



## Reports

## Nice or smart? Task relevance of self-characteristics moderates interpersonal projection<sup>☆</sup>

Claudia Toma<sup>a,b,\*</sup>, Vincent Yzerbyt<sup>b</sup>, Olivier Corneille<sup>b</sup>

<sup>a</sup> Fonds National de la Recherche Scientifique, Université catholique de Louvain, Louvain-la-Neuve, Belgium

<sup>b</sup> Université catholique de Louvain, Louvain-la-Neuve, Belgium

## ARTICLE INFO

## Article history:

Received 18 February 2011

Revised 6 October 2011

Available online 26 October 2011

## Keywords:

Interpersonal projection

Trait relevance

Competence

Warmth

Cooperation

## ABSTRACT

Two studies investigated the impact of trait relevance to a specific task on people's projection of their characteristics onto a cooperative partner. We either measured (Study 1) or manipulated (Study 2) the relevance of a trait to a specific cooperative task. In both studies, participants first rated themselves on a list of traits. Then they imagined completing a cooperative task with an unknown partner. Finally, they rated the partner on the same list of traits. In Study 1, we found partner ratings to be positively influenced by self ratings and the idiosyncratic measure of trait relevance. In Study 2, participants rated the self and the partner on competence and warmth traits while completing an intellectual or a social task. We found partner ratings to be positively influenced by self ratings more on competence than on warmth in the intellectual task, but more on warmth than on competence in the social task. These results suggest that people project onto others in a way that maximizes their chances to succeed in cooperation.

© 2011 Elsevier Inc. All rights reserved.

## Introduction

People make frequent judgments about others' suitability for cooperative interactions. If people had the possibility to select the perfect partners for collaborative tasks, what characteristics would they hope to find? Past research suggests two possibilities. On the one hand, people value in others those characteristics that are relevant to interdependent interactions (e.g., honesty, kindness, intelligence, and trustworthiness; [Cottrell, Neuberg, & Li, 2007](#)). On the other, people exhibit a clear preference toward those partners who are similar to them ([Byrne, 1971](#)), and they tend to expect similarity with cooperative partners ([Toma, Yzerbyt, & Corneille, 2010](#)). The present research examined the possibility that both types of factors, that is, trait relevance and self-related information, could be simultaneously taken into account when forming impressions about collaborative partners. Specifically, we argue that people construe egocentric representations of their partners by projecting their own traits, but that this projection is differentially used as a function of the traits' relevance for a given cooperative task.

## Trait relevance in construing the ideal partner

People should select their interaction partners with care, seeking out others likely to promote beneficial interdependent interactions and avoid those likely to impede task effectiveness. For example, intimacy and warmth are more desirable for ideal friends than leaders, whereas competence and success are more desirable for ideal leaders than friends ([Lusk, MacDonald, & Newman, 1998](#)).

With regard to cooperation, several approaches offer insights into the relevant characteristics that people value in others. For example, the literature on impression formation suggests that people primarily value features related to honesty, kindness, and intelligence ([Anderson, 1968](#)). Research on human values offers similar insights and considers that people place greatest importance on others' benevolence (e.g., honesty, loyalty, helpfulness, forgiveness, and responsibility; [Schwartz & Bardi, 2001](#)). When selecting partners for close cooperative relations, kindness, intelligence, physical attractiveness, youth, status and loyalty appear to be important ([Buss, 1989](#); [Fletcher, Simpson, & Thomas, 2000](#)).

More recent research conducted by [Cottrell et al. \(2007\)](#) documented that whereas people generally value trustworthiness and cooperativeness (see also [Willis & Todorov, 2006](#)), they also differentially value other characteristics in their partners depending on the relevance of the characteristics to the specific tasks or problems faced. This point is consistent with a functional approach of social perception (e.g., [Gill & Swann, 2004](#); [Swann, 1984](#)), according to which different traits are relevant in different social contexts and person perceivers are in the business of knowing targets in specific contexts

<sup>☆</sup> We wish to thank Sophie Bertolami for assistance in data collection.

\* Corresponding author at: Université catholique de Louvain, Place du Cardinal Mercier 10, B-1348 Louvain-la-Neuve, Belgium.

E-mail address: [claudia.toma@uclouvain.be](mailto:claudia.toma@uclouvain.be) (C. Toma).

and in specific tasks shared with the perceiver. For example, extraversion may not necessarily be a relevant trait in every cooperative situation, but may act as an important indicator of leadership and dynamism if cooperative tasks indeed require these features.

