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The Bigger one of the “Big Two”?
Preferential Processing of Communal Information

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Abstract

An important aim of person perception is to guide people in their actions towards others and an especially important question in this regard is whether to approach a target or not. A target's traits can be differentiated into the "Big Two" fundamental content dimensions of agency and communion. Four studies test the hypothesis that relative to agentic traits communal traits - which can also be conceptualized as "other-profitable" traits - are processed preferentially because they convey more information relevant for approach vs. avoidance decisions. Across four studies, we found consistent support for this preferential processing hypothesis. Communal trait words were recognized faster (Study 1) and categorized faster with regard to valence than agentic trait words (Study 2); communal traits were inferred faster from behavior descriptions than agentic traits (Study 3); and finally, communal traits were mentioned prior to agentic ones in spontaneous descriptions of another person (Study 4). Throughout these studies the stimuli's valence (positive or negative words or behaviors) did not moderate this processing speed advantage of communal information. Participants' responses in Study 4, however, were more valence-driven for the communion dimension than for the agency dimension.

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The Bigger one of the “Big Two”?

Preferential Processing of Communal Information

Imagine that you are at a party with quite a few people that you have never seen before. You look around, walk up to one of these people and start a conversation. Why did you choose this person and why not another one? What was the difference in the perception of this person compared to the others? Social psychological research suggests that besides physical appearance there are certain traits and characteristics that we infer from a target's behavior that attract us more than others. Solomon Asch (1946) was the first to show that people differentially weight traits when forming an overall impression. He found that all other traits being equal, “warm” persons were evaluated much more positively than “cold” persons (see also Kelley, 1950). In the party example you might have approached a person who “looked friendly”, and the impression of “friendliness” might have guided your choice.

We propose here that in person perception information on traits such as “warm” or “friendly” is processed preferentially to information regarding other traits and we will present a series of studies testing this prediction. Why should traits like “warm”, “friendly”, or “trustworthy” be most important for our impression of other people? According to a functional approach to person perception “perceiving is for doing” (Fiske, 1992) and its primary purpose is to guide people in their actions (Dunning, 2004; Heider, 1958; Zebrowitz & Collins, 1997). Perceivers first of all want to know whether another person is benevolent and whether it is safe to approach this person. Warmth, friendliness, and trustworthiness (and their opposites) provide important information for potential interaction partners who try to infer a person's benevolence or more generally his or her intentions towards others. Accordingly, these traits should be most relevant for approach vs. avoidance decisions (Fiske, 1992; Peeters, 2001; Peeters & Czapinski, 1990; Wojciszke, Bazinska, & Jaworski, 1998).

Traits can be organized into two fundamental content dimensions (Abele & Wojciszke, 2007; Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, & Glick, 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Peeters, 2008) which have also been called the “Big Two” (Paulhus & Trappnell, 2008). These are the dimensions of *communion* and *agency* (also referred to as

warmth and competence; Bakan, 1966; Cuddy et al. 2008; Fiske, Cuddy, Glick, & Xu, 2002; Judd et al., 2005; Paulhus & Trapnell, 2008; see also Peeters, 1992; Rosenberg, Nelson, & Vivekananthan, 1968; Wojciszke, 2005). The organization of traits into these fundamental dimensions is not incidental but reflects basic goals of social information processing, namely forming and maintaining social connections (communion) and pursuing goals and manifesting skills and accomplishments (agency; Fiske et al., 2007; Ybarra et al., 2008). The above traits of “warmth”, “friendliness”, and “trustworthiness” (and their opposites) are examples of the content dimension of communion. The content dimension of agency comprises traits like “ambitious”, “competent”, or “self-confident” (and their opposites).

In addition to being a classification of content, the dimensions of communion and agency can also be distinguished with respect to the social value they have, i.e., their “profitability” for other people interacting with the target vs. their profitability for the trait possessor him-/herself (Abele & Wojciszke, 2007; Peeters, 2001, 2008; Peeters & Czapinski, 1990; see also Beauvois & Dubois, 2009). Communal traits tend to be *other-profitable* because they inform the perceiver about attributes of the target that first and foremost have (positive or negative) consequences for other people interacting with the target. Agentic traits tend to be *self-profitable* because they first and foremost have (positive or negative) consequences for the trait possessor and the pursuit of his or her goals (see Abele & Wojciszke, 2007).

Since communal traits are most likely to have consequences for people interacting with a target they should be most relevant for person perception and for forming a behavioral tendency to approach vs. to avoid a person. Of course agentic traits may also be relevant for interaction partners' approach or avoidance tendencies in some contexts (for example, “intelligent” might be an important trait influencing who we ask for help with a complex problem). However, since communion is more closely linked to other-profitability than agency it should be more strongly connected to approach vs. avoidance tendencies. If one primary aim of person perception is to guide one's actions with regard to approach vs. avoidance, then other people's communal traits should be particularly relevant in person perception.

In line with this reasoning, numerous studies since Asch's (1946) and Kelley's (1950) classic experiments have shown that a target's communal traits receive higher weight in forming an overall impression than his/her agentic traits, an effect often referred to as the "primacy" of communion (e.g., Abele & Wojciszke, 2007; De Bruin & Van Lange, 1999, 2000; Fiske et al., 2007; Leach, Ellemers, & Barreto, 2007; Wojciszke et al., 1998; Wojciszke & Abele, 2008; Ybarra, et al., 2008). For instance, Wojciszke and colleagues (1998) have shown that self-generated personality traits are significantly more related to the communion dimension than to the agency dimension (see also Uchronski, 2008; Wojciszke & Abele, 2008). A target's communal traits generally influence attitudes towards him/ her more than his/ her agentic traits (Abele & Wojciszke, 2007; Cislak & Wojciszke, 2008; De Bruin & Van Lange, 1999, 2000). Communal traits determine the resource value of another person's desired attributes more than agentic traits (Scholer & Higgins, 2008) and are also perceived as having more predictive power for the target's future behavior than agentic traits (De Bruin & Van Lange, 1999; Kenworthy & Tausch, 2008). Moreover, communal information has a stronger impact on group perception and stereotypes than agentic information (Cuddy et al., 2008; Fiske et al., 2002; Leach et al., 2007).

Preferential Processing of Communal information

The present research goes one step further. If others' communal traits are of primary relevance in person perception, then these traits should not only be weighted more heavily in social judgments, that is, when we form a relatively deliberate impression of a person; they should matter on all stages of person perception. Specifically, we propose that communal information is not only weighted more heavily in social judgments, but is also processed preferentially on earlier stages of information processing, such as recognition, categorization, or inference. Furthermore, communal information should be processed preferentially in spontaneous person descriptions. More specifically, we predict that compared to agentic traits people recognize communal traits faster (Study 1), categorize them faster (Study 2), and are faster to draw inferences regarding communal traits from another person's behavior than to draw inferences regarding agentic traits (Study 3). Finally, we predict that communal content

should come to mind faster than agentic content when people think of and spontaneously try to characterize another person (Study 4). A demonstration of a preferential processing of communal information on all these stages contributes to a functional approach to person perception, it enhances our understanding of the “Big Two” fundamental content dimensions and their implications for social perception, and it contributes to the growing realization that it is important to consider the processed content to fully understand social information processing.

Empirical Evidence

Compared to the studies on impression formation and social judgments there is relatively little research on the processing of communal vs. agentic information on other stages of person perception. However, the existing studies provide some first evidence that communal information may indeed be processed preferentially on early stages of information processing as well.

A study by Ybarra, Chan, and Park (2001) is most relevant in the present context. In this study, communal trait words were recognized faster in a lexical decision task than agentic trait words, which is in line with our prediction that communal content is processed preferentially on the early processing stage of recognition. We will come back to this research later.

Further evidence comes from a study by De Bruin and Van Lange (2000). When their participants could choose what kind of information to receive about another person they would later interact with, they chose to see the communal information first in 84% of the cases and to see the agentic information first in only 16% of the cases. Participants also spent more time reading the communal than the agentic information. Ames and Bianchi (2008) found that agreeableness (which is related to the communion dimension, cf. Wiggins, 1991) was the most commonly inferred trait when participants described various targets. Bazinska and Wojciszke (1996) found that participants were faster to infer communal traits from ambiguous behavior descriptions than agentic traits.

Finally, a study by Wentura, Rothermund, and Bak (2000) is related to the present research questions. These authors posited that the attention-grabbing power of trait information is dependent on relevance for the self vs. for others and found that other-relevant information

produced greater interference (i.e., longer response latencies) in a Stroop task than self-relevant information. Moreover, they found that in a lexical decision task participants were faster to push a button (i.e., to approach) and slower to withdraw from a button (i.e. to avoid) in response to positive other-relevant information than in response to negative other-relevant information, while this interaction with valence did not emerge for self-relevant information. The other-relevant traits used by these authors nicely map onto the communion dimension (e.g., “cooperative”, “mean”). However, their self-relevant traits not only included agentic traits (e.g., “determined”, “lazy”), but also general mood states (e.g., “happy”, “cheerful”, “depressed”, “bored”) and attributes that seem more related to communion than to agency (e.g., “lonely”). T Wentura and colleagues’ (2000) operationalization only partially maps onto the fundamental dimensions that we are concerned with, their results do point towards a preferential processing of communal information and a particular relevance of these traits for approach vs. avoidance decisions.

A Moderating Role of Valence?

This study also points at an additional variable to consider in the context of the “Big Two” in person perception: the valence of the processed content. Studies on attitudes, impression formation, attributions, and social judgments in general have revealed a *positivity-negativity asymmetry*. People give more weight to negative than to positive information (e.g., Lewicka, Czapinski, & Peeters, 1992; Kanouse & Hanson, 1987; Peeters & Capinski, 1990; Taylor, 1991) and regard it as more diagnostic (Skowronski & Carlston, 1987; Wojciszke, Brycz, & Borkenau, 1993), possibly because negative information deviates from generally positive expectations (the “Pollyanna principle”; Matlin & Stang, 1978). However, this positivity-negativity asymmetry specifically holds for traits belonging to the communion dimension and is reversed for traits belonging to the agency dimension (Reeder & Brewer, 1979; Singh & Teoh, 2000; Skowronski & Carlston, 1987). In judging a target’s friendliness, for instance, an unfriendly behavior receives more weight than a friendly one. In contrast, when judging a target’s competence, a competent behavior receives more weight than an incompetent behavior.

