67	0.65	-0.69	1.37	1.00	1.30	2.18	1.12	-0.51	1.32	0.63	1.29	2.93	0.27	-1.08	1.46	1.91	0.92	2.60	0.66	0.45	0.99	1.73	1.07	2.76	0.62	0.56	1.69	
active	2.18	0.73	2.58	0.75	1.49	1.20	2.03	0.96	2.62	0.59	1.56	1.05	1.98	0.92	2.35	1.08	1.55	0.96	2.42	0.70	2.44	0.70	1.74	1.20	2.54	0.55	2.29	1.03	1.41	1.22	
affectionate	2.31	0.60	-0.62	1.13	2.05	0.95	2.08	0.87	-0.76	1.10	1.90	0.94	2.13	0.88	-0.85	1.05	1.58	1.08	2.12	0.85	-0.05	1.33	1.72	1.05	2.32	0.79	-0.34	1.30	2.32	0.91	
altruistic	2.58	0.68	-0.98	1.57	2.75	0.54	1.00	1.30	-1.23	1.60	2.13	1.03	2.18	0.87	-1.18	1.28	2.50	0.96	1.37	1.07	-0.26	1.36	1.60	1.42	1.15	1.24	-0.29	1.65	1.27	1.41	
ambitious	1.65	0.95	2.74	0.77	-0.17	1.46	1.17	1.12	2.68	0.61	-0.32	1.17	1.08	1.17	2.79	0.41	-0.97	1.28	2.02	0.82	2.53	0.83	0.51	1.20	2.05	1.17	2.76	0.48	0.48	1.42	
assertive	1.48	1.05	2.64	0.67	0.05	1.46	1.69	0.89	2.79	0.47	-0.41	1.23	2.20	0.91	2.88	0.40	0.43	1.08	2.14	0.91	2.14	1.13	0.61	1.18	1.73	0.95	2.73	0.55	0.32	1.57	
boastful	-1.80	0.81	1.12	1.52	-1.92	1.11	-2.05	1.22	1.63	1.15	-2.05	1.01	-0.84	1.57	1.29	1.37	-1.18	1.45	-2.26	0.79	0.86	1.56	-2.07	1.31	-0.71	1.45	1.31	1.28	-1.21	1.82	
broadminded	2.71	0.55	0.21	1.66	2.61	0.73	1.63	1.34	-1.10	1.11	2.10	0.80	2.37	0.85	1.16	1.42	1.92	1.10	2.26	1.00	1.84	1.29	1.60	1.31	2.29	1.04	0.95	1.58	1.98	1.37	
capable	1.96	0.95	2.19	1.07	0.74	1.16	1.63	1.04	2.37	0.86	0.17	1.05	1.95	0.93	2.45	0.69	1.08	1.08	1.98	0.94	2.02	0.96	0.58	1.05	2.02	0.90	2.26	0.91	1.24	1.12	
caring	1.98	0.62	0.00	1.45	1.95	1.09	1.41	0.82	-1.00	1.26	2.10	0.82	1.98	0.77	-1.10	1.53	2.65	0.80	2.12	0.82	0.00	1.27	2.09	0.97	2.54	0.64	-0.27	1.23	2.59	0.63	
chaotic	-1.32	1.20	-2.06	1.13	-0.76	1.07	-0.61	1.32	-1.78	1.17	-0.12	1.08	-1.11	1.35	-1.89	1.23	-0.95	1.11	-1.67	0.94	-1.49	1.44	-0.64	1.19	-1.07	1.18	-0.12	1.38	-1.00	1.47	
communicative	2.27	0.70	0.65	1.63	2.59	0.59	1.95	0.94	1.59	1.25	2.26	1.16	2.13	0.85	1.50	1.26	2.00	1.06	2.63	0.49	1.95	0.92	2.42	0.66	2.37	0.70	1.37	1.26	2.51	0.84	
competent	2.00	0.83	2.22	1.04	0.58	1.12	1.73	0.90	1.41	1.07	0.33	0.94	1.95	0.80	2.21	0.99	0.61	1.13	2.05	0.87	1.91	0.95	0.74	1.08	1.81	1.17	1.98	1.05	1.12	1.13	
competitive	0.30	1.19	2.59	0.83	-1.45	1.47	-1.37	1.11	2.63	0.70	-2.07	1.25	0.50	1.35	2.71	0.52	-1.39	1.46	0.35	1.38	2.47	0.91	-1.33	1.74	0.71	1.25	2.73	0.55	-1.21	1.49	
conceited	-2.53	0.67	1.23	1.58	-1.72	1.23	-2.23	0.93	1.03	1.40	-1.97	1.14	-2.05	1.13	1.53	1.20	-1.50	1.32	-2.09	0.97	0.12	1.90	-2.00	1.02	-2.05	0.86	1.02	1.46	-2.24	0.89	
conscientious	1.89	0.80	1.86	1.14	0.91	1.17	1.78	0.85	0.61	1.70	0.78	0.96	1.26	1.16	0.58	1.35	1.32	1.13	1.88	0.82	1.70	1.21	1.19	1.18	1.02	1.35	0.14	1.60	1.24	1.28	