### Self-other similarity in construing the ideal partner

Although construing an ideal partner for cooperation based on relevant traits might be a wise strategy, we argue here that the easiest strategy to use when construing the representation of others, especially when limited information is provided about the target, is to draw on self-information. Self-information is often used to form impressions of others and may drive people's propensity to construe ideal partners. Literature has documented that people tend to overestimate self-other similarity when making judgments about other people's behavior (Marks & Miller, 1987; Ross, Greene, & House, 1977), personality (Krueger, 1998; Lemon & Warren, 1976) or attitudes and preferences (Katz & Allport, 1931; Sherif & Hovland, 1961). People value similarity in others and report greater interpersonal attraction toward those who are similar to them in attitudes (Byrne, 1971) and personality (Neimeyer & Mitchell, 1988).

Research on social projection, that is, the process by which people expect others to be similar to them (Robbins & Krueger, 2005), shows that this tendency is magnified under cooperation. In other words, more social projection is observed in cooperative contexts both at the interpersonal and intergroup levels. At the intergroup level, Riketta and Sacramento (2008) found that people are more likely to see an outgroup as similar to themselves if it is cooperating rather than competing with the ingroup. At the interpersonal level, Toma et al. (2010) recently showed that people see a target person as more similar to themselves when they anticipate cooperation rather than competition with the target person.

Although the research on social projection offers evidence that people project their characteristics onto cooperative partners, it remains unclear whether projection is involved in the process of construing an ideal partner for cooperation. The possibility we suggest here is that projection emerges in cooperation because people believe that their partner's similarity to themselves increases the chances of success in cooperation. Stated otherwise, people seem to perceive similarity in others in a way that maximizes their own interests and goals (Kunda, 1987; Maner et al., 2005).

If people project in cooperation because they want to maximize their chance of succeeding, it stands to reason that they should be more prone to see their partner as similar to themselves on those characteristics that ensure success. Another possibility here is that relevant traits are more readily accessible, and by consequent, more likely to drive the projection process (Krueger & Stanke, 2001). In line with these conjectures, the current research tests the possibility that projection in cooperation occurs mainly on those characteristics that are the most relevant for success on the specific task. Moreover, we hypothesize that this effect should occur independently of the valence of the trait.

### Overview of the studies

We conducted two studies that measured (Study 1) or manipulated (Study 2) trait relevance for a specific cooperative task. In both studies, participants first rated themselves on a list of traits. Then, they imagined completing a cooperative task with an unknown partner. Finally, they rated the partner on the same list of traits. We predicted more social projection on task-relevant than on task-irrelevant traits.

In Study 1, we used the Big Five dimensions in order to provide evidence that the relevance of a trait may influence the extent to which people see partners for cooperation as similar to themselves (two-way interaction). Big Five personality traits are generally considered as relevant for selecting partners likely to meet with

success in cooperation (Buss, 1996). We, however, excluded the agreeableness dimension considered as semantically related to cooperation (see Riketta & Sacramento, 2008). This allowed us to exclude the possibility that our participants would judge these traits as relevant for cooperation because of their semantic features.

A second distinctive feature of Study 1 is that we used an idiosyncratic measure of trait relevance, which was done for two reasons. First, consistent with Cottrell et al. (2007), we contend that although Big Five factors are relevant for cooperation, each trait conveys different information to different people and different people may consider different traits as being relevant. By using the idiosyncratic measure of trait relevance we can secure a more sensitive and valid test of our hypothesis. Second, trait relevance could vary as a function of trait attribution to the self. If person A rates her/himself as very open and person B rates her/himself as not very open, the openness may likely be seen as more relevant for cooperation by person A than by person B. Therefore, by using the idiosyncratic measure of trait relevance we control for the potential covariation of trait relevance with self traits.

In Study 2, we directly manipulated trait relevance based on the two fundamental dimensions of social judgment: competence and warmth (Abele, Cuddy, Judd, & Yzerbyt, 2008; for recent reviews, see Fiske, Cuddy, & Glick, 2007; Kervyn, Yzerbyt, & Judd, 2011). More specifically, we asked participants to imagine working with another person on an intellectual task or on a social task. Our rationale was that in the intellectual task, the most relevant traits refer to competence, whereas in the social task the most relevant traits refer to warmth. We predicted that participants confronted with an intellectual task should project more on their competence traits, whereas participants confronted with a social task should project more on their warmth traits. In Study 2, we thus expect the degree to which the self is projected into the target partner to be based on an interaction between the type of trait and the type of task (three-way interaction).

## Study 1

### Method

#### Participants and design

Forty-one participants (29 females), university students in various disciplines, took part in a study of spontaneous impression formation. They ranged in age from 18 years to 35 years ( $M = 21.85$ ,  $SD = 3.51$ ).

#### Procedure

On the first page of the questionnaire, participants rated themselves on a list of 16 personality traits (8 positive and 8 negative). These traits were selected to represent four of the Big Five personality traits (extraversion, emotional stability, conscientiousness, and openness to experience; four adjectives for each trait). These traits were borrowed from Riketta and Sacramento (2008) who pre-tested them to be semantically unrelated to cooperation. Participants had to indicate the extent to which each of the traits (e.g., progressive, creative, and slow) characterized them on a 9-point rating scale ranging from 1 (= not at all) to 9 (= very much).