What do these findings regarding social judgments mean with respect to our proposition that communal information is processed preferentially? Should we expect an interaction of valence and content dimension on every level of information processing? The few published studies pertinent to these questions are inconclusive. In their first study, Ybarra and colleagues (2001) found that negative communal trait words were recognized faster than both positive communal trait words and positive and negative agentic trait words, which all did not differ from each other. Their second study again revealed that negative communal words were recognized especially fast and in this study, communal words were generally recognized faster than agentic words. Bazinska and Wojciszke (1996) also reported an interaction of content and valence, but in their study negative agentic traits were inferred especially slowly, whereas speed of inferences for positive agentic traits and for both positive and negative communal traits did not differ significantly. Finally, Wentura and colleagues (2000) found no valence by content interaction in their Stroop tasks, but the interaction of content by valence by type of task (push vs. withdraw from a button) for lexical decisions that we summarized above.

Thus, the role of valence for the processing of communal and agentic information is not fully clear yet. Following a functional approach to person perception one could also argue that at processing stages as early as recognition or categorization, stimulus valence might be of minor importance for how quickly the respective content is processed, because it is important to recognize and categorize communal information of any valence faster than the respective agentic information – especially if we assume a general positivity bias in the form of positive expectations about one's environment that allow individuals to explore their environment and to use opportunities (see Peeters & Czapinski, 1990). Take as an example a situation in which a person is seeking help from somebody. In such a situation a fast screening regarding who should be approached because they seem friendly and willing to help (as well as competent, in this case) is at least as functional as a fast screening regarding who should be avoided.

We therefore argue that the moderating impact of valence on the processing of communal vs. agentic information should be less evident for processing speed on early stages of information processing such as recognition or categorization, but should mostly become

evident on later stages of information processing, i.e., when perceivers form impressions of targets, as has been established by previous research (e.g., Reeder & Brewer, 1979; Singh & Teoh, 2000; Skowronski & Carlston, 1987). At any rate, valence is an important variable to consider in research concerning to the two fundamental dimensions (Suitner & Maas, 2008).

Present Research and Hypotheses

As outlined above, the main purpose of the present research is to test whether communal information is processed preferentially to agentic information. A primacy of communion in the form of a higher weight of the respective information in social judgment has already been established (Abele & Wojciszke, 2007; De Bruin & Van Lange, 1999, 2000; Fiske et al., 2007; Leach, et al., 2007; Wojciszke, et al., 1998; Wojciszke & Abele, 2008; Ybarra, et al., 2008). Therefore, we will mostly focus on early stages of information processing and on the speed at which communal and agentic content are processed at various stages of social information processing.

Study 1 tests the hypothesis that communal information is recognized faster than agentic information using a lexical decision task (Hypothesis 1). Study 2 tests whether communal information is classified faster as positive or negative than agentic information (Hypothesis 2). Hypothesis (3) states that participants will be faster to draw inferences regarding communal traits from information about a target's behavior than they will be to draw inferences regarding agentic traits (Study 3). Finally, Study 4 will test the prediction that when people spontaneously try to characterize another person, communal content comes to mind faster than agentic content (Hypothesis 4). We will also investigate the possibility of a moderating role of valence by including both positive and negative communal and agentic information in Studies 1 to 3.

Study 1

Our first study will test the prediction that communal information is recognized faster than agentic information. This phenomenon has already been demonstrated by Ybarra et al. (2001) and one aim of Study 1 was to replicate their findings with other material, including some additional controls, and in another language. The second aim was to test whether the recognition advantage of communal information holds for both negative and positive traits. We

closely followed the experimental procedure of Ybarra et al. (2001) and applied a lexical decision task in which participants had to decide as quickly as possible whether a letter string presented on a monitor is a word or not. We presented our participants with letter strings that were positive or negative communal or agentic traits as well as letter strings not representing words. We carefully selected our stimulus words to exclude four important potential confounds. These are the trait words' favorability, the words' frequency of occurrence in written language, word length (with regard to both letters and syllables) and a fourth control not included in Ybarra et al.'s (2001) study: the degree to which the respective items are saturated with agentic and communal content, i.e., the degree to which a trait expresses agency vs. communion.

This last control is important, because trait words are often more saturated with communal meaning than with agentic meaning (Abele & Wojciszke, 2007) and it is therefore necessary to determine the degree of agency/ communion that a trait word expresses. Moreover, there is variation within the category of positive and negative traits with regard to *how* positive or negative they are and trait words' rated communion tends to be more strongly correlated with their favorability than trait words' rated agency (Suitner & Maas, 2008). Hence, in addition to saturation with agency/ communion, favorability had to be counterbalanced in the present study. Words also differ with regard to their frequency of occurrence in language (Belica & Keibel, 2008; Kucera & Francis, 1967) and overall, positive words are more frequently used than negative words (Matlin & Stang, 1978). Since more frequent words are processed faster (e.g., Balota & Chumbley, 1984; see also Klauer, Roßnagel, & Musch, 1997; Pratto & John, 1991; Wentura, Rothermund, & Bak, 2000), word frequency has to be taken into account when the processing speed for positive and negative words is investigated. Finally, word length should be controlled because people take more time to recognize longer words in lexical decision tasks than shorter words (Balota & Chumbley, 1984).

Method

Pretest. We selected the stimulus words based on several prestudies (see also Abele, Uchronski, Suitner, & Wojciszke, 2008) in which overall 666 participants (376 women, 288 men, 1 did not indicate gender; mean age 23.2 years, $SD = 3.86$) rated a pool of 112 adjectives with

regard to their favorability (on a 7-point scale ranging from -3 *very negative* to +3 *very positive*) and with regard to how representative they were for the dimensions of agency and communion based on given definitions of the two dimensions. *Communion* was defined as traits related to a person's striving to manifest warm and benevolent relationships with others as well as moral behaviors; "friendly", "reliable", and "dependent" were given as examples. *Agency* was defined as traits related to a person's striving to assert the self, to show competence, and to pursue goals; "ambitious", "dominant", and "egoistic" were given as examples.

We instructed participants to rate both the agentic and the communal content of the trait words on 7-point scales each ranging from -3 to +3, where -3 indicated a pronounced lack of agency or communion respectively, 0 indicated that a trait word had nothing to do with the respective dimension, and +3 indicated a very high agentic or communal content of the word. We coded these ratings as the absolute deviation from the midpoint, i.e., as representing how much an item had to do with the respective dimension—in a positive or a negative sense. We counterbalanced the order in which participants completed these ratings. We selected the final list of 60 words such that agency words were rated as higher in agentic content ($M = 2.02$, $SD = .53$) than communion words ($M = .81$, $SD = .78$) and communion words were rated as higher in communal content ($M = 1.73$, $SD = .42$) than agentic words ($M = .77$, $SD = .72$), $t_s(58) > 6.31$; $p_s < .001$. Agency words were rated above the scale mean on agency, $t(29) = 19.31$, $p < .001$, and communion words were also rated above the scale mean on communion, $t(29) = 22.64$, $p < .001$. Agency words (positive: $M = 1.94$, $SD = .28$, negative: $M = -1.43$, $SD = .56$) and communion words (positive: $M = 2.04$, $SD = .31$, negative: $M = -1.25$, $SD = 1.29$) were rated as equally favorable, both $t_s < 1.20$, $p_s > .24$, and there was also no content dimension by valence interaction, $F < 1$.

There were no differences in word length depending on valence or content dimension, $F_s < 1$. Agency and communion words were balanced with respect to word frequency in written language using word norms obtained from the Institute for German Language, Mannheim (see Belica & Keibel, 2008). There was no significant main effect of dimension and no dimension by valence interaction on word frequency, $F_s < 1.21$, $p_s > .27$. However, because it was impossible

even with our large pool of trait words to find enough words that at the same time fulfilled the criteria of equal saturation with agency and communion, equal valence, equal word length, and equal word frequency, positive words were more frequent in written language than negative words, $F(1, 56) = 8.42, p < .01$, as they do naturally (cf. Ybarra et al., 2001, Study 1; Wentura, et al., 2000).

It is important to note that the selection of words representing positive or negative valence was solely based on participants' valence ratings and that the selection of words representing agency or communion was solely based on how representative of the dimensions participants had rated the respective traits (high for one dimension and low for the other in absolute terms). For example, a trait like *dominant* represents a negative agentic word since it has been rated as negative ($M = -.98, SD = 1.34$), as highly representative of the agency dimension ($M = 2.20, SD = 1.03$), and as more representative of agency than of communion ($M = -1.29, SD = 1.50$), $t(315) = 33.65, p < .001$. We use the categories *positive* and *negative* to refer to a trait's valence, not to indicate where it falls on the dimensions of agency or communion, as has sometimes been the practice in previous research (where *dominant* might be classified as "positive agency", since it expresses a high level of agency).

Participants and Design. A total of 55 (24 female, 31 male) students, mean age 23.4 years ($SD = 2.52$) were recruited on campus to participate in a study on word recognition. They received candy for participation. The study had a 2 (content dimension: agency, communion) x 2 (valence: positive, negative) design with both factors varying within participants. Response latencies were the main dependent variable.

Materials and procedure. Upon arrival in the lab, the experimenter asked participants to take seat in front of a computer monitor that provided all further instructions and materials. Participants' task was to recognize as quickly and accurately as possible whether letter strings presented to them on the monitor were words or non-words. At the beginning of each trial a fixation cross appeared in the middle of the screen for 1s. Then, with equal probability of occurrence, this fixation point was replaced by either a word (e.g., *passive*) or a non-word (e.g., *spivasse*). Non-words consisted of the same letters as the stimulus words and were

pronounceable. The stimulus letter string appeared on the screen until participants responded by either pressing the “A”-key on the keyboard or the “5”-key on the numerical keypad; both keys were color-marked to facilitate the task. We counterbalanced between participants which of the two keys corresponded to the response for a word vs. a non-word. After participants made their response, the fixation point appeared again in the center of the screen and participants continued with the next trial. Participants first completed 14 practice trials with seven neutral words (e.g., German equivalents of *blond*, *sportive*) and corresponding non-words. The following 120 experimental trials consisted of 60 non-words and 60 words, 15 positive agency words (e.g., German equivalents of *independent*, *efficient*) and 15 positive communion words (e.g., *warm*, *reliable*) as well as 15 negative words for each content dimension (e.g., agency: *insecure*, *lazy*; communion: *reserved*, *hard-hearted*; all stimulus words see Appendix 1). After completing the lexical decision task, participants provided information on their age, gender, and handedness before they were thanked and debriefed.