considerate	2.27	0.65	-0.65	1.25	1.89	0.99	1.69	0.86	-1.26	1.46	2.31	0.73	2.13	0.94	-0.35	1.42	1.55	1.08	1.81	0.77	1.07	1.12	0.60	0.98	2.41	0.67	-0.44	1.34	2.29	1.01	
consistent	1.41	0.97	1.24	1.49	0.78	1.13	1.46	1.12	2.29	0.84	0.07	1.10	2.08	0.88	0.74	1.31	1.68	1.23	2.09	1.02	2.47	0.91	0.86	1.06	1.62	0.96	1.55	1.23	1.21	1.14	
creative	2.01	1.00	1.27	1.39	0.76	1.34	1.37	1.20	0.71	1.17	0.51	0.84	1.82	1.20	1.63	1.24	0.79	1.17	2.14	0.94	1.93	0.96	0.91	1.21	2.19	0.94	0.86	1.52	0.76	1.10	
decisive	1.43	1.15	2.48	0.74	0.51	1.49	1.37	1.16	2.05	1.16	0.22	0.69	0.26	1.43	1.42	1.85	0.16	1.39	1.35	1.31	2.09	1.21	0.65	1.04	0.60	1.11	1.76	1.16	0.21	1.24	
detached	-1.11	0.93	1.13	1.54	-1.97	1.23	-0.78	1.17	0.29	1.91	-1.71	1.42	-0.84	1.10	1.61	1.35	-2.03	1.28	-1.14	1.28	0.49	1.33	-1.49	1.78	-1.40	1.11	0.21	1.82	-2.17	0.99	
determined	1.92	0.84	2.76	0.73	0.56	1.26	1.92	0.96	2.64	0.54	0.08	1.09	2.35	0.74	2.73	0.51	0.53	1.01	2.42	0.63	2.63	0.58	0.98	1.18	2.46	0.71	2.88	0.40	0.88	1.31	
dogmatic	-0.65	1.19	0.51	1.18	-0.35	1.47	-2.10	1.10	1.36	1.29	-2.51	0.76	-0.67	1.38	0.38	1.46	-0.36	1.25	-0.93	1.18	0.40	1.37	-0.93	1.14	-0.41	1.16	0.93	1.25	-0.80	1.50	
dominant	-0.57	1.31	2.56	0.74	-1.60	1.44	-0.98	1.05	2.66	0.53	-1.78	1.26	-0.21	1.53	2.76	0.49	-1.89	1.37	-0.02	1.28	2.42	1.20	-1.16	1.76	-0.24	1.25	2.64	0.85	-1.31	1.51	
egoistic	-2.30	0.73	1.25	1.28	-2.45	0.93	-1.82	1.10	2.05	1.07	-2.37	0.94	-1.98	1.25	1.53	1.45	-2.50	0.75	-2.07	0.94	0.42	2.03	-2.47	0.88	-1.37	1.24	1.56	1.21	-1.83	1.08	
emotional	0.98	1.05	-0.67	1.25	1.36	1.19	0.66	1.02	-1.20	1.14	1.41	1.24	0.26	1.43	-1.47	1.37	1.37	1.55	0.33	1.27	-0.81	1.47	1.51	1.22	0.31	1.07	-0.67	1.36	1.10	1.46	
energetic	2.03	0.81	2.10	1.15	1.01	1.19	1.54	1.00	2.22	0.79	0.66	1.22	1.55	1.06	2.42	0.83	0.79	1.51	1.98	1.03	2.35	0.81	1.12	1.18	1.55	0.89	1.71	1.07	1.24	1.08	
fair	2.40	0.73	-0.08	1.39	1.98	1.15	2.51	0.93	-0.58	1.58	1.83	1.28	1.89	0.86	-0.50	1.41	1.95	1.18	2.53	0.70	0.09	1.21	2.23	1.02	2.12	0.94	0.12	1.45	2.05	0.99	
friendly	2.71	0.51	0.09	1.20	2.34	0.80	2.26	0.79	0.38	1.09	2.33	0.77	2.25	0.71	0.15	1.21	2.23	0.80	2.70	0.46	0.81	1.16	2.49	0.51	2.93	0.26	0.05	1.30	2.59	0.89	
gullible	-0.77	1.24	-1.56	1.25	0.08	1.25	-1.27	1.18	-1.68	1.15	0.32	1.15	-1.71	1.14	-2.26	0.98	-0.26	1.57	-1.53	1.10	-1.88	1.31	0.30	1.63	-1.24	1.10	-1.66	1.20	0.14	1.35	
hardhearted	-2.25	0.76	0.83	1.31	-2.29	0.82	-2.05	1.14	0.90	1.39	-2.18	0.91	-0.48	1.45	1.95	1.15	-1.15	1.29	-2.49	0.77	0.09	1.73	-2.42	0.73	-1.10	1.51	1.39	1.39	-1.66	1.61	
helpful	2.17	0.80	-0.67	1.21	2.52	0.66	2.41	0.87	-1.07	1.29	2.66	0.57	2.11	0.83	-0.42	1.45	2.76	0.49	2.19	0.79	-0.21	1.50	2.72	0.45	2.43	0.74	-0.10	1.48	2.69	0.60	