On the second page, participants read a scenario in which they had to imagine working in cooperation with another student (the target partner). They learned that they were about to finish a final year project with this student and that the university lecturer responsible for the evaluation of the project would give the same grade to both students. Participants were told that obtaining a very good grade for this project was of utmost importance because, according to the scenario, the participant would like to continue with a M.A. program and thus good academic results were required. Participants were then asked to imagine the student with whom they will work in cooperation.

Participants were told that they had a high chance of succeeding and obtaining the best grade for the project.

On the third page of their questionnaire, participants were asked to rate the target on the same list of traits that they had previously used to rate the self.

On the fourth page of their questionnaire, participants were asked to rate the relevance of each of the 16 traits with respect to the cooperative task, using a 9-point scale ranging from  $-4$  (= rather irrelevant) to  $+4$  (= rather relevant). Because the valence of a trait can vary as a function of its attribution to the self (Krueger, 1998; Sinha & Krueger, 1998), as well as its subjective relevance to the task, participants were also asked to rate the valence of each trait, using a 9-point scale ranging from  $-4$  (= rather negative) to  $+4$  (= rather positive).

When all tasks had been completed, participants were debriefed, thanked, and dismissed.

## Results

Because the ratings of the traits were nested within participants, the data were analyzed by means of multi-level modeling. Variation due to traits (self ratings, relevance of traits, and valence of traits) was estimated at level-1 (within-subject), whereas variation due to participants was estimated at level-2 (between-subjects).

Our hypothesis states that the relation between self and target ratings is influenced by the relevance of the traits in that self ratings should predict target ratings mainly for traits judged as relevant for the task. In other words, we predicted the presence of a significant two-way interaction at level-1 between self-ratings and trait relevance. To test our prediction, we implemented the following multi-level model:

Level-1 Model:

$$\text{Target} = P0 + P1 \times \text{Self} + P2 \times \text{Relevance} + P3 \times \text{Valence} + P4 \\ \times \text{Self} \times \text{Relevance} + P5 \times \text{Self} \times \text{Valence} + P6 \times \text{Valence} \\ \times \text{Relevance} + P7 \times \text{Self} \times \text{Relevance} \times \text{Valence} + E$$

Level-2 Model:

$$P0 = B00 + R0$$

$$P1 = B10 + R1$$

...

$$P7 = B70 + R7$$

with  $P0$ ,  $B00$ ,  $B10$ ,  $B20$ ,  $B30$ ,  $B40$ ,  $B50$ ,  $B60$ ,  $B70$  as intercepts,  $P1$ ,  $P2$ ,  $P3$ ,  $P4$ ,  $P5$ ,  $P6$ ,  $P7$  as regression weights, and  $E$ ,  $R0$ ,  $R1$ ,  $R2$ ,  $R3$ ,  $R4$ ,  $R5$ ,  $R6$ ,  $R7$  as residuals.  $B10$  denotes the extent to which the self is used to judge the target.  $B20$  refers to the extent to which trait relevance affects target ratings.  $B30$  refers to the extent to which trait valence affects target ratings. The critical parameter for our hypothesis is  $B40$  because it denotes the extent to which the tendency of the self-ratings to predict the target ratings varies as a function of trait relevance.  $B50$  refers to the tendency of the self-ratings to predict the target ratings as a function of trait valence.  $B60$  controls for the potential of the interaction between trait valence and trait relevance to bias the critical self ratings by trait relevance interaction (Yzerbyt, Muller, & Judd, 2004).  $B70$  tests whether our critical self ratings  $\times$  trait relevance interaction depends on trait valence. Self-ratings, trait relevance and trait valence were centered at the mean of participants' ratings. It is important to note that parameters in this model (especially  $B10$ ,  $B40$ ,  $B50$  and  $B70$ ) reflect self-target covariance, not correspondence. The method of estimation was the restricted maximum likelihood and the covariance matrix was unstructured. These specifications also apply to the subsequent models.

Self-ratings predicted target-ratings,  $B = .27$ ,  $SE = .05$ ,  $t = 5.21$ ,  $p < .001$ . More importantly, and as predicted, the relation between

self- and target-ratings (self-target projection) was moderated by trait relevance,  $B = .03$ ,  $SE = .01$ ,  $t = 2.14$ ,  $p < .05$ . In other words, participants projected to a larger extent their own personality traits onto the target when the traits were perceived to be relevant for the cooperative task. Of note, valence did not affect the extent to which self-ratings predicted target-ratings,  $B = -.01$ ,  $SE = .01$ ,  $t = -1.13$ ,  $p = .26$ , or the extent to which self-ratings predicted target-ratings as a function of trait relevance,  $B = -.01$ ,  $SE = .003$ ,  $t = -1.63$ ,  $p = .11$ .

