IN SEARCH FOR A SOCIAL-BEHAVIORAL APPROACH-AVOIDANCE DIMENSION ASSOCIATED WITH EVALUATIVE TRAIT MEANINGS

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Participants were presented with hypothetical target persons who had produced personality descriptions of another person. The descriptions varied along two evaluative trait dimensions: likability-related other-profitability (OP) and power-related self-profitability (SP). The participants rated the targets' willingness to engage in 12 social behaviors towards the described other. Consistent with the current view associating evaluation with approach-avoidance tendencies, intercorrelations between ratings were largely accounted for by one factor which could be interpreted as an approach-avoidance dimension marked by the opposites "wanting as friend" and "avoiding". Aggressive acts loaded less negatively than avoidance on the approach-avoidance factor, which may be a statistical artifact, but is also consistent with the idea that aggression has affinities with both approach and avoidance. Otherwise than predicted on the basis of particular evaluative impression formation studies, the association of evaluation with approach-avoidance tendencies was not limited to the likability-related dimension but generalized, although to a lesser extent, to the power-related dimension as well. Practical applications regarding the measurement of social approach-avoidance tendencies and theoretical implications regarding one-dimensional versus two-dimensional models of evaluative meaning are discussed.

Since Wundt (1896) positive and negative evaluative meanings have been associated with approach and avoidance tendencies respectively. Literally the terms approach and avoidance refer to spatio-temporal locomotive actions of moving towards versus keeping away from a stimulus. Consistently, there is a growing body of literature connecting positive and negative stimulus valences with simple approach-avoidance related moves such as arm flexions versus extensions (Cacioppo, Priester, & Berntson, 1993; for a review see Friedman & Förster, 2000), pressing a key versus withdrawing from a pressed key (Wentura, Rothermund, & Bak, 2000), or moving a manikin on a computer screen towards versus away from the

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valenced stimulus (De Houwer, Crombez, Baeyens, & Hermans, 2001; Moors & De Houwer, 2001). However, when connecting approach and avoidance with positive and negative evaluative meanings, most psychologists do not think of elementary motor responses but of general social behavioral categories referring to tendencies to enter versus not to enter in interaction with particular objects or people in the environment (Peeters & Czapinski, 1990). In this way, reading a book and calling a date are approach acts, while deciding not to buy a book and fleeing a robber are avoidance acts.

A somewhat ambiguous case are destructive or aggressive actions which imply both an approach and an avoidance component (Peeters, 1971). Indeed, in order to burn a book, one must first get it, in order to kick the robber downstairs, one must have physical contact, and one cannot scold a person without speaking to him or her. This intuitive evidence could be completed with psycholinguistic evidence that verbs expressing aggression are processed in a way that resembles the processing of approach verbs as well as avoidance verbs (Peeters, 1969, 1971) and recent neurological evidence showing that, similar to positive affect, also anger and aggression involve left-prefrontal cortical activity which is associated with approach motivation (Harmon-Jones & Sigelman, 2001). However, the approach acts that are involved in aggression aim at the same final state as genuine avoidance acts, which is the elimination or prevention of particular undesirable interactions with the approached object, if need be by eliminating the object itself.

Taking a social perceptual perspective, the present study was designed to check whether the general evaluative good-bad dimension in social-perception and cognition is associated with a general social behavioral dimension that is suited to be interpreted as an approach-avoidance dimension. Thereby I proceeded from the tripartite attitude model that has prevailed in social psychology since Krech and Crutchfield (1948) presented it in their classic textbook. According to this model the attitude of a person P towards an attitude object X involves (a) a cognitive component (positive versus negative thoughts of P about X), (b) an affective component (positive versus negative feelings of P relative to X), and (c) a behavioral component (positive versus negative actions of P relative to X). Attributing positive versus negative traits to X can be interpreted as the manifestation of cognitive and affective components of positive versus negative attitudes towards X.

Originally the tripartite model assumed that positive versus negative cognition and affect relative to X would be accompanied with positive versus negative actions relative to X. However, this link of the behavioral component with the other components has been rather problematic. As it is evident from the extensive literature review of Eagly and Chaiken (1993), the valences of the cognitive and affective component of a person's attitude tend
to fit harmoniously together, but they seem a poor predictor of the person’s behavior. However, this does not necessarily exclude any associative bond between a person’s attitude and particular behavioral dispositions. It may mean that overt behavior involves more determinants than just a single correspondent attitude. Particularly negative attitudes may be associated with negative, for instance violent, acts that are inhibited because they are incompatible with social norms and/or the actor’s self-concept. Hence, expressions such as “I could kill him” may be used in an informal conversation just to make it clear to one’s friends that one really dislikes the guy in question. However, the speaker in question may never consider any real violence, and in formal interviews, for instance by a psychologist, he or she may rightly deny any violent intention.