Item	Belgium (French)						Germany						Italy						Poland						USA						
	V		A		C		V		A		C		V		A		C		V		A		C		V		A		C		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M
honest	2.64	0.59	0.04	1.35	2.26	0.80	2.54	0.74	-0.71	1.36	1.83	1.22	2.58	0.86	-0.71	1.43	2.34	0.78	2.74	0.54	0.26	1.17	2.05	0.87	2.71	0.51	0.40	1.06	2.12	0.89	
independent	1.66	0.97	2.80	0.54	-1.64	1.47	2.51	0.56	2.72	0.51	0.05	1.39	1.95	0.96	2.65	1.10	-0.83	1.58	1.93	0.91	2.42	0.88	-0.49	1.50	2.27	0.90	2.90	0.37	-1.07	1.65	
industrious	2.20	0.78	2.72	0.61	1.06	1.31	1.90	0.88	2.46	0.82	0.72	1.15	0.48	1.26	2.33	0.94	0.28	1.40	2.44	0.59	2.44	0.85	1.12	1.28	1.49	0.90	2.44	1.07	0.61	1.66	
insecure	-1.51	0.94	-0.37	1.50	-0.47	1.22	-1.18	0.97	-2.13	1.26	-0.41	1.07	-1.50	1.06	-2.35	1.08	0.23	1.49	-0.74	1.22	-1.95	1.27	-0.79	1.15	-1.73	0.87	-2.07	1.08	-0.61	1.34	
intelligent	2.38	0.73	2.07	1.09	0.63	1.09	2.29	0.84	1.32	1.29	0.44	0.78	2.42	0.89	2.21	0.91	1.16	1.28	2.44	0.73	2.19	1.01	0.77	1.00	2.55	0.74	2.12	1.09	1.07	1.05	
lazy	-1.96	0.83	-2.42	0.95	-1.07	1.35	-1.92	1.18	-2.44	0.97	-1.08	1.42	-1.48	1.04	-2.45	1.13	-1.03	1.21	-1.98	0.71	-2.19	1.10	-1.16	1.09	-2.00	1.05	-2.32	1.25	-1.61	1.18	
loyal	2.46	0.69	0.22	1.39	2.45	0.74	2.21	1.32	-0.23	1.37	2.10	0.88	2.58	0.71	-0.88	1.07	2.28	0.85	2.49	0.67	0.65	1.43	2.37	0.79	2.80	0.51	0.00	1.40	2.68	0.57	
moral	1.98	0.98	0.34	1.31	1.95	0.94	0.69	1.42	-0.51	1.27	1.21	1.22	1.65	1.14	-0.78	1.29	1.58	0.98	2.52	0.74	0.42	1.28	1.70	0.94	2.34	0.76	0.12	1.75	2.39	1.00	
not hide emotions	1.27	1.08	-0.57	1.47	0.95	1.35	0.95	1.19	-1.26	1.14	1.54	1.07	0.98	1.33	-1.43	1.30	1.23	1.64	1.21	1.10	-0.19	1.22	1.16	1.09	0.68	1.08	0.27	1.73	0.73	1.40	
obstinate	-0.26	1.54	0.88	1.26	-0.70	1.17	-1.46	1.14	1.44	1.17	-2.10	0.97	-0.05	1.40	2.43	0.68	-0.78	1.14	-0.05	1.17	1.86	1.37	-1.02	1.34	-0.49	0.81	0.51	1.29	-0.73	1.12	
open	2.58	0.60	0.06	1.53	2.67	0.81	1.54	1.21	0.07	1.10	1.90	0.92	1.87	1.09	0.45	1.48	2.05	0.98	1.95	0.95	0.77	1.56	2.14	1.19	1.57	0.91	0.29	1.35	2.00	0.96	