## Discussion

The results of Study 1 suggest that participants projected their traits onto the cooperative partner. Importantly, however, the degree of social projection increased as a function of how relevant participants considered these traits to be for the cooperative task. This study is consistent with other research in which cooperation was found to increase projection (Riketta & Sacramento, 2008; Toma et al., 2010). Moreover, this study provides evidence that people project in cooperation more on relevant traits, either because these traits were the most salient ones or because these traits may increase the chance of succeeding in this situation. As a matter of fact, the degree of projection was sensitive to the specific requirement of the task. Of note, projection occurred regardless of the valence of the traits. This was also the case for the predicted interaction with trait relevance. Controlling for trait valence ensured that the impact of trait relevance on social projection was not due to the positivity of the traits.

## Study 2

Study 2 further investigates the role of trait relevance on interpersonal projection. Although the data from Study 1 are informative in that they capitalize on participants' personal evaluation of the relevance of a trait for the task at hand, the design of Study 1 limits our ability to draw strong causal conclusions about trait relevance in social projection. To address this issue, Study 2 manipulated the relevance of the traits by using traits that either did or did not fit well with the cooperative task requirements.

Competence and warmth, which are considered to be fundamental dimensions for social judgment (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), constitute two basic clusters of traits that differ in their relevance for specific cooperative tasks. Competence is related to striving to expand the self and it involves traits such as instrumentality, ambition, dominance, intelligence, and efficiency in goal attainment. Warmth arises from striving to integrate the self in a larger social unit and it involves such qualities as a focus on others, sociability, trustworthiness, interdependence and nurturance (Abele & Wojciszke, 2007). Competence might be particularly relevant if the cooperative task calls for efficiency and rapidity in the pursuit of goal. Warmth might be particularly relevant if the cooperative task calls for support, solidarity and empathy. In sum, these dimensions relate to key structural aspects of cooperative interpersonal and intergroup relations (Yzerbyt, Kervyn, & Judd, 2008).

We therefore asked half of the participants to imagine cooperating with an unknown partner on an intellectual task, while the other half imagined cooperating on a social task. Both competence and warmth traits were used to measure social projection. We predicted interpersonal projection to occur especially on the competence traits for the intellectual task, but to occur especially on the warmth traits for the social task.

## Method

### Participants and design

Fifty participants (33 females), university students in various disciplines, took part in a study of spontaneous impression formation.

They ranged in age from 18 years to 27 years ( $M = 20.74$ ,  $SD = 2.30$ ) and were randomly assigned to one of two experimental conditions (intellectual task versus social task).

#### Procedure

Similar to Study 1, participants first rated themselves on a list of 16 personality traits. Half of these traits were related to competence (e.g., intelligent, lazy, convincing, and unwise) and half were related to sociability (e.g., friendly, disdainful, funny, and nice). Again, 8 of these traits were positive and 8 were negative. These traits were taken from Kervyn, Yzerbyt, Judd, and Nunes (2009).

Next, participants read a scenario in which they had to imagine working in cooperation with another person (the target). Half of the participants had to imagine being employed in a software company where they would have to team up with a target person (their partner) in order to create new statistical software as quickly as possible (intellectual task). This task was presented as requiring efficient work, speed, and team coordination. The other half of the participants had to imagine performing voluntary work for a non-governmental organization (social task) where they would have to team up with a target person (their partner) in order to increase public awareness of the cause of children's rights defended by this organization. This task was presented as requiring empathy, interpersonal abilities, and team coordination. All participants were also informed that by working cooperatively with their partner, they could increase their chances of promotion and allow them to get ahead in their career. Participants were then asked to imagine the partner with whom they will work in cooperation. They were also told that they had a good chance of obtaining the professional promotion.

On the third page of their questionnaire, participants were asked to rate the target partner on the same list of traits that they had used to rate the self.

On the last page of their questionnaire, participants were asked to rate the valence of each personality trait, using a 9-point scale ranging from  $-4$  (= rather negative) to  $+4$  (= rather positive). Participants also completed two measures designed to assess their perception of the relevance of the trait to the task. In one measure, participants read "In the task that you were asked to perform with your partner, competence/warmth was important". They evaluated this proposition separately for competence and warmth using a 9-point scale ranging from  $-4$  (= rather unimportant) to  $+4$  (= rather important). In another measure, participants were presented with the forced choice question "In the task that you were asked to perform, the most important characteristic to have was competence versus warmth", and their task was to circle the relevant characteristic.

When all tasks had been completed, participants were debriefed, thanked, and dismissed.

#### Results

##### Manipulation checks

On the forced choice question, 22 of the 25 participants in the intellectual task condition considered competence as the central characteristic. In the social task condition 23 of the 25 participants considered warmth as the central characteristics,  $\chi^2(1) = 30.05$ ,  $p < .001$ .

