

People as resources: Exploring the functionality of warm and cold

ABIGAIL A. SCHOLER* AND E. TORY HIGGINS
Department of Psychology, Columbia University, USA

Abstract

We propose a motivational model of impression formation—people as resources—as a way to understand what information perceivers seek in their interpersonal world. Prior work has established that the warm–cold dimension is fundamental to impression formation. Building on other functional approaches, we suggest that the attributes warm and cold are important because they predict the direction of target resource use in interpersonal relationships—whether a person’s valued resources are likely (warm) or unlikely (cold) to be used for the benefit of the perceiver. In two studies, the warmth or coldness of a target influenced impressions more when the target did versus did not possess a valued resource. This effect was replicated across two studies using two different types of resources—competence (Study 1) and a material resource (Study 2). Implications of the model for understanding the motivations that underlie social perception are discussed. Copyright © 2008 John Wiley & Sons, Ltd.

How do people form impressions of others? What information do perceivers attend to and why do they care about that information? What makes some attributes more important than others? Questions like these have increased interest in understanding how the *functionality* for perceivers of certain target attributes might underlie their importance. Such approaches endorse the idea that “perceiving is for doing” (Fiske, 1992; McArthur & Baron, 1983; Swann, 1984; Zebrowitz & Collins, 1997). Perceivers do not want to know what kind of person a target is simply because they are intellectually curious; they want to know whether this is an individual to be approached or avoided (Fiske, Cuddy, & Glick, 2006; Peeters & Czapinski, 1990). Two fundamental dimensions of social judgment have emerged: the warm–cold or communion dimension, communicating information about social goodness or badness, and the competence or agency dimension, communicating information about intellectual fitness or non-fitness (Abele & Wojciszke, 2007; Asch, 1946; Dubois & Beauvois, 2005; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Peeters, 1992; Peeters & Czapinski, 1990; Phalet & Poppe, 1997; Rosenberg, Nelson, & Vivekananthan, 1968; Singh, Onglatco, Sriram, & Tay, 1997; Wiggins, 1979).

While the warm–cold dimension has been found to be primary in both the perceiver’s affective responses to a target (e.g., liking) and approach/avoidance behaviors related to a target (Beauvois & Dubois, 2000; Peeters, Cornelissen, & Pandelaere, 2003; Wentura, Rothermund, & Bak, 2000), the competence dimension also has consequences in an interpersonal context (Peeters & Czapinski, 1990; Vonk, 1996, 1999; Wojciszke, Bazinska, & Jaworki, 1998). Across a range of competence attributes (e.g., industrious, intelligent), Peeters (1992) found that these “self-profitable” attributes are sought in friends but not in enemies—for friends, a smart friend is preferable to a dumb one; for enemies, dumb is preferable to smart. Together, these two dimensions suggest not only how helpful or harmful a target may be, but also whether the target has the capacity to make such intentions consequential (*cf.* Abele & Wojciszke, 2007; Peeters & Czapinski, 1990; Vonk, 1996; Wojciszke et al., 1998). The influence of the competence dimension, however, has been assumed to be more variable in its impact, such that the importance of competence may depend on a perceiver’s relationship with the target (Abele & Wojciszke, 2007; Vonk, 1996). For instance, Abele and Wojciszke (2007) have

*Correspondence to: Abigail A. Scholer, Department of Psychology, Columbia University, 406 Schermerhorn Hall, MC 5501, New York, NY 10027, USA. E-mail: ascholer@psych.columbia.edu

recently suggested that perceivers will care about the competence dimension primarily when it has the potential to impact them (i.e., only in interdependent contexts).

The current functionalist approaches to impression formation suggest two central ideas: the evaluative meaning of the competence dimension depends on where a target falls on the warm–cold dimension (e.g., Peeters, 1992), and the personal significance of the competence dimension depends on the perceiver’s relationship with the target (Abele & Wojciszke, 2007). Building on these key insights, we suggest that these functional approaches can be extended by considering competence more broadly and by considering how warm–cold information may itself vary in its significance to perceivers. Specifically, we argue that what drives the importance of warm and cold is the information that these attributes convey about how an individual will use his or her resources (personal attributes, associates, possessions) in his or her relationship with the perceiver. Although clearly important, competence is not the only resource. Resources are *any* attributes (psychological, social, or material) that individuals possess that can be appreciated and valued by others (cf. Diener & Fujita, 1995; Foa & Foa, 1974; Hobfoll, 1989). When a target possesses *valued* resources, the likelihood that the target will make those resources available to the perceiver becomes especially relevant. We propose, then, that warm–cold information is particularly critical when a target possesses resources that are valued by the perceiver.