outgoing	-0.32	1.22	-0.38	1.32	-0.38	1.44	1.43	1.06	0.50	1.38	2.34	0.85	1.61	1.31	1.11	1.48	1.39	1.57	1.14	0.91	1.40	1.26	0.93	1.50	2.14	0.98	1.49	1.34	1.93	1.22	
perfectionist	1.30	0.97	2.49	1.03	0.20	1.41	0.49	1.14	2.03	0.87	-0.10	0.88	0.43	1.47	2.15	0.93	0.05	1.11	1.44	0.98	2.02	1.01	0.67	1.02	0.27	1.48	2.22	1.17	-0.24	1.39	
persistent	1.58	0.80	2.06	1.06	0.34	1.09	1.95	0.86	2.36	0.58	0.72	1.07	0.28	1.41	1.78	0.89	0.23	1.35	2.21	0.67	2.42	0.82	1.09	1.04	1.10	1.32	2.44	1.14	0.61	1.46	
polite	2.14	0.84	0.39	1.10	1.70	1.30	1.83	1.11	-0.07	1.13	1.71	0.96	2.00	1.16	0.13	1.36	1.92	0.91	1.91	0.97	0.14	1.21	2.09	1.11	1.81	0.89	-0.14	1.57	2.12	0.94	
rational	1.46	1.02	1.80	1.13	0.41	1.30	0.92	1.17	1.49	1.34	0.11	0.86	1.33	0.92	1.73	1.26	0.53	1.30	1.53	0.77	1.29	1.20	0.74	0.95	2.02	0.94	1.37	1.58	1.24	1.28	
reliable	1.73	0.98	1.34	1.38	1.17	1.33	2.56	0.67	-0.02	1.31	2.29	0.72	2.39	0.59	0.45	1.45	2.21	0.84	2.44	0.70	1.35	1.15	1.42	1.18	2.57	0.55	0.57	1.43	2.33	0.90	
reserved	-0.14	1.09	-0.38	1.47	-0.78	1.44	-0.32	0.96	-1.41	1.30	-0.71	1.38	-0.24	1.17	0.11	1.29	-1.00	1.07	-0.79	1.04	0.72	1.40	-1.70	1.21	-0.31	1.07	-0.64	1.61	-0.81	1.17	
seek harmony	1.96	0.79	0.12	1.22	2.33	0.84	0.82	1.27	-1.26	1.25	1.36	1.56	1.53	1.01	-0.40	1.01	2.05	0.99	1.14	1.10	0.21	1.19	1.02	1.10	1.71	1.08	-0.46	1.47	2.28	1.18	
self-confident	1.67	1.01	2.11	1.13	0.85	1.12	1.51	1.05	2.61	0.80	0.20	1.23	1.29	1.14	2.87	0.34	0.50	1.56	1.51	1.24	2.70	0.60	0.74	1.43	2.26	0.91	2.69	0.87	1.24	1.43	
self-critical	1.61	1.15	0.63	1.75	0.47	1.38	1.72	0.92	0.44	1.68	0.92	1.11	1.78	1.07	0.25	1.55	0.53	1.38	1.40	0.85	0.81	1.50	0.47	0.98	0.00	1.38	1.51	1.42	-0.12	1.52	
self-reliant	2.12	0.90	2.73	0.56	-0.70	1.75	1.71	0.87	2.68	0.65	0.05	1.30	1.87	0.91	2.76	0.43	-0.47	1.57	1.52	1.29	2.40	0.79	-1.51	1.35	1.60	1.01	2.81	0.55	-0.69	1.51	