Participants' perception of trait relevance was analyzed with a 2 (task: intellectual, social)  $\times$  2 (trait: competence, warmth) mixed-model ANOVA with repeated measures on the second factor. This analysis revealed the presence of a main effect of trait: warmth ( $M = 3.04$ ,  $SD = 1.76$ ) was perceived as more relevant for cooperation than competence ( $M = 2.52$ ,  $SD = 1.09$ ), irrespective of the type of task,  $F(1,48) = 4.44$ ,  $p < .05$ ,  $\eta_p^2 = .08$ . This main effect was qualified by a significant interaction between the type of task and the traits,  $F(1,48) = 30.40$ ,  $p < .001$ ,  $\eta_p^2 = .39$ . Competence ( $M = 3.32$ ,  $SD = 0.90$ ) was perceived as more relevant than warmth ( $M = 2.48$ ,  $SD = 0.87$ )

for the intellectual task,  $F(1,48) = 11.97$ ,  $p < .01$ ,  $\eta_p^2 = .11$ , whereas warmth ( $M = 3.60$ ,  $SD = 1.00$ ) was perceived as more relevant than competence ( $M = 1.72$ ,  $SD = 2.05$ ) for the social task  $F(1,48) = 19.16$ ,  $p < .001$ ,  $\eta_p^2 = .37$ .

#### Main analyses

As in Study 1, the ratings of personality traits were nested within participants. The multilevel analysis used the ratings of the target as our criterion and self-ratings, type of traits, and valence of traits as predictors at level-1 (within-subject). The type of task was included as a moderator variable at level-2 (between-subjects).

Our hypothesis predicts that that the relation between self and target ratings should be simultaneously influenced by one variable at the level-1 (the type of traits) and by one variable at the level-2 (the type of task), in that self ratings should predict target ratings especially for competence traits in the intellectual task and especially for warmth traits in the social task. In other words, we predicted the presence of a significant cross-level interaction between self-ratings, type of traits, and type of task three-way interaction. To test our prediction, we implemented the following multi-level model<sup>1</sup>:

##### Level-1 Model:

$$\text{Target} = P_0 + P_1 \times \text{Self} + P_2 \times \text{Valence} + P_3 \times \text{Self} \times \text{Valence} + P_4 \times \text{Self} \times \text{Traits} + E$$

##### Level-2 Model:

$$\begin{aligned} P_0 &= B_00 + R_0 \\ P_1 &= B_10 + B_11 \times \text{Condition} + R_1 \\ P_2 &= B_20 + R_2 \\ P_3 &= B_30 + R_3 \\ P_4 &= B_40 + B_41 \times \text{Condition} + R_4 \end{aligned}$$

with  $P_0$ ,  $B_00$ ,  $B_10$ ,  $B_20$ ,  $B_30$ ,  $B_40$  as intercepts,  $P_1$ ,  $P_2$ ,  $P_3$ ,  $P_4$ , as regression weights, and  $E$ ,  $R_0$ ,  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ , as residuals.  $B_10$  denotes the extent to which the self is used to judge the target.  $B_11$  refers to the extent to which the self is used to judge the target as a function of the type of task.  $B_20$  refers to the extent to which the trait valence affects target ratings.  $B_30$  expresses whether the self target relation is influenced by trait valence.  $B_40$  refers to the extent to which the self is used to judge the target as a function of the type of trait. The critical parameter for our hypothesis is  $B_41$  because it denotes the extent to which the tendency of the self-ratings to predict the target ratings varies as a function of the type of trait and the type of task (a three-way interaction). Self-ratings and trait valence were centered at the mean of participants' ratings.

Self-ratings predicted target-ratings,  $B = .14$ ,  $SE = .05$ ,  $t = 2.55$ ,  $p < .01$ . Again, valence did not affect the extent to which self-ratings predicted target-ratings,  $B = -.01$ ,  $SE = .01$ ,  $t < 1$ . Neither the type of traits nor the type of task influenced the extent to which self-ratings predicted target-ratings, ( $B = -.01$ ,  $SE = .02$ ,  $t < 1$ ,  $ns$ , and  $B = .06$ ,  $SE = .04$ ,  $t = 1.37$ ,  $p = .17$ , respectively).

<sup>1</sup> More complete models were also tested. We tested a model that included at the level-1 the type of task and the interaction between the type of task and the type of traits. None of these effects was significant,  $B = -.06$ ,  $SE = .06$ ,  $t = -1.01$ ,  $p = .32$ , and respectively,  $B = .02$ ,  $SE = .05$ ,  $t < 1$ . We also tested if valence affected the self  $\times$  trait, self  $\times$  task or self  $\times$  trait  $\times$  task interactions. None of these effects was significant,  $B = -.01$ ,  $SE = .01$ ,  $t < -1$ ;  $B = -.014$ ,  $SE = .009$ ,  $t = -1.50$ ,  $p = .13$ ;  $B = -.01$ ,  $SE = .008$ ,  $t = 1.50$ ,  $p = .13$ . Therefore all these non significant effects were excluded from analyses because the primary results were unchanged in the more complex models.