In order to reduce the chances that particular associations between attitudes and behavior are not detected because participants deny any intention to perform the behavior, one may question participants about other people’s behavior rather than about the own behavior. Specifically, participants may be presented with a hypothetical person who expresses his or her attitude towards a hypothetical target person by attributing particular traits to that target, and then the participants may be asked how they think the person might behave toward the target. Taking into account the use of this strategy, the first hypothesis at stake was the following:

Hypothesis 1. Provided that P is perceived to attribute positive (versus negative) traits to X, the perceiver expects behavioral dispositions in P that are organized along a dimension that can be interpreted as a social approach-avoidance dimension.

It could be objected that the above hypothesis involves an oversimplified view on evaluative meaning as a one-dimensional good-bad opposition. As it is apparent from the literature reviewed, for instance, by Vonk (1993) and White (1980), students of social perception and cognition have distinguished between two, presumably universal, evaluative dimensions: a power-related dimension (dominance, competence, etc.), and a likability-related dimension (sociability, morality, etc.) Hence the question arises whether and how each of these evaluative dimensions would relate to a behavioral approach-avoidance dimension.

A possible answer was provided by Peeters and Czapinski (1990). They argued that trait valences reflected anticipated positive (advantageous) and negative (disadvantageous) consequences associated with the traits. Borrowing terminology from economics, these consequences were referred to as the traits’ positive and negative (+/-) profitability (Peeters, 1976, 1983). Further, a fundamental distinction was made between a trait’s profitability for the possessor of the trait him/her-self and the trait’s profitability for others who have to deal with the possessor of the trait. Evaluative meanings
reflecting profitability for the self and the others were called respectively self-profitability (SP) and other-profitability (OP). SP and OP constituted evaluative meaning dimensions that could be matched with the two established social-cognitive evaluative dimensions: SP with the power-related dimension and OP with the likability-related one.

Considering that a person can only approach or avoid an "other" person than the own self, it was hypothesised that only OP, but not SP, would be unconditionally associated with approach-avoidance tendencies. Peeters and Czapinski (1990) found indirect support for that hypothesis in the literature on positivity biases and negativity effects in social information processing. Specifically, reviewed effects and biases that were assumed to be functional to the organization of approach-avoidance behavior, seemed limited to the OP dimension. However direct evidence that manifest approach-avoidance reactions would be limited to OP stimuli was not provided until recently Wentura et al. (2000) demonstrated that approach/avoidance reactions were elicited by +/-OP traits (generous/intolerant, etc.) but not by +/-SP traits (self-confident/powerless, etc.). However these approach-avoidance reactions consisted only of elementary motoric responses such as pressing (approach) versus withdrawing from (avoidance) a key in a lexical decision task with OP and SP traits as stimuli. So there remains the question whether the unilateral connection with OP would generalize to a broader category of social approach-avoidance behavior. Hence the second hypothesis at stake was the following:

**Hypothesis 2. The association with approach-avoidance would be limited to the likability-related OP dimension and not extend to the power-related SP dimension.**

A third hypothesis concerned the interaction between both dimensions. Evidence has been presented suggesting that when SP information is combined with OP information, the positive SP information accentuates the given OP value while negative SP information detracts from it. For instance, Peeters (1992) observed that participants found a positive SP (self-confident) friend "better" than a negative SP (powerless) one and a positive SP (self-confident) enemy "worse" than a negative SP (powerless) one. Also Vonk (1996) found an analogous interaction between cues regarding the likability and power of a target and the global likability of the target, the weak and dislikable being evaluated less dislikable than the strong and dislikable. However, she did not obtain a reversal of the effects of the power related information, the strong and likable person not being evaluated more positively than the weak and likable one. Considering that the OP value or likability of a target is associated with approach-avoidance tendencies towards the target, a weak version of the third hypothesis stated the following:

**Hypothesis 3 (weak version). There is an interaction between the effects**
of perceived SP and OP traits of a target on the perceiver’s approach-avoidance tendencies. Specifically, effects of the SP valence of traits on approach-avoidance tendencies would vary, either in size or in direction or in both size and direction, as a function of whether the SP traits are combined with positive OP traits or with negative OP traits.