self-sacrificing	-0.31	1.42	-0.48	1.37	0.20	1.63	0.05	1.45	-0.82	1.86	1.79	1.24	1.18	1.48	0.00	2.06	2.43	0.81	1.88	0.88	0.60	1.64	2.33	0.89	1.32	1.40	-0.78	2.06	2.24	0.89	
sensitive	1.45	0.80	-0.75	1.29	1.63	0.91	0.31	1.54	-1.21	1.19	1.10	1.14	1.95	1.04	-1.03	1.23	1.70	0.91	1.84	0.81	-0.57	1.45	1.65	1.19	0.59	1.34	-0.76	1.39	1.10	1.46	
shy	-0.58	0.83	-1.84	1.06	-0.60	1.32	-0.79	1.06	-2.38	0.75	-0.46	1.19	-0.65	0.92	-2.25	0.95	-0.58	1.03	-0.64	0.85	-1.77	1.15	-0.88	1.15	-0.59	0.81	-1.98	1.01	-1.12	1.27	
sociable	2.56	0.58	-0.04	1.63	2.80	0.52	1.54	1.10	0.02	1.08	2.44	0.71	2.03	0.79	0.66	1.65	2.71	0.69	1.91	1.00	0.28	1.39	2.56	0.83	2.05	0.85	1.21	1.35	2.74	0.45	
striving	1.31	1.10	2.45	0.82	0.22	1.24	1.13	1.17	2.36	0.78	0.03	1.09	1.13	1.28	2.55	0.60	0.35	1.41	0.79	1.30	1.95	1.32	0.40	1.33	1.46	0.95	2.56	0.74	0.71	1.57	
strong-minded	1.96	0.92	2.42	0.77	0.17	1.38	1.77	1.01	2.71	0.52	-0.49	1.19	1.35	1.05	2.48	0.88	0.03	1.37	-0.26	1.47	1.84	1.51	-1.44	1.31	2.00	1.07	2.76	0.62	-0.34	1.62	
supportive	2.12	0.73	-0.51	1.06	2.44	0.69	1.49	1.00	-0.95	1.09	2.15	0.82	1.13	1.28	-0.27	1.56	1.87	1.14	2.05	0.92	-0.19	1.30	2.74	0.50	2.10	0.93	-0.26	1.19	2.52	0.71	
sympathetic	1.71	0.78	-0.81	1.28	2.39	0.79	2.07	0.85	-1.39	1.28	2.02	1.23	1.08	1.30	-0.53	1.43	2.21	1.17	1.72	0.93	-0.19	1.26	1.88	0.98	1.67	0.85	-0.76	1.38	2.38	0.79	
tolerant	2.40	0.88	-0.62	1.28	2.34	1.00	2.10	1.09	-0.90	1.22	2.17	0.95	2.29	0.73	-0.34	1.60	2.63	0.67	2.02	1.01	-0.16	1.34	2.56	0.80	1.86	1.05	-0.10	1.38	2.05	1.13	
trustworthy	2.37	0.69	0.81	1.54	1.95	0.96	2.31	0.80	1.26	1.25	1.74	1.14	2.40	0.81	0.23	1.54	2.15	0.98	2.58	0.54	1.02	1.22	2.37	0.69	2.88	0.33	0.34	1.65	2.41	0.87	
understanding	2.30	0.61	-0.24	1.22	2.43	0.89	1.80	0.87	-1.15	0.99	2.25	0.78	2.00	0.94	-0.37	1.42	2.45	0.76	1.86	0.74	1.02	1.34	2.07	0.99	2.24	0.79	0.17	1.48	2.61	0.59	
vigorous	1.80	0.78	2.01	0.95	0.54	1.15	0.54	1.12	2.44	0.55	-0.33	1.24	1.18	1.11	1.55	1.11	0.10	1.06	2.16	0.78	1.91	0.84	1.21	1.06	0.71	1.23	2.29	0.87	-0.22	1.37	