More importantly, and as predicted, the relation between self- and target-ratings (self-target projection) depended on the interaction between the type of traits and the type of task,  $B = .09$ ,  $SE = .02$ ,  $t = 3.77$ ,  $p < .001$ . To probe this interaction, we tested whether the self-ratings predicted target-ratings as a function of the type of trait separately for each task. The interaction between self-rating and traits was significant for both the intellectual task,  $B = -.09$ ,  $SE = .03$ ,  $t = -2.75$ ,  $p < .01$ , and the social task,  $B = .09$ ,  $SE = .03$ ,  $t = 2.56$ ,  $p < .01$ . For the intellectual task, the effect of self-ratings on target ratings was positive and significant for the competence traits,  $B = .18$ ,  $SE = .08$ ,  $t = 2.30$ ,  $p < .05$ , but it was not significant for the warmth traits  $B = -.01$ ,  $SE = .07$ ,  $t < 1$ . For the social task, the effect of self-ratings on target ratings was positive and significant for the warmth traits,  $B = .29$ ,  $SE = .08$ ,  $t = 3.71$ ,  $p < .001$ , but it was not significant for the competence traits  $B = .11$ ,  $SE = .05$ ,  $t = 1.42$ ,  $p = .16$ . In other words, participants projected their personality traits onto the target but this effect was only found for those traits manipulated to be relevant for their corresponding cooperative tasks.

## Discussion

The rationale for this study was that people should project on those traits that are perceived to be important for a specific task. Participants perceived competence as the most important dimension for intellectual tasks and warmth as the most important dimension for social tasks. As predicted, participants projected more on competence traits in the intellectual task condition and projected more on warmth traits in the social task condition. These results fully corroborate our hypothesis and nicely replicate those of [Study 1](#), this time with an experimental manipulation of trait relevance.

## General discussion

In two studies, the projection of self-attributed traits onto an unknown partner was influenced by the relevance of those traits for a given cooperative task. In [Study 1](#), using an idiosyncratic measure of trait relevance, we found enhanced projection on more task-relevant traits. In [Study 2](#), we manipulated trait relevance by using traits that varied in their relevance for cooperative task. Specifically, participants rated the self and the partner on competence and warmth traits while anticipating cooperating on an intellectual or social task. We found that participants projected more on competence than on warmth traits in the intellectual task, whereas the reverse was true for the social task. Our data thus confirm the prediction that trait relevance moderates interpersonal projection.

One could argue that, in the absence of individuating information about their partner, participants were somehow forced to rely on their own traits in forming an impression about their partner. Our results suggest that this is not necessarily the case. If participants were indeed constrained by the lack of partner information in the experiment, projection in [Study 2](#) should have occurred in all conditions. In other words, the simple slopes reflecting projection should have been significant also for competence on the social task and for warmth on the intellectual task (although perhaps to a lesser extent than for warmth on the social task and for competence in the intellectual task). Our data show that participants did not project on the irrelevant characteristics. Hence, the lack of information does not seem to account for the pattern of interaction obtained here. Of importance too, people in real life situations often have limited information about future partners and are left to form expectations about them in the absence of more detailed individual information. The experimental setting considered here may best reflect the latter circumstances. Another issue is whether any trait, irrespective of its semantic meaning, is likely to be

projected onto a partner. For instance, would people project “nervous” and “hostile” on their partner? Clearly, people may be reluctant to project some traits on potential partners. Hence, more research is certainly needed in order to disentangle the relative impact of semantic meaning and trait relevance on projection.

Despite these limitations, the present findings have a number of important implications. The current studies are the first to demonstrate that trait relevance does not only influence the process of construing an ideal partner by means of valuable characteristics ([Britt & Shepperd, 1999](#); [Cottrell et al., 2007](#); [Fletcher & Simpson, 2000](#)), but that it also facilitates the projection processes by which the partner is viewed as similar to the self. Our studies suggest that projection might be inflated or deflated depending on whether the traits used for the judgment are relevant or not in a specific situation. This is consistent with a functional approach to social perception (e.g., [Gill & Swann, 2004](#); [Swann, 1984](#)), which states that person perceivers are in the business of knowing targets in specific contexts of interactions and for specific tasks.