It is feasible, however, that the rather concrete evaluations obtained in Peeters’ experiment by indicating which one of two friends would be the “better friend” and which one of two enemies would be the “worse enemy”, might be more approach-avoidance related than the more abstract evaluations (based on evaluative rating scale responses and evaluative trait inferences) that were used in Vonk’s experiment. Hence, generalizing from Peeters’ friend-enemy experiment, the strong version of the hypothesis specified the expected interaction in the following way:

Hypothesis 3 (strong version). A target person with positive OP traits would be more approachable if the positive OP traits are combined with positive SP traits than if they are combined with negative SP traits; alternatively a target person marked by negative OP traits would be avoided more if the negative OP traits are combined with positive SP traits than if they are combined with negative SP traits.

The hypotheses were tested using an experimental questionnaire method in which participants were first informed about traits attributed by a hypothetical person A to a hypothetical other person B, and then asked to estimate the likelihood that A would be inclined to manifest specific attitude-relevant behaviors.

Method and Design

Participants

Thirty-eight Dutch-speaking adults were individually invited to complete a questionnaire. They were recruited quite arbitrarily from the circles of acquaintances of staff and students working at the Laboratory of Experimental Social Psychology (KULeuven). They formed a rather heterogeneous sample of 19 men and 19 women with various educational and professional backgrounds including 15 students from various faculties, 16 staff members of the Faculty of Psychology and Educational Sciences who were not familiar with the sort of research they participated in, and seven other adults without psychological study backgrounds. They were randomly divided into two groups each of which got a variant of the same questionnaire.
Questionnaire

The participants were presented with a booklet with 13 pages. At page 1 the following general instructions were presented (in Dutch):

A number of statements will be presented. They are formulated in the following way: ‘Person A describes person B as...’

After each statement there will follow a list of 12 possible behaviors person A could engage in with respect to B. You are asked to mark each behavior with a number between 1 to 9 whereby 1 means that, according to you, the likelihood that A would engage in that behavior is very low, and 9 means that the likelihood is very high.

Each of the following pages was composed according to the same pattern. On the top of the page, four traits attributed by A to B were presented as follows:

Person A describes person B as TRAIT1, TRAIT2, TRAIT3 and TRAIT4. How high do you estimate the likelihood that, if possible, A would ... B?

Then followed a list of 12 possible behaviors of A relative to B (beat, help, etc.) each of which was suited to be inserted at the short dotted line after “A would”. Participants were asked to note next to each verb the demanded likelihood rating.

Independent Variables: Sets of Traits Attributed by A to B

The four traits A used to describe B were varied following two designs that constituted two parallel experiments run with the same participants but with no overlapping data. They are henceforth referred to as Experiments 1 and 2. All traits were selected on the basis of previous research on evaluative trait meanings (Peeters, 1992; Peeters & Czapinski, 1990) and they represented positive and negative extremes of the power-related dimension SP (SP+ and SP-) and of the likability-related dimension OP (OP+ and OP-). They were combined into 12 sets or “conditions”. Four conditions, presented in Table 1a, belonged to Experiment 1, and eight conditions, presented in Table 1b, belonged to Experiment 2.

Experiment 1 (Table 1a) involved a 2 X 2 X 2 X 2 design with two within Ss factors: Dimension (the nature of evaluative trait dimension: OP, SP), and Valence (of traits: +,-). In addition, the design involved two between Ss factors: Gender (of participants) and Order (of presentation of the conditions).

Experiment 2 (Table 1b) involved a 2 X 2 X 2 X 2 X 2 design with three within Ss factors: OP (the valence of OP: +,-), SP (the valence of SP: +,-), and Replication. The factor replication concerned two parallel operationali-
### Table 1a. Experiment 1: Conditions, Implementation of Conditions, and Results (A scores).

<table>
<thead>
<tr>
<th>Conditions Dimension</th>
<th>Valence</th>
<th>Implementation</th>
<th>A score</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP</td>
<td>+</td>
<td>TOLERANT GENEROUS SENSITIVE RELIABLE verdraagzaam edelmoedig gevoelig betrouwbaar</td>
<td>8.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INTOOLDANT SELFISH INSENSITIVE UNRELIABLE onverdraagzaam zelfzichtig voeloos onbetrouwbaar</td>
<td>2.19</td>
</tr>
<tr>
<td>SP</td>
<td>+</td>
<td>POWERFUL AMBITIOUS SELF-CONFIDENT PRACTICAL machtig ambitieus zelfverzekerd praktisch</td>
<td>6.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WEAK UNAMBITIOUS SHY CLUMSY zwaak ambitieloos schuchter onhandig</td>
<td>5.60</td>
</tr>
</tbody>
</table>

Note. The factors involved are: (1) Dimension (OP and SP), and (2) Valence (+ vs. -). The original Dutch trait adjectives are added in small characters.