Item	Belgium (French)						Germany						Italy						Poland						USA						
	V		A		C		V		A		C		V		A		C		V		A		C		V		A		C		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M
vulnerable	-0.77	1.33	-1.65	1.27	-0.11	1.34	-0.29	1.23	-1.83	1.14	0.44	1.30	-0.95	1.45	-2.29	1.01	-0.16	1.87	-1.48	0.97	-2.00	1.34	-0.19	1.48	-0.90	1.38	-1.86	1.39	0.00	1.62	
warm	2.72	0.55	-0.19	1.25	2.36	0.79	2.33	0.90	-0.26	1.19	2.26	0.88	1.25	1.10	0.18	1.26	1.20	1.09	1.95	0.84	0.37	1.09	1.84	1.11	2.46	0.64	0.15	1.33	2.22	0.88	

Note. Scales ranged from -3 to +3. A: agency rating; C: communion rating; V: valence rating

Table 2

Correlations of Participants' Agency-, Communion-, and Valence-Ratings within countries (Fisher z-standardized *rs* averaged across the two item lists).

	Belgium (N = 173)		Germany (N = 80)		Italy (N = 78)		Poland (N = 86)		USA (N = 83)	
	A	C	A	C	A	C	A	C	A	C
C	.34***		.02		.31*		.50***		.26*	
V	.27**	.32**	.12	.19	.21	.35**	.40***	.35***	.33**	.20
AC <sub>part</sub> *		.28**		.01		.22		.43***		.22

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; A = Agency. C = Communion. V = Valence; AC<sub>part</sub> = correlation of agency and communion with valence ratings partialled out

Table 3

Correlations of the Trait Words' Agency-, Communion-, and Valence-Ratings within countries (Unit of Analysis:  $N = 69$  trait words).

	Belgium		Germany		Italy		Poland		USA	
	A	C	A	C	A	C	A	C	A	C
C	-.29*	—	-.42**	—	-.35***	—	.01	—	-.18	—
V	.19	.82***	.12	.77***	.18	.76***	.48**	.82***	.30	.82***

Note. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; A = Agency, C = Communion, V = Valence

Table 4

Rank-order correlations (Spearman-rho) of Word Frequencies with Agency-, Communion-, and Valence-Ratings within Countries.

	Correlation of Word Frequency with		
	Agency	Communion	Valence
Belgium	-.06	.03	.12
Germany	-.05	.23	.42**
Italy	.13	.05	.21
Poland	.13	.23	.29*
USA	-.03	.24	.37**

Note. \*\*p < .01

Table 5

Rank-order correlations (Spearman-rho) of the Agency-, Communion-, and Valence Ratings between Countries.

	Agency					Communion					Valence				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 Belgium		.93	.91	.89	.92		.87	.91	.90	.90		.79	.83	.78	.81
2 Germany			.92	.86	.94			.90	.87	.90			.78	.80	.81
3 Italy				.88	.92				.91	.93				.79	.85
4 Poland					.87					.90					.83
5 USA															

Note. For all  $r_s p < .001$

Table 6

Agency, Communion, and Valence Means for agentic and communal item-sets

	Belgium (n = 173)			Germany (n = 80)			Italy (n = 78)			Poland (n = 86)			USA (n = 83)		
	Set 1	Set 2	t(172)	Set 1	Set 2	t(79)	Set 1	Set 2	t(77)	Set 1	Set 2	t(85)	Set 1	Set 2	t(82)
<b>A</b>	2.21	-.14	29.62; p<.001	1.92	-.61	21.49, p<.001	2.32	-.50	22.22, p<.001	2.10	.24	14.39, p<.001	2.14	-.19	17.75, p<.001
<b>C</b>	.19	2.13	25.95; p<.001	.33	1.97	15.85, p<.001	.47	2.26	16.64, p<.001	.43	2.16	15.68, p<.001	.53	2.32	14.34, p<.001
<b>V</b>	1.98	2.07	1.86; ns	1.87	1.80	< 1, ns	1.97	2.02	< 1, ns	2.07	2.08	< 1, ns	2.13	2.12	< 1, ns

Note. A = Agency, C = Communion, V = Valence

Set 1: able, active, assertive, creative, independent, intelligent, rational, self-reliant

Set 2: caring, helpful, loyal, polite, sensitive, sympathetic, understanding, trustworthy

Table 7

Agency, Communion, and Valence Means for the negative item-sets

	Belgium (n = 171)			Germany (n = 79)			Italy (n = 78)			Poland (n = 86)			USA (n = 83)		
	Set 3	Set 4	t (170)	Set 3	Set 4	t (78)	Set 3	Set 4	t (77)	Set 3	Set 4	t (84)	Set 3	Set 4	t (82)
<b>A</b>	-1.60	1.85	28.06; p<.001	-2.07	2.01	29.92; p<.001	-2.32	2.20	28.77; p<.001	-1.98	1.30	14.99; p<.001	-1.99	1.99	22.45; p<.001
<b>C</b>	-.40	-1.86	11.82; p<.001	-.09	-1.97	10.21; p<.001	-.31	-1.80	5.33; p<.001	-.57	-1.73	5.33; p<.001	-.55	-1.61	4.74; p<.001
<b>V</b>	-1.05	-1.43	3.00; p<.01	-.79	-1.50	5.11; p<.001	-1.08	-.87	1.08; ns	-1.30	-1.13	<1	-1.17	-.86	1.78; p<.08

Note. A = Agency, C = Communion, V = Valence

Set 3: insecure, lazy, shy, vulnerable

Set 4: conceited, dominant, egoistic, hardhearted

Table 8. The Final Item Sets. Means Across All Samples.