Results and Discussion

We excluded five participants with outlying scores either on average response latencies or on number of errors (more than 2 *SDs* above the mean). Neither participants' handedness nor the assignment of response keys to the possible answers had an influence on response latencies, all *t*s < 1.

Errors. Errors occurred at a low rate (2.9 % of all answers). Participants made more errors for words (3.4 %) than for non-words (2.4 %), *Wilcoxon W* = 2.13, *p* < .04. There were no other significant effects for errors.

Response latencies. For the analysis of response latencies we only included correct responses and response latencies up to 2s (cf. Ybarra et al., 2001). Since we were not interested in response latencies for non-words, we did not analyze them further. We created average response latencies in milliseconds for the four categories of words. Since preliminary analyses revealed no significant main effects or interactions including participant gender, all *F*s < 1, we did not consider gender in further analyses.

We then submitted these average response latencies to a 2 (content dimension: communion, agency) x 2 (valence: positive, negative) mixed measures ANOVA with both factors varying within participants.

In accord with Hypothesis (1), we found a significant main effect of content dimension, $F(1, 49) = 4.34, p < .05$, indicating that participants were faster to recognize communion words ($M = 591, SD = 79$) than agency words ($M = 605, SD = 85$), $d = .17$. The ANOVA also revealed a significant main effect of valence, $F(1, 49) = 10.24, p < .01$. Positive words were recognized faster ($M = 585, SD = 78$) than negative words ($M = 611, SD = 89$), $d = .31$. The content dimension by valence interaction was not significant, $F(1, 49) < 1.70, p > .20$.

Although the agency and communion sets were counterbalanced with regard to frequency of occurrence in written German language, our positive trait words were more frequent than the negative words, as they are in natural language use. In order to investigate to what extent our findings with regard to valence might be due to this covariation of valence and word frequency we used regression analyses. We restructured the data such that every item represented a case and used multiple regression to predict the average response latency across participants by the logarithm of word frequency (mean centered), content dimension, and valence. As expected, word frequency was a significant predictor of response latencies, $\beta = -.63, t = 5.20, p < .001$. In accord with our prediction, content dimension (coded as -1 = communion, 1 = agency) also significantly predicted response latencies, $\beta = .27, t = 2.44, p < .02$, with faster responses for communion words than for agency words. However, when word frequency was taken into account, valence (coded as -1 = negative, 1 = positive) was not a significant predictor of response latencies anymore, $\beta = .18, t = 1.47, p > .14$, although there was a non-significant tendency for faster recognition of negative words (cf. Ybarra et al., 2001). Importantly, the content dimension by valence interaction did not predict response latencies, $\beta = -.02, t < 1$.

As mentioned earlier, our selection of negative traits includes traits representing a pronounced lack of agency (e.g., *lazy*) or communion (e.g., *aloof*) as well as traits that represent a high degree of agency (*self-opinionated, aggressive, dominant*) or communion (*yielding*). In

previous research items representing negative valence often exclusively include traits that also indicate a pronounced lack of agency or communion (or only few sample items that represent a lack of the respective dimension are given, Ybarra et al., 2001). In order to insure comparability of our findings with this previous research, we re-ran the regression analysis only including those negative items that were negative both with regard to valence and “negative” in the sense that they indicated a pronounced lack of the respective dimension. The results were by and large the same: word frequency $\beta = -.65$, $t = 5.32$, $p < .01$, and content dimension, $\beta = .24$, $t = 2.11$, $p < .05$, were significant predictors, while valence, $\beta = .20$, $t = 1.61$, $p > .11$, and the dimension by valence interaction, $\beta = .02$, $t < 1$, were not.

Summarizing, Study 1 supported Hypothesis (1) that participants recognize communal information faster than agentic information. These results emerged with stimulus material that was thoroughly balanced with respect to representativeness of the stimulus words for the dimensions in question, with respect to valence, word length, and word frequency in written language. We further found that positive words were recognized faster than negative words, but that this advantage disappeared when word frequency was controlled for. Our ANOVA revealed no interaction between content dimension and valence. Our regression analysis also did not reveal any interaction of content dimension and valence.

Our main finding that communal trait words are recognized faster than agentic trait words thus replicates Ybarra and colleagues (2001) and shows that the finding holds for two different languages (English and German) and when the degree to which trait words express agency and communion is counterbalanced. Our finding of independent effects of content dimension and valence in word recognition speed is in line with our reasoning that content by valence interactions will be less evident on early stages of information processing than on later ones. However, Ybarra and colleagues (2001) found an interaction, and this discrepancy between their findings and ours leads us to conclude that communal information is recognized faster than agentic information, but that the role of valence is not fully established yet. The discrepancy in findings suggests that the specific materials used, and perhaps also procedural differences², may have an influence on whether the faster recognition of communal content is

moderated by valence or not. Our second study will move from recognition to categorization and will further address the question whether a preferential processing of communal information is moderated by valence.

Study 2

Our second study will be concerned with preferential categorization of communal information. We chose a task in which a word's valence as either positive or negative had to be categorized as fast as possible. Valence is automatically activated when a stimulus is presented (e.g., Bargh, Chaiken, Gollwitzer, & Pratto, 1992; Fazio, 2001). The automatic activation of valence enables people to quickly and effortlessly appraise their environment for signs of threat vs. benefit and to act accordingly since ultimately not only "perceiving is for doing" (Fiske, 1992) but "liking is for doing" (Ferguson & Bargh, 2004) as well. Hypothesis (2) states that compared to agentic stimuli communal stimuli will be categorized faster as positive or negative.

We presented our participants with the same stimulus words as in Study 1 and asked them to decide as quickly as possible whether the stimulus words were positive, i.e., conveying a positive trait, or negative, i.e., conveying a negative trait. Besides predicting a speed advantage for communal traits we again tested whether this effect was independent of valence.

Method

Participants and design. We recruited a total of 42 (20 men, 22 women) students with a mean age of $M = 23.05$ ($SD = 3.00$) years on campus to participate in the study. They received candy for their participation. The design was 2 (content dimension: agency, communion) \times 2 (valence: positive, negative) with both factors varying within participants. The main dependent variable were participants' response latencies, but we additionally controlled for participants' answers, i.e., whether they categorized the words as positive or negative.

Materials and procedure. Participants completed a task introduced as a study on the perception of trait words. They took seat in front of a computer screen and were instructed to fixate a cross in the middle of the screen. After one second, a trait word replaced this fixation point and remained on the screen until participants responded. Participants' task was to decide as quickly as possible whether the word was positive or negative by pressing one of two color-

marked keys on the keyboard. The words *positive* and *negative* printed in the same colors as the marked keys appeared in the lower left and lower right corners of the screen to remind participants of the response alternatives. We again counterbalanced the assignment of keys to response options between participants. As soon as participants responded, the fixation cross appeared again and a new trial started.

The study consisted of 3 practice trials and 60 experimental trials in which the same positive and negative agency and communion words as used in Study 1 appeared in random order. After completing this task, participants provided the same demographic information as in Study 1.

Results and Discussion

Preliminary analyses. We excluded two participants who had categorized an unusually high number of positive words as negative and vice versa (more than 2 *SDs* above the mean). Participant gender had no significant main or interaction effects on the dependent variables of interest, all *F*s < 2.26, all *p*s > .14. Participants' handedness and the assignment of keys to response alternatives had no effects.

Categorization of trait words. Overall, participants agreed with the a priori categorization of trait words that we had based on the pre-studies. The percentage of positive words categorized as negative and vice versa was low (5.6%). A repeated measures ANOVA with content dimension and valence as independent variables and number of categorizations deviating from the a priori ones as dependent variable revealed a significant main effect of valence, $F(1,37) = 30.60, p < .001$. Participants categorized more negative words as positive ($M = 2.63, SD = 1.89$) than vice versa ($M = 0.72, SD = .88$), $d = 1.29$. This effect is most likely due to a "positivity bias": participants overall gave more "positive" responses (53.2 %) than "negative" responses (46.8%), $t(39) = 5.54, p < .001, d = 1.78$. Moreover, participants categorized somewhat more agency words differently ($M = 1.93, SD = 1.56$) than communion words ($M = 1.43, SD = 1.01$), $F(1, 37) = 3.42, p < .08, d = .38$. Remember that we had counterbalanced the traits' favorability. Given this control, the effect seems remarkable, although it is only marginally significant. It hints at a lower ambiguity of communal than of

agentic traits' valence, which is in line with a functional perspective. If communion is more important than agency for approach-avoidance decisions it is not only functional to make these decisions quickly, but also to make correct judgments. There was no content dimension by valence interaction on number of deviating categorizations, $F < 1$.

Response Latencies. We excluded reaction times above 3000ms³ and computed average response latencies in milliseconds for positive agency words, negative agency words, positive communion words, and negative communion words. We excluded participants' responses to one negative communion word (*yielding*), since participants apparently found it substantially more difficult to judge the valence of this word than of all other words as indicated by a mean response latency more than 24 SDs above the mean for all words⁴.

We tested our hypotheses by means of an ANOVA with content dimension (agency, communion) and valence (positive, negative) as within-subjects factors. This revealed a significant main effect of content dimension, $F(1, 39) = 27.64, p < .001$. As predicted, participants categorized communion words ($M = 836, SD = 258$) faster than agency words ($M = 960, SD = 243$), $d = .49$. They also decided faster that positive words were positive ($M = 877, SD = 196$) than they decided that negative words were negative ($M = 998, SD = 290$), $F(1, 37) = 27.98, p < .001, d = .49$. The content dimension by valence interaction was not significant, $F(1, 37) = 1.87, p > .17$.