### Table 1b. Experiment 2: Conditions, Implementation of Conditions, and Results (A scores)

<table>
<thead>
<tr>
<th>Conditions</th>
<th>SP</th>
<th>Replic.</th>
<th>Implementation</th>
<th>A score</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP+</td>
<td>SP+</td>
<td>Rep. 1</td>
<td>GENEROUS AMBITIOUS PRACTICAL TOLERANT edelmoedig ambieus praktisch verdraagzaam</td>
<td>7.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rep. 2</td>
<td>SELF-CONFIDENT SENSITIVE RELIABLE POWERFUL zelfzeker gevoelig betrouwbaar machtig</td>
<td>7.92</td>
</tr>
<tr>
<td>SP-</td>
<td>Rep. 1</td>
<td>TOLERANT UNAMBITIOUS CLUMSY RELIABLE verdraagzaam ambitieus onhandig betrouwbaar</td>
<td>6.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rep. 2</td>
<td>SHY SENSITIVE GENEROUS WEAK schuiter gevoelig edelmoedig zwaak</td>
<td>7.08</td>
<td></td>
</tr>
<tr>
<td>OP-</td>
<td>SP+</td>
<td>Rep. 1</td>
<td>UNRELIABLE SELF-CONFIDENT PRACTICAL INSENSITIVE onbetrouwbaar zelfverzekerd praktisch gevoelloos</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td>Rep. 2</td>
<td>POWERFUL SELFISH INTOOLDANT AMBITIOUS machtig zelfzichtig onverdraagzaam ambitieus</td>
<td>3.72</td>
<td></td>
</tr>
<tr>
<td>SP-</td>
<td>Rep. 1</td>
<td>INSENSITIVE CLUMSY UNAMBITIOUS SELFISH gevoelloos onhandig ambitieus zelfzichtig</td>
<td>2.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rep. 2</td>
<td>WEAK INTOOLDANT UNRELIABLE SHY zwaak onverdraagzaam onbetrouwbaar schuiter</td>
<td>3.21</td>
<td></td>
</tr>
</tbody>
</table>

Note. The factors involved are: Other-Profitable Value of Traits (OP+ vs. OP-), Self-Profitable Value of traits (SP+ vs. SP-), and Replication (Rep.1 and Rep.2). The original Dutch trait adjectives are added in small characters.

The results show that the approach-avoidance dimension significantly influenced the responses. The positive approach and avoidance conditions resulted in higher A scores compared to the negative conditions.

To control for order and gender, both factors were balanced for each participant. The order of the conditions was randomized for each participant.

The results indicated that participants were more inclined to approach positive and avoid negative conditions. This suggests that the approach-avoidance dimension is a significant factor in determining the choice of conditions.

The study also showed that the approach-avoidance dimension influenced the participants' responses in a consistent manner across different dimensions and valences. This consistency supports the validity of the approach-avoidance dimension as a psychological construct.

Finally, the study was replicated with different dimensions and valences to further validate the findings. The replicated results were consistent with the original findings, confirming the robustness of the approach-avoidance dimension.

In conclusion, the study provides empirical evidence for the approach-avoidance dimension as a significant factor in psychological decision-making. The findings have implications for understanding the mechanisms underlying decision-making processes and can be applied in various fields, including psychology, economics, and management.
Dependent Variables: The List of Behaviors (Verbs)

12 Attitude related behaviors (verbs) that appeared to be examples of social approach and avoidance behavior were advanced on the basis of an informal examination of the social psychological literature on aggression, prosocial behavior, and social distance. The aim was not to achieve an exhaustive inventory of possible behaviors but to compose a varied sample of possibly approach-avoidance related behaviors. With that aim in mind, four behaviors were drawn from each domain. They are presented in Table 2. The 12 selected behaviors were presented to the participants in a random order, with the restriction that two consecutive behaviors never belonged to the same domain, and the order of presentation was reversed for half of the participants.

Table 2. Behavioral Dispositions, the Domains They Belong to (SD: Social Distance, PB: Prosocial Behavior, A: Aggression), and Obtained Results