Item	Agency <i>M</i>	Communion <i>M</i>	Valence <i>M</i>
Agentic Words			
able	1.88	.62	2.36
active	2.48	1.54	2.22
assertive	2.63	.18	1.79
creative	1.28	.75	1.93
independent	2.71	-.94	1.99
intelligent	2.00	.78	2.41
rational	1.58	.58	1.46
self-reliant	2.68	-.68	1.83
Communal Words			
caring	-.38	2.22	2.00
helpful	-.52	2.64	2.25
loyal	.01	2.39	2.50
polite	.15	1.87	1.98
sensitive	-.84	1.47	1.27
sympathetic	-.75	2.22	1.67
trustworthy	.74	2.10	2.49
understanding	-.13	2.37	2.09
Lack of agency			
insecure	-1.53	-.43	-1.36
lazy	-2.37	-1.17	-1.89
shy	-2.00	-.71	-.64
vulnerable	-1.87	-.02	-.86
Lack of communion			
conceited	1.02	-1.86	-2.25
dominant	2.59	-1.55	-.43
egoistic	1.33	-2.35	-1.98
hardhearted	.99	-2.00	-1.78

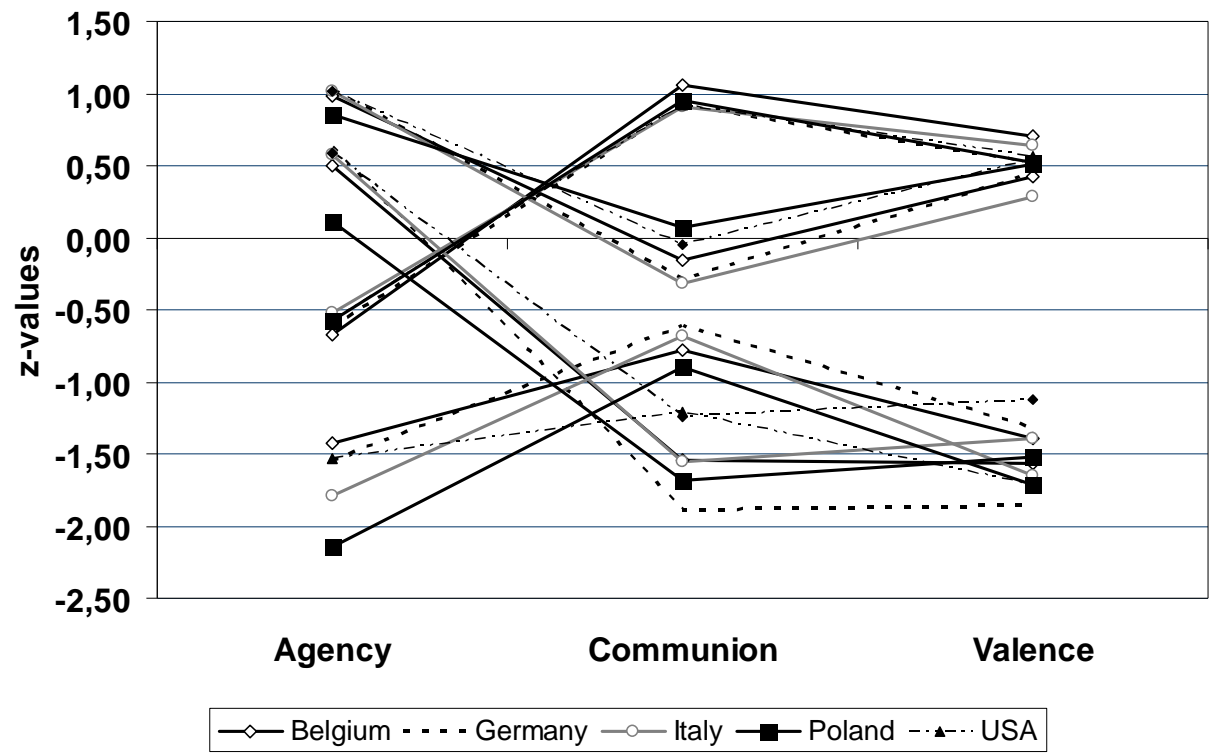
Note. Scales ranged from -3 to +3.

Figure Caption.

Figure 1.