Although we had based the selection of positive and negative words on pretest ratings, participants sometimes disagreed with our valence categorizations (see above). These responses may have been errors, but for some words it is also plausible that participants did evaluate the traits differently than we did (e.g., *chaotic, dominant, or jealous*). Thus, we recoded the data such that mean reaction times for positive and negative agency and communion words were based on each participant's own categorization as positive or negative. We submitted these new mean reaction times to a repeated measures ANOVA with content dimension (agency, communion) and valence (positive, negative) and found basically the same effects as when we used our a priori categorization of positive and negative words: a significant content dimension effect, $F(1, 39) = 35.07, p < .001$, with faster responses for communion words ($M =$

908, $SD = 230$) than for agency words ($M = 953$, $SD = 234$), $d = .19$, a significant valence effect, $F(1, 39) = 27.45$, $p < .001$, indicating faster responses for positive ($M = 872$, $SD = 194$) than for negative words ($M = 989$, $SD = 280$), $d = .49$, and no interaction, $F(1, 37) = 1.69$, $p > .20$.

To reiterate, we had counterbalanced word frequency between agency and communion words, but not between positive and negative words. Thus, to estimate the contribution of word frequency to the valence effect described above, we again used multiple regression to predict average response latencies for our target words from the log of word frequency (mean centered), valence, and content dimension, as well as from the content dimension by valence interaction, which we entered in a second step⁵. Not surprisingly, participants categorized more frequent words faster, $\beta = -.26$, $t = 2.16$, $p < .04$. In accord with our hypothesis, content dimension was a significant predictor of response latencies, $\beta = .23$, $t = 2.13$, $p < .04$; participants categorized communal traits faster than agentic traits. Unlike Study 1, valence significantly predicted response latencies after word frequency had been controlled for, $\beta = -.42$, $t = 3.59$, $p < .01$; participants categorized positive words faster than negative ones and this effect was not simply due to the higher frequency of positive words. Importantly, the valence by content dimension interaction was not significant, $\beta = .06$, $t < 1$.

In summary, the results support our predictions: communal trait words are not only recognized faster (Study 1), they are also categorized faster as either positive or negative than agentic trait words. As in Study 1, the effect was independent of the traits' valence. As outlined above, our categorization of a word as "positive" or "negative" was solely based on rated favorability in a pretest, not on whether a word expresses high or low dimensional values of communion and agency. Inspecting our list of words there seem to be more negative agentic traits that indicate high agency and might also express a certain lack of communion (e.g. *dominant*, *selfish*), than negative communal words that express high communion and might also indicate a lack of agency (e.g., *yielding*). Since communion is more saturated with valence than agency (Suitner & Maas, 2008), one might object that this could be a potential confound. However, in our pretests the negative agentic words had overall been rated as equally indicative of communion ($M = 1.09$, $SD = .83$) as the negative communal words had been rated as

indicative of agency ($M = .66$, $SD = .83$), $t(28) = 1.45$, $p > .15$. More importantly, even if we assume a higher saturation of our negative agentic words with communion than of our negative communal words with agency, this would work *against* our hypothesis rather than in favor of them: If communion is highly saturated with valence and this makes the categorization as positive or negative easier, than the lack of communion expressed in some negative agentic words should make categorization of these agentic words as negative easier (and thus faster). However, we still find support for our hypothesis of a faster categorization of communal than of agentic content.

In summary, the results support Hypothesis (2): communal trait words are not only recognized faster (Study 1), they are also categorized faster as either positive or negative than agentic trait words. As in Study 1, we found no indication for a moderating role of trait words' valence.

Study 3

So far our results have supported the general proposition that communal information is processed preferentially (more specifically, faster) both with respect to recognition and with respect to categorization. One might argue that the experimental material of both Studies 1 and 2 was rather de-contextualized and that responding to verbal stimuli on a computer screen barely reflects information processing in encounters with an actual other person. This might make it difficult to link basic processes in lexical stimulus recognition or lexical stimulus categorization to the so much richer processes of human social perception. In our Studies 1 and 2 we chose such a de-contextualized experimental procedure to demonstrate the phenomenon on a general level and under conditions that were as controlled as possible. If communal information is recognized faster than agentic information in such a de-contextualized experimental situation and with words as stimuli, it seems plausible that such an advantage will also emerge in situations in which a richer social context is provided. However, a consideration of perception in context is central to a functional approach to person perception and therefore, Study 3 applied more complex and richer stimulus material.

We presented our participants with a number of both positive and negative behavior descriptions and asked them to decide as quickly as possible whether these behaviors were indicative of communal or agentic traits. The behaviors had been pretested for the extent to which they were “friendly” and “helpful” as examples for communal traits and for the extent to which they were “competent” and “determined” as examples for agentic traits. We selected these traits because they are all highly and equally representative of their respective dimension and were comparable with regard to valence, length, and word frequency in German language (see prestudy to Study 1). We tested Hypothesis (3) that inferences regarding communal traits would be made faster than inferences regarding agentic traits.

Method

Pretest. We selected the stimulus sentences based on a prestudy in which 81 participants (69 women, 12 men, mean age 22.3 years, $SD = 3.61$) rated a pool of 69 sentences (32 negative behaviors, 37 positive behaviors). The sentences always described a person “X” performing a behavior. By describing the target as “X” and not with a specific name we wanted to assure that participants did not construct a personal relationship of any kind with the actor but that they focused on the behavior only. There were four different conditions answered by 20 (one condition 21) participants each. Participants rated all 69 sentences. Depending on condition they rated the extent to which the behavior was “friendly” (German: *freundlich*), “helpful” (German: *hilfsbereit*), “competent” (German: *kompetent*), or “determined” (German: *zielstrebig*) on a 7-point scale ranging from 1 *not at all* to 7 *very much*. For the main study we selected 32 stimulus sentences that were rated as expressing one of the communal and one of the agentic traits to the same extent (see below) and an additional 8 filler sentences.

Participants and Design. A total of 68 (61 female, 7 male) students, mean age 21.49 years ($SD = 4.82$) participated in a reaction times study. They received course credit for participation. The study had a 2 (content dimension: communion [*friendly*, *helpful*], agency [*competent*, *determined*]) x 2 (valence of the behavior: positive, negative) x 2 (assignment of traits to be inferred to sentences: version 1, version 2) design with the first two factors varying within participants and the third varying between participants. Response latencies were the

main dependent variable but we also analyzed the participants' categorizations of the behaviors.

Procedure. Participants read 40 sentences appearing in one of two random orders. After each sentence participants indicated by pressing the space bar that they had read and understood the sentence. As soon as participants pressed the space bar, they saw an adjective (e.g., *friendly*) and decided as quickly as possible, whether this adjective was suitable to describe the action in the sentence or not (answers *yes* or *no*) by pressing the respective color-marked key. After this response, a second adjective appeared (e.g., *lazy*) and participants again decided as quickly as possible, whether this adjective described the behavior in the sentence or not (again *yes* or *no* answer by pressing the respective color-marked key). After their response to this second item, participants saw the next sentence.

Materials. Among the 40 sentences selected from the pretest were eight filler sentences for which participants always indicated whether the words *nice* and *chaotic* (in varying order) were descriptive of the behavior in the sentence. We selected the 32 critical sentences such that eight sentences had been rated as expressing *friendly* and *competent* to the same degree, eight had been rated as equally indicative for *friendly* and *determined*, eight were equally indicative of *helpful* and *competent*, and eight were equally indicative of *helpful* and *determined*, all $t_s < 1$. For each set of eight sentences, four described a positive behavior (helpful or friendly and determined or competent) and four described a negative behavior (unfriendly or not helpful and not determined or incompetent). Each participant judged half of the friendly-competent sentences with regard to friendly and half with regard to competent, half of the friendly-determined sentences with regard to friendly and half with regard to determined, and so forth. For each of the critical sentences we varied between participants whether they judged the sentence with regard to an agentic or a communal trait (version 1 and version 2).

For each sentence, participants were asked to make two inferences. One referred to the critical trait (*friendly*, *helpful*, *competent*, or *determined*); the other referred to the distractor trait. Distractor traits were also words of agentic or communal content, some of them positive (e.g., *energetic*, *likeable*) and some of them negative (e.g., *aimless*, *rude*). By adding the distractor

words that sometimes were and sometimes were not descriptive of the target behavior independent of the behavior's valence, we insured that participants could not develop a simple heuristic to always respond with "yes" after positive sentences and with "no" after negative sentences, but actually had to process the meaning of both the sentence and the traits. Whether the target word or the distractor word came first varied between the sentences, but was always the same for all participants. When the target word appeared second, it was for an equal number of sentences preceded by a positive vs. a negative word, a word that was descriptive of the behavior in the sentence vs. a word that was not descriptive of the behavior, and a trait belonging to the same vs. the other content dimension.

Results and Discussion

Preliminary analyses. Participant gender had no significant main or interaction effects on the dependent variables of interest, all F s < 1.05, all p s > .30. In which of the two random orders the sentences had been presented and the assignment of the critical agentic and communal traits to the sentences had no significant main effect and did not interact with content dimension, F s < 1.48, p s > .23.

Inferences from the behaviors. Overall, participants agreed with the pretest assignments of the sentences as indicative or not indicative of the critical traits. The percentage of answers deviating from the expected ones was 8%. A repeated measures ANOVA with content dimension and valence as independent variables and number of answers deviating from the pretest as dependent variable revealed a significant main effect of content dimension, $F(1,65) = 26.81, p < .001$. Participants gave more answers in agreement with the pretest for communal traits (95%, $M = 15.18, SD = .90$) than for agentic traits (89%, $M = 14.19, SD = 1.52$), $d = .79$, despite the fact that pretest participants had rated the behaviors as equally descriptive of the communal and the agentic traits. As in Study 2, this hints at a lower ambiguity of communal than of agentic information. Behavioral valence had no effect on participants answers, $F < 1$, and there was no interaction of content dimension and valence, $F < 1$. Overall, participants responded with "yes" (i.e., the trait is descriptive of the behavior in the sentence; M

= 15.93, $SD = 2.13$) and “no” (i.e., the trait is not descriptive; $M = 16.07$, $SD = 2.13$) equally often, $t < 1$.