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Domain</th>
<th>Mean</th>
<th>SD</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>WANT AS FRIEND (als vriend willen)</td>
<td>SD</td>
<td>4.60</td>
<td>2.89</td>
<td>0.90</td>
</tr>
<tr>
<td>WANT AS ACQUAINTANCE (als kennis willen)</td>
<td>SD</td>
<td>4.99</td>
<td>2.86</td>
<td>0.90</td>
</tr>
<tr>
<td>ALLOW TO USE HIS OR HER (A’s) BELONGINGS (zijn/haar (A’s) bezittingen laten gebruiken)</td>
<td>PB</td>
<td>4.72</td>
<td>2.83</td>
<td>0.86</td>
</tr>
<tr>
<td>HELP (helpen)</td>
<td>PB</td>
<td>5.30</td>
<td>2.67</td>
<td>0.86</td>
</tr>
<tr>
<td>WANT AS LIFE-PARTNER (als levenspartner willen)</td>
<td>SD</td>
<td>3.62</td>
<td>2.68</td>
<td>0.81</td>
</tr>
<tr>
<td>WANT TO COLLABORATE WITH (er willen mee samenwerken)</td>
<td>PB</td>
<td>4.21</td>
<td>2.83</td>
<td>0.80</td>
</tr>
<tr>
<td>ASSIST INDIRECTLY BY ATTENDING OTHERS TO B’s NEED OF HELP (indirect bijstaan door er anderen attent op te maken dat B hulp nodig heeft)</td>
<td>PB</td>
<td>5.05</td>
<td>2.64</td>
<td>0.77</td>
</tr>
<tr>
<td>BEAT (slaan)</td>
<td>A</td>
<td>2.11</td>
<td>1.84</td>
<td>-0.65</td>
</tr>
<tr>
<td>SCOLD (uitschelden)</td>
<td>A</td>
<td>2.97</td>
<td>2.19</td>
<td>-0.76</td>
</tr>
<tr>
<td>RIDICULIZE (belecheltelijk maken)</td>
<td>A</td>
<td>2.97</td>
<td>2.12</td>
<td>-0.76</td>
</tr>
<tr>
<td>THWART, PREVENT B FROM ACHIEVING HIS OR HER GOALS (tegenwerken; verhinderen dat B zijn of haar doeleinden bereikt)</td>
<td>A</td>
<td>3.06</td>
<td>2.14</td>
<td>-0.76</td>
</tr>
<tr>
<td>AVOID (vermijden)</td>
<td>SD</td>
<td>4.05</td>
<td>2.73</td>
<td>-0.84</td>
</tr>
</tbody>
</table>
Results and Discussion

Preliminary Analysis of Interindividual Differences (Experiments 1 and 2)

Because of the heterogeneous composition of the participant group, a preliminary Q-type principal component analysis\(^1\) was applied to the correlations between participants computed across the N=144 ratings provided by each participant across the 12 behavior ratings and the 12 conditions of experiments 1 and 2. One component accounted for 69% of the variance and all of the participants loaded high on it, loadings ranging from 0.73 to 0.91 (Me = 0.82) for males and from 0.74 to 0.92 (Me = 84) for females. The other components all accounted for less than 6% of the variance and did not reveal clear subgroups of participants. Altogether, in spite of the heterogeneous composition of the participant group, the obtained response patterns seemed quite similar, which argues for the generality of the effects revealed by those patterns in the following analyses.

Results regarding the First Hypothesis (Experiments 1 and 2)

In order to test the first hypothesis, product moment correlations were computed between the 12 behavioral dispositions across N=456 observations (the 12 conditions of experiments 1 and 2 presented to 38 participants) and submitted to principal component analysis. Consistent with the hypothesis, one single outstanding factor was obtained that accounted for 66% of the variance and could be interpreted as a bipolar approach-avoidance dimension. As it is shown in Table 2, all behavioral dispositions loaded high on that factor, contrasting a set of positive loadings for approach-related behavior, marked by "wanting as friend", against a set of negative loadings.

\(^1\) Principal component analysis is a factor analysis that covers the full range of the obtained variance. It follows, for instance, that the proportions of the variance accounted for by separate factors or "components" are computed relative to the total variance rather than to the, possibly much more restricted, shared variance. In this way the proportions are not artificially inflated and the outcomes of the analysis reflect the raw data in a less flattered but more faithful way than a common factor analysis would. Normally component- or factor-analyses are performed on correlations computed between items (in this case: 12 behavioral dispositions) across participants, and the obtained components reflect dimensions or categories underlying the similarities and differences obtained between items. This standard analysis was the one used to obtain the outcomes reported in the subsequent results section regarding the first hypothesis. The Q-type variant, which was used in the preliminary analysis of interindividual differences, is performed on correlations computed between participants across items, and the obtained components reflect dimensions or categories underlying the similarities and differences obtained between participants. For instance, they may reflect different viewpoints taken by participants.
for avoidance-related behavior, marked by "avoiding".

Calling the obtained dimension an approach-avoidance dimension has intuitive appeal, particularly because the most extreme negative loading was obtained for "avoid", and not for aggressive behavior items. Aggressive behavior items loaded negatively as well, but less extremely than "avoid". This may be a statistical artifact due to the relatively small variability of the aggressive behavior ratings. As it is shown in Table 2, standard deviations of aggressive behavior items are systematically smaller, indeed, although not impressively smaller, than the other standard deviations.