Cluster Profiles for the four cluster solution in the five countries

Figure 1



## Appendix 1: Alphabetical list of trait adjectives in the five languages

English	French	German	Italian	Polish
able	doué	klug	abile	Zdolny
achievement-oriented	orienté vers les résultats	leistungsorientiert	orientato al successo	Z potrzeba osiagniec
active	actif	aktiv	attivo	Aktywny
affectionate	affectueux	liebepoll	affettuoso	Uczuciowy
altruistic	altruiste	uneigennützig	altruista	Altruista
ambitious	ambitieux	ehргеизиг	ambizioso	Ambitny
assertive	sûr de soi	durchsetzungsfähig	deciso	Asertywny
boastful	vantard	überheblich	vanitoso	Próźny
broadminded	ouvert	großzügig	di mente aperta	Otwarty umysl
capable	capable	leistungsfähig	capace	Uzdolniony
caring	prévenant	fürsorglich	attento agli altri	Troskliwy
chaotic	désorganisé	chaotisch	confusionario	Chaotyczny
communicative	communicatif	kommunikativ	comunicativo	Komunikatywny
competent	compétent	kompetent	competente	Kompetentny
competitive	compétitif	konkurrenzbetont	competitivo	Rywalizujacy
conceited	prétentieux	eingebildet	presuntuoso	Zarozumialy
conscientious	consciencieux	gewissenhaft	coscienzioso	Sumienny
considerate	attentionné	rücksichtsvoll	rispettoso	Rozważny
consistent	consistant	konsequent	coerente	Konsekwentny
creative	créatif	kreativ	creativo	Twórczy
detached	distant	distanziert	distaccato	Samotny
determined	déterminé	zielstrebig	determinato	Zdecydowany
dogmatic	dogmatique	rechthaberisch	rigido	Dogmatyczny
dominant	dominant	dominant	dominante	Dominujacy
egoistic	égoïste	egoistisch	egoista	Egoista
emotional	émotif	emotional	emotivo	Emocjonalny
energetic	énergique	tatkräftig	energico	Energiczny
fair	juste	gerecht	giusto	Sprawiedliwy
friendly	sympathique	freundlich	socievole	Przyjazny
gullible	naïf	leichtgläubig	credulone	Latwowierny
hardhearted	insensible	hartherzig	duro	Bez serca
helpful	serviable	hilfsbereit	disponibile	Pomocny
honest	honnête	ehrlich	onesto	Uczciwy
independent	indépendant	selbständig	indipendente	Niezalezny
industrious	endurant	fleißig	industrioso	Pracowity
insecure	anxieux	unsicher	insicuro	Niepewny
intelligent	intelligent	intelligent	intelligente	Inteligentny
lazy	fainéant	faul	pigro	Leniwy
loyal	loyal	treu	leale	Lojalny
makes decisions easily	prend facilement les décisions	entscheidungsfreudig	prende le decisioni facilm.	Latwo podejmuje decyzje
moral	moral	moralisch	morale	Moralny
not hide emotions	ne cache pas ses émotions	geföhlsbetont	non nasconde le emozioni	Nie ukrywajacy uczuc
obstinate	opiniâtre	stur	ostinato	Uparty
open	ouvert	offen	aperto	Otwarty
outgoing	affable	kontaktfreudig	estroverso	Bezposredni
perfectionistic	perfectionniste	perfektionistisch	perfezionista	Perfekcjonista
persistent	travailleur	ausdauernd	persistente	Wytrwaly
polite	poli	höflich	educato	Uprzejmy
rational	rationnel	rational	razionale	Racjonalny
reliable	crédible	verlässlich	affidabile	Rzetelny
reserved	réservé	zurückhaltend	riservato	Nieufny
seek harmony	cherche l'harmonie	harmoniebedürftig	cerca l'armonia	Poszukujacy harmonii
self-confident	plein d'aplomb	selbstsicher	sicuro di se	Pewny siebie
self-critical	critique à propos de soi	selbstkritisch	autocritico	Samokrytyczny
self-reliant	autonome	selbstbewusst	autonomo	Samowystarczalny

self-sacrificing	plein d'abnégation	aufopfernd	sacrifica se stesso/a	Poswiecający się
sensitive <sup>1</sup>	susceptible	sensibel	sensibile	Wrażliwy
shy	timide	schüchtern	timido	Niesmiały
sociable	sociable	gesellig	socievole	Towarzyski
striving	tenace	strebsam	combattivo	Z napedem
strong-minded	fort	willensstark	risoluto	Nieustępliwy
supportive	psychologiquement aidant	unterstützend	supportivo	Wspierający innych
sympathetic	compatissant	einfühlsam	empatico	Miły
tolerant	tolérant	tolérant	tollerante	Tolerancyjny
trustworthy	fiabile	zuverlässig	fiducioso	Godzien zaufania
understanding	compréhensif	verständnisvoll	comprensivo	Rozumiejący
vigorous	vigoureux	energisch	vigoroso	Zywotny
vulnerable	vulnérable	verletzlich	vulnerabile	Nieodporny
warm	chaleureux	herzlich	caldo	Ciepły