Response latencies. We computed average response latencies in milliseconds for communion inferences from positive and negative behaviors and for agency inferences from positive and negative behaviors by averaging the responses for the critical trait words (either *helpful* and *friendly* or *competent* and *determined*) across sentences⁶.

We tested our hypotheses by means of an ANOVA with content dimension (agency, communion) and behaviors' valence (positive, negative) as within-subjects factors. This revealed a significant main effect of content dimension, $F(1, 67) = 36.66$, $p < .001$. As predicted, participants were faster to infer communion ($M = 1009$, $SD = 282$) than agency ($M = 1166$, $SD = 385$), $d = .47$; responses for positive behaviors took as long ($M = 1069$, $SD = 358$) as responses for negative behaviors ($M = 1105$, $SD = 326$), $F(1, 67) = 1.37$, $p > .24$, $d = .11$. The content dimension by valence interaction was not significant, $F(1, 67) = 1.04$, $p > .31$ (Figure 1)⁷.

Because the number of responses corresponding to the pretest was lower for agentic traits than for communal traits, we computed the same ANOVA with content dimension (agency, communion) and behaviors' valence (positive, negative) as within-subjects factors for reaction times associated with "correct" responses only. Findings were basically the same as for all responses: a significant main effect of content dimension, $F(1, 67) = 46.43$, $p < .001$, no effect of valence, $F(1, 67) = 2.25$, $p > .13$, and no content dimension by valence interaction, $F < 1$.

Whereas we found no effect of behavior valence on response latencies for trait inferences, behavior valence did affect reading times. Participants took more time to read sentences describing negative behaviors ($M = 4948$, $SD = 1194$) than sentences describing positive behaviors ($M = 3684$, $SD = 935$), $t(67) = 16.53$, $p < .001$, $d = 2.54$. This is in line with the assumption that people generally tend to expect positivity in their environment and that negative stimuli thus elicit more cognitive work than positive stimuli (Fiske, 1980; see Peeters & Czapinski, 1990, for an overview).

Response latencies for negative traits. One might argue that although our stimulus material contained the same number of positive and negative behaviors, the critical inferences all concerned positive traits, which might constrain the generalizability of our findings. The analysis of responses for negative traits was not the focus of Study 3, but negative traits used as distractors can serve as an approximation. We computed average response latencies for participants' inferences for those negative traits that had appeared twice following positive or negative behaviors. These were two communal traits (*disrespectful*, and *rude*; German: *respektlos*, *grob*) and two agentic traits (*simple-minded*, and *faint-hearted*; German: *einfältig*, *zaghaf*).

The respective ANOVA with content dimension (negative agentic vs. communal traits) and behavior valence (positive, negative) as within participants factors revealed a significant effect of content dimension, $F(1, 67) = 24.57, p < .001$, a significant effect of valence, $F(1, 67) = 43.59, p < .001$, and no interaction of content dimension by valence, $F(1, 67) = 1.25, p > .27$. The content dimension effect was the same as for positive trait words, i.e., faster responses for negative communal traits ($M = 1172, SD = 430$) than for negative agentic traits ($M = 1523, SD = 539$), $d = .73$. In contrast to inferences on positive traits we here found an effect of behavior valence. Participants were faster to draw inferences from positive behaviors ($M = 1072, SD = 374$) than from negative behaviors ($M = 1623, SD = 634$), $d = 1.07$. Most importantly, however, we found the same predicted speed advantage for inferring negative communal traits compared to negative agentic traits and we found no interaction of valence and content dimension.

Summarizing, in support of Hypothesis (3) participants were faster to infer communal traits from behaviors than agentic traits. The behaviors' valence had no influence on the speed at which participants inferred positive traits and there was again no interaction of content dimension and valence. Inferences with regard to negative traits were not the focus of this study but preliminary analyses also revealed faster inferences for negative communal than for negative agentic traits and no valence by content dimension interaction.

One could object that other differences between our critical traits than their communal vs. agentic content may have contributed to the present findings. Although this remains a

possibility, the selected items were among the most representative traits for the respective fundamental dimension (as revealed in pretest to Study 1) and we thus argue that their agentic and communal content should have been the most important and prominent difference between them. That the same preferential processing also emerged for our less carefully preselected agentic and communal distractor words further enhances our confidence that the effect is more general and not limited to our specific selection of critical traits.

As a final concern, one might ask whether it is easier to infer friendliness/ helpfulness from behaviors than competence/ determination, even if a behavior expresses these traits to the same degree—as insured by our pretest. One could argue that the speed advantage of inferences for communal traits is simply due to a higher ease of making inferences regarding friendliness / helpfulness than inferences regarding competence / determination. We do not consider this a very likely alternative explanation. For instance, the conclusion that a behavior is *helpful* requires quite a few inferences, e.g., that somebody is in need of help, that the actor is aware of this fact, and that the actor intends to improve the situation of the person in need; the conclusion that somebody is *determined* requires inferences regarding that person's goals and motivations; categorizing a behavior as *competent* requires knowledge or inferences of standards for successful goal completion; and in order to conclude that a behavior is *friendly* one also has to infer the person's intentions. Which of these inferences is easier or harder to make is quite difficult to estimate. Thus, although we carefully selected our behavior descriptions based on pretests, easier inferences regarding some of our critical words remain a conceivable confound and we conducted a posttest to explore this alternative.

Posttest: Difficulty of Inferences

Fifty-four undergraduate psychology students (gender and age unidentified) voluntarily completed a one page-questionnaire in a group-testing session. There were four different versions of this questionnaire depending on whether participants had to estimate how easy it was to make inferences regarding *friendliness*, *helpfulness*, *competence*, or *determination*. We asked participants to rate the respective 16 behavior descriptions (eight positive, eight negative) of the main study with regard to the respective word. Participants' task was to indicate for each

of the behaviors how difficult it was to infer the respective trait from the behavior (on a scale from 1 = *easy to infer* to 7 = *difficult to infer*).

We calculated the mean judgments of the difficulty of inferences for both traits for each sentence and restructured the data such that the sentences represented the cases. Since neither *friendly* ($M = 4.11$, $SD = .82$) and *helpful* ($M = 4.20$, $SD = 1.29$), nor *competent* ($M = 3.41$, $SD = .85$) and *determined* ($M = 3.60$, $SD = .82$) differed in their mean difficulty ratings, $t < 1$, we combined the ratings for communal traits (i.e., *friendly* and *helpful*) and for agentic traits (i.e., *competent* and *determined*) into one respective index. We then conducted a 2 (content: agency, communion) by 2 (valence of sentence: positive, negative) ANOVA on the difficulty ratings with repeated measures on the first factor.

This revealed a main effect of sentence valence, $F(1, 30) = 16.65$, $p < .001$; participants judged inferences based on negative behaviors ($M = 4.28$, $SD = .48$) as more difficult than inferences based on positive behaviors ($M = 3.38$, $SD = .73$), $d = 1.46$. Moreover, we found a main effect of trait content, $F(1, 30) = 10.39$, $p < .01$; contrary to the alternative explanation outlined above, participants judged inferences regarding communal traits as *more* difficult ($M = 4.16$, $SD = 1.07$) than inferences regarding agentic traits ($M = 3.51$, $SD = .82$), $d = .68$. The content by valence interaction was not significant, $F < 2.28$, $p > .15$.

Moreover, main Study 3 participants' response latencies for deciding whether a behavior expressed an agentic or a communal trait and posttest participants' estimations of how difficult it was to infer these traits from the respective behavior were uncorrelated (agency: $r(32) = .09$; communion: $r(32) = .15$, $ps > .42$). This suggests that ease / difficulty of inferences from the behavior descriptions if anything only played a subordinate role for how quickly participants processed the respective content. We conclude that differences in how easy it is to infer competence/ determination and friendliness/ helpfulness from the behaviors in Study 3 are not a viable alternative explanation for our findings.

Study 4

Study 3 extends the findings of Studies 1 and 2 by testing our proposition of a preferential processing of communal information with a more complex and more realistic task

than word recognition or categorization. In Study 4 we wanted to test our hypothesis with a task as close to everyday person perception as possible. We applied a similar procedure as Wojciszke et al. (1998) who asked their participants to list trait words that are most indicative of other people and who later on content-analyzed these trait words. In contrast to this study, however, we asked our participants to think of a *specific* target person and to then describe this target by a number of self-generated characteristics. Such free person characterizations closely correspond to everyday situations in which we describe a person to somebody else who might not know this person. Other than in Wojciszke et al.'s (1998) study, our main focus was not on whether participants would mostly use communal or agentic traits to describe another person, but rather on how fast the respective content would come to participants' mind, when people think of and spontaneously try to characterize another person.

We asked our participants to describe another student whom they see regularly in classes but whom they do not meet outside classes. By choosing this target we wanted to assure that on the one hand our participants in fact imagined a specific person, but that on the other hand this target represents a kind of a "generalized other". If more specific others (for instance, one's spouse or one's doctor, etc.) are described then the specific relationship between respondent and target comes into play, which might alter the findings. This is, however, not the focus of our present research.

Other than in Studies 1 to 3, we did not test our Hypothesis (4) by means of response latencies, but rather assessed in order in which the traits our participants used to describe the target were mentioned. Free descriptions not only mirror everyday encounters more closely than yes-no responses to stimuli presented on a computer screen; employing a different operationalization of preferential processing of communion also adds to the generalizability of our findings beyond reaction time measures.

Hypothesis (4) therefore says that communal characteristics would be listed earlier than agentic ones, i.e., would be more likely mentioned at the beginning of a target's description than towards the end. We further predicted that participants would generally mention more communal than agentic characteristics.

Method

Participants and design. A total of 51 (49 female, 2 male) students, mean age 22.59 years ($SD = 3.56$), participated voluntarily and without payment. We collected the data by distributing questionnaires at the end of a lecture.