It is worth mentioning, however, that the less extreme negative loadings of aggressive behavior items may not only reflect a statistical artifact. In addition, they are in agreement with the proposition presented in the introductory section according to which aggression resembles avoidance in that it aims at the same final purpose, but differs from avoidance in that it involves an approach component. The presence of an approach component may make aggressive behavior less representative of avoidance behavior than pure avoidance acts are and this may have contributed to the less extreme negative loadings of the aggressive behavior items. However, in order to decide whether it really contributed, more research, controlling the statistical artifact, is required.

Meanwhile neither the statistical artifact nor the approach component in aggressive behavior may detract from the conclusion that the results confirm the first hypothesis: Provided that P is perceived to attribute (positive and negative) traits to X, the perceiver expects behavioral dispositions in P that are organized along a dimension that can be interpreted as social approach-avoidance whereby the data suggest that aggressive behavior is associated with avoidance.

Provided that social behavioral concepts associated with positively and negatively valenced traits reflect an approach dimension, the question remains which valence is associated with approach and which one with avoidance. The elaboration of an answer to this question led to the present hypotheses 2 and 3. When testing these hypotheses, the ratings for the 12 behavioral approach and avoidance dispositions were combined into a single score, henceforth referred to as "approach" score "A". The A score had a potential range from 0 (minimal approach and maximal avoidance) to 10 (maximal approach and minimal avoidance). It was obtained by the following formula:

\[ A = \frac{S + 38}{10.1} \]

where S is a sum ranging from -38 to 63 that is obtained by adding ratings across the 12 behavioral disposition items whereby negative signs are assigned to the ratings of the five items with negative loadings.
Results Regarding the Second Hypothesis (Experiment 1)

Mean A-scores relative to Experiment 1 are shown in Table 1a. They were submitted to a 2 (gender: male, female) x 2 (presentation order: order 1, order 2) x 2 (dimension: OP, SP) x 2 (valence: positive, negative) ANOVA with repeated measures for dimension and valence. In the present and subsequent analyses, alpha was set at \(p=0.01\), and effect sizes were computed using Cohen’s \(r\) where \(r\) values of 0.10, 0.30 and 0.50 represent respectively small, medium and large effects (Cohen, 1977; Wolf, 1986).

The analysis did not reveal any significant effect involving gender and presentation order and the mean \(F\) value associated with those effects was as low as 1.57. Significant effects were restricted to a main effect of dimension that was not relevant for the present study \(F(1,34)=35.45\;p<0.0001\;MSE=76.68\), a rather trivial main effect of valence, positive traits eliciting more approach (less avoidance) than negative ones, \(F(1,34)=464.50, p<0.0001\;MSE=116.24,\) and a huge interaction between dimension and valence involving the means presented in Table 1a, \(F(1,34)=207.74, p<0.0001, MSE=122.60,\) effect size \(r=0.93.\)

The interaction indicated that behavioral dispositions associated with positive traits contrasted with behavioral dispositions associated with negative traits, and this contrast was more pronounced for OP traits (8.50 versus 2.19) than for SP traits (6.79 versus 5.60). Scheffe tests \((p<0.001)\) showed that positive SP traits elicited less approach than positive OP traits, and negative SP traits elicited more approach (less avoidance) than negative OP. However, although it was weaker, the effect of (positive vs. negative) SP still pointed in the same direction as that of (positive vs. negative) OP and a separate ANOVA of the SP data revealed that the effect was significant and medium-sized \(F(1,34)=18.84\;p<0.0002,\;MSE=140.57\) effect size \(r=0.36.\)

Altogether, the interaction is at least partly in line with the second hypothesis in that the approach-avoidance tendency seems most strongly associated with the likability-related OP dimension rather than with the power-related SP dimension. However, contrary to the hypothesis, the association of approach-avoidance with evaluation is not limited to the OP dimension but extends, to a lesser but significant and medium-sized degree, to the SP dimension. Nevertheless, it may be possible to explain the association of approach-avoidance with SP without detracting from the hypothesis.

A first explanation may be that the association is accounted for by a minor OP component carried by the manifest SP adjectives. A problem with this explanation is that the minor OP component should have the same valence as the major SP component, which is not always be the case—e.g., compare “intelligent” with “sly” and “cunning”.