Our findings also point to a possible explanation of why people project their self-view especially in cooperative settings ([Riketta & Sacramento, 2008](#); [Toma et al., 2010](#)). The research conducted so far suggests that a focus on similarity is the default process in cooperation. That is, cooperation has been found to activate an integration mindset in which similarities between the self and others are emphasized ([Carnevale & Probst, 1998](#); [Stapel & Koomen, 2001](#)), with a resulting assimilation of the self into the other but also of the other into the self. Because our work reveals that people project mainly on relevant traits, we would like to suggest that they are definitely concerned with the outcome of cooperation when producing this judgment. In other words, people may want to construe an ideal partner for cooperation by projecting those traits that increase their chances to succeed in the task. Future research should test whether participants' motivation for success is related to their propensity to use relevant traits when projecting onto the partner.

Another possible explanation of why people project on relevant traits is that those traits are accessible knowledge structures likely to enhance memory and attention ([Krueger & Stanke, 2001](#)). Because projection can also correspond to a heuristic process ([Krueger, 2007](#)) increased attention and accessibility may enhance reliance on the most relevant traits. In order to test this possibility, future research should investigate whether projection occurs more rapidly and with greater confidence on relevant compared to irrelevant traits.

Interestingly enough, the present work may have implications for the role of similarity in cooperation. People who overestimate the self-partner similarity on task-relevant dimensions may overlook the fact that divergence may be also beneficial. Imagine that two collaborators work together to write a research paper. One of the two persons capitalizes on good writing abilities whereas the other one can count on good statistical abilities. If in this situation people rely on similarities with their partner, they may fail to fully benefit from the partner's competence.

Our work may also have implications for research on the two fundamental dimensions of social judgment ([Fiske et al., 2007](#); [Kervyn et al., 2011](#)). Competence and warmth underlie social perception across different research domains: person perception ([Zanna & Hamilton, 1972](#)), face perception ([Montepare & Dobish, 2003](#)), and intergroup perception ([Fiske et al., 2007](#)). Our data suggest that competence and warmth could be also important dimensions for social projection research. By taking into account competence and warmth, our research suggests that people are not engaged in an indiscriminate attempt to see their partners as similar to themselves. If the success of the task relies on good interpersonal relations, people may expect their partners to be similar on communal characteristics, but may be more likely to accept partner difference on agentic characteristics.

## Appendix A

### Study 1

Test for the moderating role of trait relevance on target projection

$$\begin{aligned} \text{Target} = & 4.79 + 0.27 \times \text{Self} + 0.52 \times \text{Valence} + 0.11 \times \text{Relevance} \\ & + 0.02 \times \text{Self} \times \text{Relevance} - 0.01 \times \text{Self} \times \text{Valence} - 0.001 \\ & \times \text{Relevance} \times \text{Valence} - 0.002 \times \text{Self} \times \text{Relevance} \\ & \times \text{Valence} \end{aligned}$$

### Study 2

Test for the moderating role of the type of trait and the type of task on target projection

$$\begin{aligned} \text{Target} = & 4.69 - 0.14 \times \text{Self} + 0.60 \times \text{Valence} + 0.06 \times \text{Self} \\ & \times \text{Task} - 0.0001 \times \text{Self} \times \text{Valence} - 0.004 \times \text{Self} \times \text{Trait} \\ & + 0.09 \times \text{Self} \times \text{Task} \times \text{Trait} \end{aligned}$$