Materials and procedure. We instructed the participants to think of an acquainted fellow student (*Please describe a student that you meet regularly in classes, but whom you don't meet otherwise*). In order to insure that the participants imagined one specific person we also asked them to indicate in which class they meet this person and to write down the initial of this person's first name. We then asked participants to list six characteristics of this person and provided them with six empty lines for these characteristics. At the end of the questionnaire participants indicated how much they liked the described person (from 1 *not at all* to 5 *very much*).

Content analysis of the listed traits. Two independent judges unaware of the hypotheses classified the characteristics into agentic vs. communal traits. We provided the definitions we had already used in the prestudy to Study 1. Traits or descriptions that could not be classified as either agentic or communal were classified as "other". Examples for this last-mentioned category are *sportive, fashionable, or pretty*. Judges also categorized all descriptions as positive, neutral, or negative, i.e., whether they were desirable (e.g., *ambitious, friendly*), whether they were evaluatively neutral (e.g., *calm*) or whether they were undesirable (e.g., *unreliable, selfish*). Intercoder reliability was high (content codings, $\kappa = .86$; 94% agreement; valence codings, $\kappa = .82$, 90% agreement), and coders reconciled disagreements for our analyses.

Results and Discussion

Preliminary analyses. Overall, participants' favorability ratings indicated that liking for the described person was somewhat, but not overly positive ($M = 3.27$, $SD = .80$). Most participants listed six characteristics ($M = 5.88$, $SD = .33$). We first analyzed the characteristics' valence and found a significant valence effect, $F(2, 100) = 69.16$, $p < .001$, with a higher number of positive ($M = 3.98$, $SD = 1.46$) than neutral traits ($M = 1.27$, $SD = 1.17$), $t(50) = 8.04$,

$p < .001$; and both more positive, $t(51) = 10.47$, $p < .001$, and neutral traits, $t(51) = 2.67$, $p = .01$, than negative traits ($M = .63$, $SD = 1.09$).

Participants listed $M = .94$ ($SD = .90$) descriptions that could not be classified as either agentic or communal. The target was often described with characteristics referring to his/her outer appearance (*good-looking, attractive, tall*, etc.; 21% of “other” characterizations). We will not consider descriptions falling into the “other” category in our further analyses.

More than two thirds of the characteristics were mentioned only once (70%), indicating that participants described targets mostly by individualized characteristics.

Agentic vs. communal content in target characterizations. As expected, participants overall listed more communal traits ($M = 3.37$, $SD = 1.43$) than agentic traits ($M = 1.57$, $SD = 1.30$), $t(50) = 5.05$, $p < .001$, $d = 1.32$. To test Hypothesis (4) that participants would mention communal traits earlier than agentic ones, we calculated an average rank score by assigning a score of 6 for a trait listed in the first position, a score of 5 for a trait listed in the second position, and so forth until a score of 1 for a trait listed in the sixth position. We then summed these scores and divided them by the total number of communal (agentic) traits listed by the participant to account for the overall higher number of communal traits. Note that a higher score indicates an earlier mention of the respective kind of traits. The average score for communal traits was 3.47 ($SD = 1.20$), while the average score for agentic traits was 2.60 ($SD = 1.82$), indicating that participants did indeed mention communal traits prior to agentic ones, $t(50) = 2.42$, $p < .02$, $d = .56$.

Content and valence of the generated descriptions. To investigate the role of valence, we computed a 2 (dimension: agency vs. communion) x 2 (positive vs. negative valence) ANOVA with repeated measures on both factors. The content dimension effect was not significant any more, $F(1, 50) = 1.61$, $p = .21$, the valence effect was significant, $F(1, 50) = 74.90$, $p < .001$, and the valence by content dimension effect was significant, as well, $F(1, 50) = 9.52$, $p < .01$ (Figure 2). The communal traits that participants listed were more valence driven, that is, the difference between the percentage of positive and of negative traits was higher among the communal traits ($M_s = .73$ and $.06$, $SD_s = .32$ and $.16$, respectively), $t(50) = 11.70$, p

$< .001$, $d = 2.65$, than among the agentic traits that participants listed ($M_s = .53$ and $.17$, $SD_s = .45$ and $.33$, respectively), $t(50) = 3.91$, $p < .001$, $d = .91$. The overall number of negative characteristics listed was quite low; participants were inclined to describe the target in mostly positive terms, probably due to a general positivity bias or social norms not to say negative things about a person they hardly know. Since communion is more closely related to valence than agency (Suitner & Maas, 2008), this resulted in a greater difference between the number of positive and negative characteristics among the communal attributes than among the agentic attributes.

We also tested for a three-way interaction of content dimension by valence by position of the traits mentioned, but there was none, $F < 1$. Participants mentioned communal characteristics of any valence earlier than agentic ones.

In sum, we found that a fellow student was described with more communal traits than agentic traits. This supports earlier findings (Wojciszke, et al., 1998) that descriptions of other persons are more loaded with communal than with agentic content. Most importantly, in line with our general proposition of a preferential processing of communal content, Hypothesis (4) was also supported. Communal traits were mentioned earlier than agentic ones. We further found that communal descriptions were more valence-driven than agentic ones.

General Discussion

Derived from a functional approach to person perception the present series of studies tested the proposition of a preferential processing of communal information compared to agentic information on the levels of recognition (Hypothesis 1), categorization (Hypothesis 2), and the formation of inferences (Hypothesis 3), as well as in spontaneous person descriptions (Hypothesis 4). Across four studies, we found support for this hypothesis. Participants recognized communal trait words faster than agentic trait words; they categorized the valence of word stimuli faster when these belonged to the communion dimension rather than the agency dimension; they inferred communal content faster than agentic content from more complex behavior descriptions, and they mentioned communal traits both more frequently and earlier than agentic traits in free descriptions of another person. The size of the content dimension

effect was relatively small for recognition, (Cohen's d statistic, $d = .17$), and became larger for categorization ($d = .49$), trait inferences ($d = .47$), and free person descriptions ($d = .56$). Parallel results obtained on different tasks (recognition, categorization, inference, generation of person descriptions) and with different operationalizations (response latencies, kind and order of generated descriptions) support our proposition that compared to agentic information communal information is processed preferentially in person perception.

We have also argued that an interaction of content dimension and stimulus valence as it has been observed on the level of social judgments (Reeder & Brewer, 1979; Skowronski & Carlston, 1987) might not necessarily emerge on early levels of processing and for response latency data. Whereas research by Ybarra and colleagues (2001) revealed an interaction of content and valence in word recognition, we found that valence did not interact with content dimension for speed of word recognition (Study 1) and valence-based categorization (Study 2). In Study 3 participants were faster to infer positive communal traits than positive agentic traits from complex behaviors, irrespective of these behaviors' valence. Our studies therefore suggest that an interaction of content by valence does not emerge at these early stages of information processing, however, this should be tested in further research. In line with studies on social judgments (Reeder & Brewer, 1979; Skowronski & Carlston, 1987) we found an interaction of valence and content dimension in our Study 4, in which participants had to generate free descriptions of a target person. Descriptions in terms of communal traits were more evaluation-driven than descriptions in terms of agentic traits—an effect that was probably due to the stronger correlation between valence and communion compared to agency (Suitner & Maas, 2008). This finding nicely fits with previous results showing that attitudes towards others are much more influenced by communal information than by agentic information (De Bruin & Van Lange, 1999, 2000; Wojciszke et al., 1998).

We interpret our data as demonstrating a preferential processing of communal information. One could argue, however, that the stimulus materials used in the present experiments did not only differ with respect to the communion vs. agency dimension but to other

features, as well, and that these may also account for - at least part of - the findings. We think that we can exclude a number of alternative explanations.

First, due to the careful pre-selection of items for Studies 1 and 2 the agentic traits expressed agency to the same degree as the communal traits expressed communion; word frequency was counterbalanced; agentic and communal traits were comparable in favorability; and words did not differ in length. These variables should not have influenced the findings.

Second, with regard to the results of Study 3 one could argue that the communal traits we selected were easier to infer from observed behavior than the agentic traits that we selected. However, we had carefully preselected behavior descriptions that conveyed an equal amount of these communal and agentic traits and a posttest ruled out a greater ease of inferences regarding communal traits than agentic traits as an alternative explanation for the present findings.

Working with words as stimuli in Studies 1 and 2 had the advantage that we could control for quite a number of possible confounds and that we could demonstrate the proposed preferential processing of communal information in a highly standardized experimental setting. At the same time this approach – although very common in the study of person perception (e.g., Asch, 1946) – is rather de-contextualized and lexical recognition and categorization is quite far away from broader processes of person perception, especially with respect to the functional perspective that “perceiving is for doing”. No doubt, there are situations in which we base our impressions of others on written or verbally communicated material like trait words. This is, for instance, the case when we build expectations towards an unknown person based on how others describe him or her. The classical Kelley (1950) research is a convincing example for how powerful expectations which are solely based on verbal descriptions of a target can be. Nevertheless, in everyday encounters we rarely “see” another person’s traits, but we see this person’s face, body, outer appearance, and behavior and we hear his/ her voice. Interestingly, Willis and Todorov (2006) reported that when participants had to judge faces after a very short exposure (100ms), they judged the communal trait of trustworthiness most consistently with

judgments under no time-constraints. This finding accords well with our data showing a faster recognition and categorization of communion words than agency words.

Our Study 3 and especially Study 4 were meant to test our hypothesis of a preferential processing of communal information under more “naturalistic” conditions. Inferences from behaviors are closer to everyday information processing than categorizations of isolated words and in everyday life we often describe a person to somebody else. In interpreting the findings of Study 4 it is important to keep in mind that the target was a “fellow student”, i.e., a person the participants were not close to and were not interdependent with. It may well be that descriptions of targets who are closer to the respondent than a fellow student would differ from the results in Study 4. It has, for instance, already been shown that people regard others’ agentic traits as more important the more interdependent they are with these others (Abele & Wojciszke, 2007, Study 4; Wojciszke & Abele, 2008). However, this is not the focus of the present research. Our present prediction was that usually, or as the “default” of person perception, communal information is processed preferentially. This does not exclude that agency gains in relevance depending on the situation at hand. However, as the default in most situations, communal information should dominate person perception and thus we asked our participant to describe a – more or less – “generalized” other.