A second explanation is provided by the positive-negative asymmetry the-
ory (Peeters, 1971; Peeters & Czapinski, 1990) and the related positive offset principle (Cacioppo, Gardner, & Berntson, 1997). According to this theory, humans are inclined to process missing information proceeding from the hypothesis that the missing information may be positively OP valenced rather than negatively OP valenced. It follows that isolated adjectives (i.e., presented "in vitro" without referent) should be interpreted as if presented with a positive OP referent rather than with a negative OP referent. If SP and OP interact, as assumed by the strong version of the present third hypothesis, it follows that positive SP communicates positive OP in that it reinforces the implicitly assumed positive OP, while negative SP may adopt a negative OP valence in that it detracts from the implicitly assumed positive OP. For instance, when "strong" is presented in isolation, it would communicate positive OP, as in "strong friend" rather than negative OP as in "strong enemy". In an analogous way "weak" may communicate negative OP because "weak" combined with "friend" would detract from the positive OP value of "friend", whereby it would be disregarded that "weak" combined with "enemy" would have positive OP value in that it would detract from the negative OP value of "enemy".

In a previous study (Peeters, 1992), empirical evidence has been presented confirming that some SP adjectives indeed carry minor OP meaning components, but confirming also that adjectives in isolation reflect the meaning they carry in a positive OP context making that SP adjectives adopt OP values of the same valence as the original SP value. In this way the slight negative OP connotation of a positive SP trait such as sly may be compensated for by the positive OP adopted by the positive SP value if the trait is, rightly or wrongly, assumed to belong to a positive OP target as in "sly friend". Hence the results of experiment 1 may be explained in that the SP traits were processed as if they were presented in a positive OP context, making that positive SP is associated with positive OP and the related approach tendency, while negative SP is associated with negative SP and the related avoidance tendency. The present explanation stands or falls with the validity of the strong version of the third hypothesis according to which the approach-avoidance acts associated with respectively positive and negative SP values would be observed for SP traits combined with positive OP context traits and not generalize to SP traits combined with negative OP context traits.

**Results regarding the Third Hypothesis (Experiment 2)**

Mean A-scores relative to Experiment 2 are shown in table 1b. They were submitted to a 2 (gender: male, female) X 2 (presentation order: order 1, order 2) X 2 (OP: positive, negative) X 2(SP: positive, negative) X 2 (repli-
cation: replication 1, replication 2) ANOVA with repeated measures for OP, SP, and replications. Besides a main effect of replications that has no theoretical relevance $F(1,34)=10.40$ $p<0.003$ $MSE=68.61$, the factors gender, presentation order, and replication, did not yield any significant effect and the average $F$ involved amounted only to 1.04. The scarce significant effects included only a trivial main effect of (the valence of) OP $F(1,34)=650.45$ $p<0.00001$ $MSE=207.6853$, a large main effect of (the valence of) SP $F(1,34)=36.82$ $p<0.000001$, $MSE=111.92$, effect size $r=0.69$, and a rather large interaction between OP and SP $F(1,34)=8.87$, $p<0.006$, $MSE=63.49$, effect size $r=0.45$.

As to the third hypothesis, a weak and a strong version were presented. The weak version predicted only an interaction between OP and SP and is thus confirmed. The strong version concerned the nature of the interaction and predicted that positive SP would elicit more approach than negative SP when SP was combined with positive OP, and less approach when SP was combined with negative OP. The results in Table 1b confirm the first part of the hypothesis: When combined with positive OP traits, positive and negative SP traits elicited average A scores amounting respectively to 7.92 and 6.92. A separate ANOVA of the relevant data showed that the difference is significant and large-sized $F(1,34)=47.31$ $p<0.000001$ $MSE=81.72$ effect size $r=0.76$. However, the second part of the hypothesis was strongly contradicted by the data. The effects of SP were not reversed in the negative OP condition as compared with the positive OP condition. Instead positive SP traits continued to elicit higher A scores than negative SP traits, the means amounting respectively to 3.47 and 3.01. The difference was smaller than in the positive OP context, which indicates that the OP X SP interaction is in the direction of the hypothesis, but it still represents a significant and rather large effect $F(1,34)=8.74$ $p<0.006$ $MSE=93.70$ effect size $r=0.45$.

Concluding remarks and perspectives

A main conclusion, with practical implications, is that it makes sense to associate evaluation with a social behavioral approach avoidance dimension that encompasses more specific behavioral dispositions such as the ones listed in Table 2. Future researchers may measure approach-avoidance intentions relying on one or two behavioral items loading high on approach-avoidance, particularly “wanting as friend” and “avoiding”.

Within the approach-avoidance dimension, aggressive acts such as “beating” are near to the avoidance pole, although being less extreme than “avoiding”. At a first glance, this outcome may surprise in that “beating a person” may appear a more extreme negative act than “avoiding a person”. However,
as it was explained, the outcome in question may be a statistical artifact. Alternatively, it may be related to the fact that aggressive acts involve an approach component making them more approach-like than pure avoidance is.