## References

- Abele, A. E., Cuddy, A. J. C., Judd, C. M., & Yzerbyt, V. Y. (2008). Fundamental dimensions of social judgment: A view from different perspectives. *European Journal of Social Psychology, 38*, 1063–1065.
- Abele, A., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology, 93*, 751–763.
- Anderson, N. H. (1968). Likableness ratings of 555 personality-trait words. *Journal of Personality and Social Psychology, 9*, 272–279.
- Britt, T. W., & Shepperd, J. A. (1999). Trait relevance and trait assessment. *Personality and Social Psychology Review, 3*, 108–122.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *The Behavioral and Brain Sciences, 12*, 1–49.
- Buss, D. M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.), *The five-factor model of personality: theoretical perspectives* (pp. 180–207).
- Byrne, D. (1971). *The attraction paradigm*. New York: Academic Press.
- Carnevale, P. J., & Probst, T. M. (1998). Social values and social conflict in creative problem solving and categorization. *Journal of Personality and Social Psychology, 74*, 1300–1309.
- Cottrell, C. A., Neuberg, S. L., & Li, N. P. (2007). What do people desire in others? A sociofunctional perspective on the importance of different valued characteristics. *Journal of Personality and Social Psychology, 92*, 208–231.
- Fiske, S., Cuddy, A., & Glick, P. (2007). Universal dimensions of social perception: Warmth, then competence. *Trends in Cognitive Science, 11*, 77–83.
- Fletcher, G. J. O., & Simpson, J. A. (2000). Ideal standards in close relationships: Their structure and functions. *Current Directions in Psychological Science, 9*, 102–105.
- Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology, 79*, 933–940.
- Gill, M. J., & Swann, W. B., Jr. (2004). On what it means to know someone: A matter of pragmatics. *Journal of Personality and Social Psychology, 86*, 405–418.
- Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: Understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology, 89*, 899–913.
- Katz, D., & Allport, F. (1931). *Students' attitudes*. Syracuse, NY: Craftsman.
- Kervyn, N., Yzerbyt, V. Y., & Judd, C. M. (2011). When compensation guides inferences: Indirect and implicit measures of the compensation effect. *European Journal of Social Psychology, 41*, 144–150.
- Kervyn, N., Yzerbyt, V., Judd, C., & Nunes, A. (2009). A question of compensation: The social life of the fundamental dimensions of social perception. *Journal of Personality and Social Psychology, 96*, 828–842.
- Krueger, J. (1998). Enhancement bias in the description of self and others. *Personality and Social Psychology Bulletin, 24*, 505–516.
- Krueger, J. I. (2007). From social projection to social behaviour. *European Review of Social Psychology, 18*, 1–35.
- Krueger, J., & Stanke, D. (2001). The role of self-referent and other-referent knowledge in perceptions of group characteristics. *Personality and Social Psychology Bulletin, 27*, 878–888.
- Kunda, Z. (1987). Motivated inference: Self-serving generation and evaluation of causal theories. *Journal of Personality and Social Psychology, 53*, 636–647.
- Lemon, N., & Warren, N. (1976). Salience, centrality, and self-relevance of traits in construing others. *The British Journal of Social and Clinical Psychology, 13*, 119–124.
- Lusk, J., MacDonald, K., & Newman, J. R. (1998). Resource appraisals among self, friend and leader: Implications for an evolutionary perspective on individual differences. *Personality and Individual Differences, 24*, 685–700.
- Maner, J. K., Kenrick, D. T., Neuberg, S. L., Becker, D. V., Robertson, T., Hofer, B., et al. (2005). Functional projection: How fundamental social motives can bias interpersonal perception. *Journal of Personality and Social Psychology, 88*, 63–78.
- Marks, G., & Miller, N. (1987). Ten years of research on the false-consensus effect: An empirical and theoretical review. *Psychological Bulletin, 102*, 72–90.
- Montepare, J. M., & Dobish, H. (2003). The contribution of emotion perceptions and their overgeneralizations to trait impressions. *Journal of Nonverbal Behaviour, 27*, 237–254.
- Neimeyer, R. A., & Mitchell, K. A. (1988). Similarity and attraction: A longitudinal study. *Journal of Social and Personal Relationships, 5*, 131–148.
- Riketta, M., & Sacramento, C. (2008). 'They cooperate with us, so they are like me': Perceived intergroup relationship moderates projection from self to outgroups. *Group Processes and Intergroup Relations, 11*, 115–131.
- Robbins, J. M., & Krueger, J. I. (2005). Social projection to ingroups and outgroups: A review and meta-analysis. *Personality and Social Psychology Review, 9*, 32–47.
- Ross, L., Greene, D., & House, P. (1977). The false consensus phenomenon: An attributional bias in self-perception and social-perception processes. *Journal of Experimental Social Psychology, 13*, 279–301.
- Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross-Cultural Psychology, 32*, 268–290.
- Sherif, M., & Hovland, C. I. (1961). *Social judgment: Assimilation and contrast effects in communication and attitude change*. New Haven: Yale University Press.
- Sinha, R. R., & Krueger, J. (1998). Idiographic self-evaluation and bias. *Journal of Research in Personality, 32*, 131–155.
- Stapel, D. A., & Koomen, W. (2001). I, we, and the effects of others on me: How self-construal moderates social comparison effects. *Journal of Personality and Social Psychology, 80*, 766–781.
- Swann, W. B., Jr. (1984). The quest for accuracy in person perception: A matter of pragmatics. *Psychological Review, 91*, 457–477.
- Toma, C., Yzerbyt, V., & Corneille, O. (2010). Anticipated cooperation vs. competition moderates interpersonal projection. *Journal of Experimental Social Psychology, 46*, 375–381.
- Willis, J., & Todorov, A. (2006). First impressions: Making up your mind after a 100-ms exposure to a face. *Psychological Science, 17*, 592–598.
- Yzerbyt, V. Y., Kervyn, N., & Judd, C. M. (2008). Compensation versus halo: The unique relations between the fundamental dimensions of social judgment. *Personality and Social Psychology Bulletin, 34*, 1110–1123.
- Yzerbyt, V. Y., Muller, D., & Judd, C. M. (2004). Adjusting researchers' approach to adjustment: On the use of covariates when testing interactions. *Journal of Experimental Social Psychology, 40*, 423–431.
- Zanna, M., & Hamilton, D. (1972). Attributes dimensions and patterns of traits inferences. *Psychonomic Science, 27*, 343–354.