Summarizing, we found comparable results that were all in favor of our preferential processing of communal information hypothesis across a number of different methods and materials and on multiple levels of processing. This further enhances our confidence that the effects are based on a more general phenomenon and are not due to some specific aspects of our methods or the materials that we used.

Contribution and Implications

The functional approach to person perception and the preferential processing hypothesis. Our present theorizing was based on the assumption that “perceiving is for doing” (Dunning, 2004; Fiske, 1992; Heider, 1958; Peeters & Czapinski, 1990; Zebrowitz & Collins, 1997). Communal traits are “other-profitable” and signal the target’s interpersonal intentions more than agentic traits (Abele & Wojciszke, 2007; Peeters, 2001; Wojciszke, Baryla,

Parzuchowski, Szymkow, & Abele, 2011). This is why they should be processed preferentially. The here proposed preferential processing hypothesis provides a framework under which findings on the higher weight assigned to communal information in judgments of others (e.g. Abele & Wojciszke, 2007; Ames & Bianchi, 2008; De Bruin & Van Lange, 1999, 2000; Fiske et al., 2007; Leach et al., 2007; Wojciszke et al., 1998, 2009; Wojciszke & Abele, 2008; Ybarra et al., 2008), research on response latencies (Bazinska & Wojciszke, 1996; Ybarra et al., 2001), on information selection (De Bruin & Van Lange, 2000), and on trait inferences (Ames & Bianchi, 2008) can be brought together.

Our present findings show that preferential processing means faster processing of communal information on the levels of recognition, categorization, and inferences as well as in spontaneous characterizations of an acquaintance. However, preferential processing of communal information does not always have to result in faster responses for communal information than for agentic information. It may well be that although communal information is recognized, categorized, inferred, and spontaneously called to mind more quickly, it may lead to slower responses due to interference (e.g., in a Stroop task as used by Wentura et al., 2000) or it may be processed more slowly when consequential social judgments have to be made (cf., De Bruin & Van Lange, 2000). Future research should address what the preferential processing of communal information means with respect to the speed of social judgments.

The “Big Two” fundamental dimensions. The present research adds to our understanding of the dimensions of agency and communion. These dimensions have been called “fundamental” or “Big Two” because they underlie judgments of many different targets like the self, other persons, social groups, nations, and cultures (Abele & Wojciszke, 2007; Cuddy et al., 2008; Fiske et al., 2007; Judd et al., 2005; Paulhus & Trapnell, 2008; Peeters, 2008; Wojciszke, 2005). The present research suggests that considering content, specifically content belonging to the “Big Two”, can enhance our understanding of social information processing in general and that content plays an important role in how information is processed.

The present research also fosters our understanding of the “Big Two” as intrinsically relational constructs. We were here concerned with communion and agency from the observer

perspective and with respect to the other-profitability of traits. Other research compared the perspective of self vs. others in forming impressions from agency and communion. A recent line of research has, for instance, shown that the evaluation of others is strongly tied to their presumed communion, but barely to their agency; people's self-evaluations, in contrast, are strongly linked to their agency, but not to their communion (Wojciszke et al., 2011). An interesting task for future research would be to compare response latencies for trait judgments of self vs. others to test whether these differ depending on the content dimension.

The interplay of cognition and environment. Putting our preferential processing hypothesis in a broader context we could speculate about the interplay between cognition and environment and how the preferential processing of communion in people's cognition is reinforced by language and cultural practices. People interpret the environment by means of their cognitive structure, but the environment has also shaped cognition. Recent findings suggest that the social environment is richer and more unambiguous for communal information than for agentic information. Trait words are more saturated with communal meaning than with agentic meaning (Abele & Wojciszke, 2007; study 1); "human universals" (Brown, 1991), i.e., practices that are performed in numerous cultural groups, are also more saturated with communal meaning than with agentic meaning (Ybarra et al., 2008; Study 1); and communal trait words are more similar across languages than agentic trait words (Abele et al., 2008; for English, French, German, Italian, and Polish). Ybarra et al. (2008, Study 2) showed that participants from the United States and from Korea agreed more on the prototypicality of communal traits than on the prototypicality of agentic traits. Some of our present findings also suggest that despite extensive pretesting for equivalence, communal content was more unambiguously interpretable than agentic content. Both our Studies 2 and 3 revealed that participants tended to make more "mistakes" or disagreed more for agentic than for communal content. The environment may permanently foster and reinforce the preferential processing of communion by being richer and less ambiguous for content pertaining to the communion dimension.

Implications for person perception. De Bruin and Van Lange (2000) have demonstrated that people consciously select communal information about a future interaction partner prior to agentic information and that they take more time to read about the other's communal traits. Our present theorizing and data suggest that even one's initial more or less automatic response to a target is determined by a quick screening of communal information, while the processing of agentic information occurs a little later.

Several questions for further research arise from these findings. For instance, does the processing of agentic information depend on whether the initial screening for communal information has led to the conclusion "approach" or "do not approach"? As was outlined by Peeters (2001), the perception that a target is "friendly" can lead to more positive evaluation of this person's "competence" while the perception of a target as "hostile" can lead to a negative evaluation of this person's competence because a competent "enemy" is even less desirable than an incompetent enemy.

Based on the present theoretical framework one might also predict that cognitive load should enhance the preferential processing of communal information and that under such constraints people might not only process agentic information slower but also worse than communal information – which would be evident in a greater impairment of the retrieval of information concerning others' agency than of information concerning others' communion.

The preferential processing hypothesis might also shed new light on the old question of actor-observer differences in attributions (Jones & Nisbett, 1971; Malle, 2006). It might well be that actors and observers not only differ in their explanations of behavior ("why did I or he/she behave like that"), but that they also differ in their interpretations ("what trait can be inferred from my or from his/her behavior").

Conclusions

People perceive their environment in a way that aims at maximizing gains and minimizing losses. When perceiving others they first of all want to recognize these targets' interpersonal intentions and to draw inferences regarding approach vs. avoidance. Hence, they are especially attentive to information that helps to answer this question, that is, communal

information. Preferential processing includes faster recognition, categorization, and inference of communal compared to agentic information as well as a faster generation of respective information when we describe others. This preferential processing of communal information demonstrates the importance of content in social information processing and should foster the generation of multiple new research questions to advance our understanding of person perception.

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Footnotes

¹ Although word frequency correlated with valence, a variance inflation factor of 3.61 indicated that multicollinearity is not an issue in the present analysis (cf., O'Brian, 2007).

² To control for word frequency, Ybarra et al. (2001, Study 2) adjusted response latencies by multiplying the response latency for each word by the log of the word's frequency of occurrence. Applying the same procedure to our data led to an over-correction. While the log of word frequency and unadjusted response latencies were negatively correlated, $r(60) = -.52, p < .001$, response latencies adjusted with Ybarra et al.'s (2001) procedure were positively correlated with word frequency, $r(60) = .41, p < .001$.

³ This cut-off value is higher than in Study 1 because of the different nature of the task and higher average response latencies than in Study 1.

⁴ The remaining word sets did not differ with regard to word frequency, word length, or pretest favorability ratings, all t s < 1.22 , p s $> .23$.

⁵ A variance inflation factor of 1.59 indicated that multicollinearity was not a concern in this analysis (cf., O'Brian, 2007).

⁶ Other than in our two previous studies, we did not exclude any response latencies. Since the sentences varied in their complexity, response latencies fell into a broad range (352ms to 8063ms) and a common cut-off value for all sentences would not have been appropriate.

⁷ We also tested whether there were any differences in response latencies within the content dimensions, i.e., between participants' answers regarding "helpful" and "friendly" or between their answers regarding "competent" and "determined" respectively. While participants' answers regarding the two communal traits (helpful: $M = 980, SD = 267$; friendly: $M = 984, SD = 257$) were equally fast, $t < 1$, participants' responses regarding "competent" were significantly faster ($M = 1033, SD = 298$) than their responses regarding "determined" ($M = 1216, SD = 344$), $t(65) = 5.25, p < .001, d = .57$. However, response latencies for "helpful" and "friendly" differed significantly from response latencies for both agentic traits ("determined": t s $> 6.96, p$ s $< .001$; "competent": t s $> 2.09, p$ s $< .05$). Thus, the main effect of faster responses regarding communal

traits than agentic traits reported above is not solely due to slower answers regarding “determined”.

ACCEPTED MANUSCRIPT

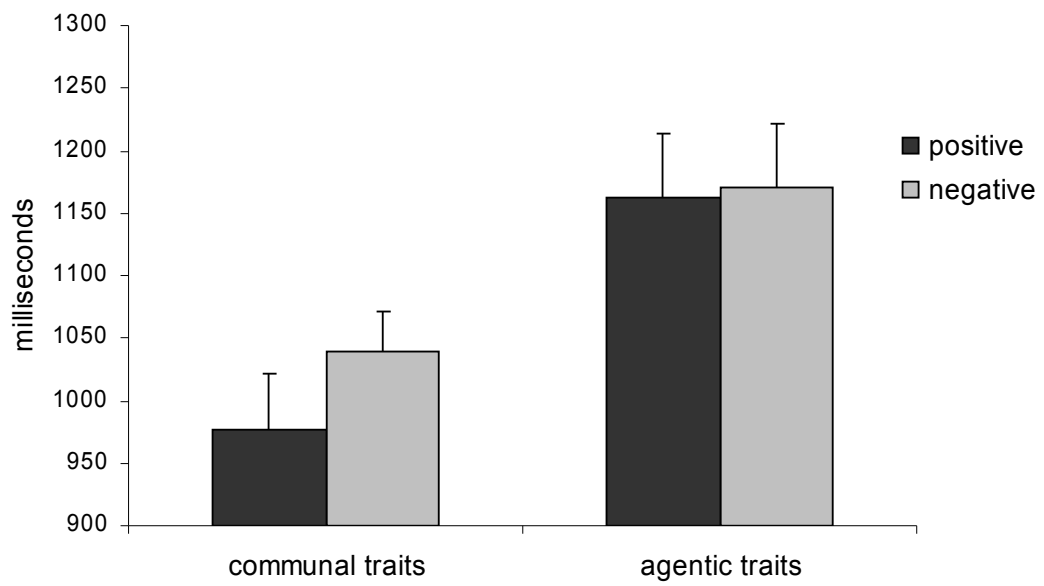
Figure Captions

Figure 1: Mean response latencies for behavior categorizations (Study 3; $N = 68$)