It is noteworthy that the present outcomes were similar across male and female participants and were not affected by methodological factors such as order of presentation and replications with different implementations of crucial variables. Apparently they are robust outcomes.

Altogether, the present data suggest that there is a general social perceptual dimension of behavioral disposition that can be characterized in terms of approach versus avoidance and that aligns with a general evaluative good-bad dimension. In this respect the data are in line with the traditional association of evaluative meaning with approach and avoidance. However, no support was obtained for the specification that the association of evaluation with approach-avoidance would be limited to the likability related dimension OP and not extend straightforwardly to the power related dimension SP unless indirectly through interaction with an implicit or explicit OP context. Both OP and SP values were associated straightforwardly with approach if the values were positive and with avoidance if they were negative. In this respect the present social approach-avoidance associations did not match the evaluative judgments obtained in the former friend-enemy experiment (Peeters, 1992), nor did they match the motoric approach-avoidance tendencies observed by Wentura et al. (2000).

A possible explanation for the discrepancy with the friend-enemy experiment may be that the simple one-dimensional concept of evaluation applies when approach-avoidance responses are at stake, while the more complex two-dimensional concept applies when perceivers make evaluative judgments without focusing on manifest approach-avoidance implications. If this explanation is correct, it would argue against a simple straightforward interpretation of positive versus negative evaluative meaning in terms of approach versus avoidance. However, there may be alternative explanations.

One alternative explanation may be looked for once more in the positive-negative asymmetry and related positive offset principle that was advanced above as an explanation for the association of approach-avoidance with SP observed in Experiment 1. Perhaps the manipulation of negative OP using trait adjectives (selfish, intolerant, etc.) was weaker than the friend-enemy manipulation and failed to overcome the positive offset of the participants. In this way, the participants may have persisted in conceiving the selfish, intolerant, etc. person as a somewhat less positive other-profitable "friend" rather than as a negative other-profitable "enemy".

Finally, an alternative explanation may be looked for in the procedure which required participants to estimate an other person's rather than the own
behavioral dispositions or intentions. As it was explained, this procedure was followed for strategic reasons and it was assumed not to interfere with the theoretically relevant factors at stake in the study. However, it might have interfered after all, and in that way provide an explanation for the discrepancy with the friend-enemy experiment. Some evidence pointing in that direction can be found in a recent study by Peeters, Cornelissen, and Pandelaere (2001).

In that study, we used the method developed in the present study to obtain approach-avoidance ratings of a variety of concrete acts relative to hypothetical target persons marked by particular traits. We knew from a previous study how actors’ willingness to enact these acts varied as a function of the target persons’ traits perceived by the actors. Hence determining the approach-avoidance values of these acts, we obtained the approach-avoidance values associated with the traits from the perspective of the actors. These approach avoidance values were found to be directly related to the OP value of the traits and not at all to the SP value. Hence, consistent with the present second hypothesis, participants associated approach-avoidance concepts exclusively with the likability-related OP dimension. In this way, the results highlighted the relevance of SP and OP as distinct evaluative dimensions of which one (OP) was straightforwardly associated with behavioral approach and avoidance.

However, in one condition, the acts, of which approach-avoidance ratings were obtained, were not reactions effectively elicited by the traits but acts that consisted simply of attributing the traits to the target persons. Thus, like in the present study, participants were asked to rate an actor’s inclination to approach or avoid a hypothetical target person provided that the actor used a particular trait to describe the target person. In that condition participants relied on the simple unified general evaluative dimension and associated approach (vs. avoidance) with positive (vs. negative) traits irrespective of whether the traits belonged to the OP or the SP dimension.

A possible explanation may be that evaluative meaning is only processed following the two-dimensional model as far as it functions as an incentive value for approach-avoidance acts anticipated by a perceiver taking the perspective of the actor. However evaluative meaning would be processed following the one-dimensional model if it is perceived as the expression of approach-avoidance intentions. This means that the perceiver does not take the perspective of the actor who uses the traits to describe a target, but the perspective of an observer who derives the actor’s approach-avoidance intentions from the way the actor describes the target. Thus a perceiver would expect that an actor ‘A’ would approach an other ‘B’ if, like in the present study, A describes B as likable (OP) as well as if A describes B as powerful (SP). However if the perceiver takes the role of A and it is not A
who describes B, but A receives a description of B, then A would be inclined to approach B if B is described as a likable (OP) person, but not if B is presented as a powerful (SP) person. Future research will have to test the validity of this explanation and the role of possible actor-observer effects.

References


Peeters, G. (1992). Evaluative meanings of adjectives in vitro and in context: Some theoretical implications and practical consequences of positive-negative asym-


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