Figure 2: Content and valence of traits listed in description of acquaintance (Study 4; $N = 59$)

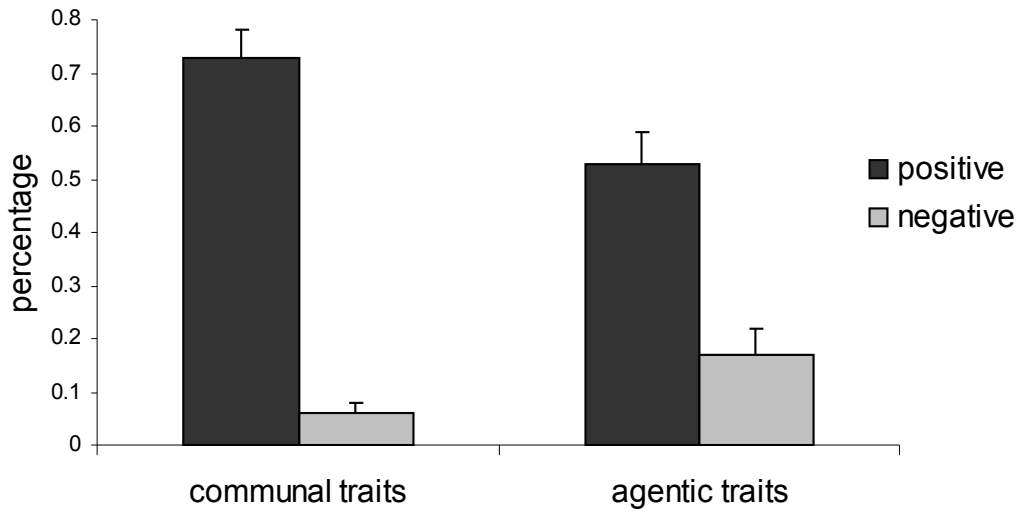
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Figure 1



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Figure 2



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Appendix 1

Stimulus words in Studies 1 and 2

Content	Valence				
	positive		negative		
	German	English	German	English	
Agency	aktiv	active	disziplinlos	undisciplined	
	ausdauernd	persistent	dumm	dumb	
	clever	clever	einfältig	simple-minded	
	entschlossen	resolute	passiv	passive	
	fleißig	industrious	planlos	aimless	
	kompetent	competent	schlampig	messy	
	leistungsfähig	capable	träge	lazy	
	selbstsicher	self-confident	unsicher	insecure	
	unabhängig	independent	aggressiv	aggressive	
	zielstrebig	determined	arrogant	arrogant	
	effizient	efficient	chaotisch	chaotic	
	ehrgeizig	ambitious	dominant	dominant	
	konsequent	consequent	egoistisch	selfish	
	selbständig	self-reliant	rechthaberisch	self-opinionated	
	willensstark	strong-minded	überheblich	presumptuous	
	Communion	einfühlsam	empathetic	abweisend	repellent
		feinfühlig	sensitive	distanziert	reserved
freundlich		friendly	hartherzig	hard-hearted	
fürsorglich		caring	kühl	cool	
großzügig		generous	taktlos	insensitive	
höflich		polite	unnahbar	aloof	
moralisch		ethical	verschlossen	withdrawn	
rücksichtsvoll		considerate	eifersüchtig	jealous	
tolerant		tolerant	gemein	mean	
warmherzig		warm	gewissenlos	unscrupulous	
ehrlich		honest	heuchlerisch	tokenistic	
herzlich		affectionate	hinterlistig	deceitful	
liebepoll		loving	nachgiebig	yielding	
treu		faithful	scheinheilig	hypocritical	
verlässlich		reliable	verlogen	dishonest	

Appendix 2

Stimulus Sentences in Study 3 (original German sentence in parentheses) with Pretest Ratings
on Respective Traits ($N = 81$)

Sentences	Pretest rating	
	<i>M</i> friendly	<i>M</i> competent
Positive behaviors		
X cooperates well with others, even if they disagree with him / her. (X arbeitet auch mit Andersdenkenden gut zusammen.)	5.55	5.65
X sends applications to many companies during college already and shares important advice with fellow students. (X bewirbt sich schon während des Studiums bei vielen Firmen und gibt wichtige Tipps an die Kommilitonen weiter.)	5.50	5.50
X advances employees' further training to enhance the department's success. (X fördert die Weiterbildung der Mitarbeiter, um die Abteilung zum Erfolg zu führen.)	5.60	5.55
X writes a small software program to facilitate work for a colleague. (X schreibt ein kleines Computerprogramm, um einem Kollegen die Arbeit zu erleichtern.)	5.75	5.90
Negative behaviors		
X cannot come up with good suggestions and therefore steals ideas from colleagues. (X fallen keine guten Vorschläge ein und deshalb klaut er/sie die Ideen von Kollegen.)	1.90	1.85
X fouls an opponent because he/she cannot succeed with fair play. (X foul den Gegenspieler, weil er/sie sich mit fairen Mitteln nicht durchsetzen kann.)	1.60	1.55
X simply keeps on walking when someone asks for the way because he/she does not know it either. (X geht einfach weiter, als jemand nach dem Weg fragt, da er/sie sich selbst nicht auskennt.)	1.65	1.70
X neglects his/her duties and spreads a bad atmosphere. (X vernachlässigt seine Pflichten und verbreitet schlechte Laune.)	1.70	1.50
Positive behaviors		
	<i>M</i> friendly	<i>M</i> determined
X is fluent in several foreign languages because he/she loves to meet new people. (X spricht fließend mehrere Fremdsprachen, da er/sie gerne neue Leute kennen lernt.)	5.35	5.20
X pursues to his/her goals with charm. (X verfolgt die eigenen Anliegen mit Charme.)	5.30	5.45
X organizes voluntary work calls for the sports club. (X organisiert Arbeitseinsätze für den Sportverein.)	5.10	5.05
X can stand his/her ground without offending others. (X kann sich gut behaupten ohne andere zu verletzen.)	5.45	5.43
Negative behaviors		
X does not make suggestions for how to solve the problem but criticizes other people's ideas. (X macht selbst keine Lösungsvorschläge, kritisiert aber die der anderen.)	1.80	1.81
X came late to the event and is now bothering others by pushing to the front. (X hat den Beginn der Veranstaltung verträdelte und stört nun andere, als er/sie sich vordrängelt.)	1.95	1.86
X remains silent to the criticism of a friend and later takes it out on a weaker person. (X schweigt zu den Vorwürfen, die ihm/ihr ein Freund macht und lässt seine Wut später an einer schwächeren Person aus.)	1.90	2.10
X still has not finished his diploma thesis and therefore cancels a friend's birthday party. (X hat die Diplomarbeit immer noch nicht fertig geschrieben und sagt deshalb für die Geburtstagsparty eines Freundes ab.)	3.45	3.33

Positive behaviors	<i>M</i> helpful	<i>M</i> competent
X gives useful advice to cheer others up. (X gibt nützliche Ratschläge, um andere aufzumuntern.)	4.95	5.10
X knows how to reintegrate outsiders. (X kann Außenseiter wieder integrieren.)	5.90	5.95
X is able to help a stranger with a car breakdown thanks to his/ her extensive knowledge. (X kann dank seines/ ihres umfangreichen Wissens einem Fremden bei einer Autopanne schnell helfen.)	5.65	5.75
X lends the money he/she won in a math competition to a friend. (X leiht das Geld, das er/sie bei einem Mathematikwettbewerb gewonnen hat, einem Freund.)	5.25	5.00
Negative behaviors		
X spreads lies about a colleague but nobody is able to follow his/her illogical argumentation. (X verbreitet Lügen über einen Kollegen, aber den unlogischen Argumenten kann niemand folgen.)	1.40	1.55
To fit in with the majority, X readily changes his/her opinion and thereby also turns against former comrades. (Um sich der Mehrheit anzupassen, ändert X schnell die Meinung und wendet sich damit auch gegen einstige Mitstreiter.)	1.80	1.75
X has not studied for the exam and now demands of his/ her fellow students to let him/ her copy from them. (X hat sich nicht auf die Prüfung vorbereitet und verlangt deshalb, dass die Kommilitonen abschreiben lassen.)	1.90	1.85
X rather throws every pawn in a game from the table than accepting a defeat. (X wirft lieber die Spielfiguren vom Tisch als sich eine Niederlage einzugestehen.)	1.85	1.85
Positive behaviors	<i>M</i> helpful	<i>M</i> determined
X has organized a successful surprise party for a friend. (X hat eine gelungene Überraschungsparty für eine Freundin organisiert.)	4.20	4.24
X argues that the club needs a homepage and constructs it without payment. (X argumentiert, dass der Verein eine Homepage braucht und erstellt diese unentgeltlich.)	5.05	4.71
X is organizing joint activities for friends. (X organisiert gemeinsame Aktivitäten für Freunde.)	4.60	4.76
X can insist on his/her opinion without offending others. (X kann auf der eigenen Meinung bestehen, ohne andere zu verletzen.)	5.05	4.95
Negative behaviors		
X decides not to do favors for others any more since nobody in the department recognizes his/her wishes either. (X beschließt, von nun an niemandem mehr einen Gefallen zu tun, da seine/ihre Wünsche in dieser Abteilung auch nicht beachtet werden.)	2.40	2.57
X is a sore loser. (X ist ein schlechter Verlierer.)	2.25	2.14
X often forgets to adhere to his/her end of a bargain. (X vergisst häufig, getroffene Abmachungen einzuhalten.)	1.85	1.86
X is hardly able to take care of himself / herself let alone of others. (X ist kaum in der Lage, sich um sich selbst zu kümmern, geschweige denn um andere.)	1.95	1.81