Our concept of resources is closely related to Dubois and Beauvois’s (2005) notion of social utility (a person’s “market value” in the social world) and Peeters and Czapinski’s (1990) notion of self-profitable attributes (the adaptive value of the attributes for success or failure in the social world). However, we construe resources more broadly, beyond their relation to whether an individual has what it takes to succeed (either economically or socially). Above all, what matters is whether a perceiver cares about a given resource in a particular context, which will depend on both the quality of the resource itself and on the perceiver’s own personal interests and concerns (cf. Abele & Wojciszke, 2007; Cottrell et al., 2007; Jones & Davis, 1965; Jones & deCharms, 1957; Jones & Thibaut, 1958; Fitzsimons & Bargh, 2003; Fitzsimons, 2006; Gill & Swann, 2004; Neuberg & Fiske, 1987; Swann, 1984). Therefore, we make a specific prediction about when warm and cold should matter. If warm and cold are used simply to predict whether a target should be approached or avoided, then they should always have a major impact on impressions. However, if warm and cold are important because they provide information about how a target will use his or her resources, then they should be relevant primarily in those circumstances when the target does (vs. does not) possess a resource that matters to a particular perceiver.

This prediction differs from the traditional Aschian perspective, which predicts a main effect of central traits (e.g., a main effect of the warm vs. cold difference) (Asch, 1946), and from perspectives suggesting that the competence dimension primarily predicts evaluative intensity (Wojciszke et al., 1998). Rather, building on approaches suggesting that the relational context determines the significance of competence information (Abele & Wojciszke, 2007), our People-as-Resources (PAR) approach emphasizes the importance of the relational context for determining the significance of *warm–cold* information for perceivers. This relational value comes from the resources that an individual target does or does not possess—resources that perceivers may value because of their own interests and concerns, or because of situational constraints and demands. Consequently, perceivers will be most affected by a target’s warmth or coldness when the target, given his or her resources, is someone with whom they are currently motivated to have a relationship. Earlier work by Wojciszke et al. (1998) provides some support for this position. They found, in conditions where interpersonal implications were highlighted, that the effect of target warmth–coldness on perceiver evaluations was stronger when the target was competent than when the target was incompetent. In these studies, the warm–cold dimension had more evaluative power when the target possessed a resource that perceivers cared about (competence; see also Vonk, 1996).

Finally, we should note that although warm and cold are special in impression formation because they provide information about the target’s likely inclinations toward the perceiver regarding the direction of resource use, warm and cold may also serve as resources in and of themselves. Warmth, even absent other resources, suggests that an individual will be kind, helpful, and supportive. Given this dual function, we do expect that information about the warmth or coldness of others should generally have a main effect on impressions (e.g., Ybarra, Chan, & Park, 2001), either because warm and cold are themselves viewed as resources or because the default assumption of perceivers is that others are likely to have valuable resources in general.

In our two studies, we sought to test the basic premise that information about warmth and coldness will interact with subjectively valued target resources to impact impressions. If the importance of warm–cold shifts as a function of the presence or absence of valued resources, it provides further support for functional accounts of social perception. In Study 1, we extended prior studies that have examined the interaction between competence and warmth by using a novel manipulation of warmth, and by directly testing the subjective resource value of competence for our participants.

In Study 2, we employed a resource other than competence—a material resource—to further test the predictions of the PAR model. If warm–cold is a central dimension because it predicts the direction of resource use, then we should find that this dimension matters primarily when the target possesses (vs. does not possess) a resource valued by perceivers.

STUDY 1

Study 1's aims were to replicate the competence and warmth interaction established in prior research (Vonk, 1996; Wojciszke et al., 1998), using both an indirect manipulation of target warmth and dependent variables that were more relational in nature. A long history of research in psychology has demonstrated that situational forces, including role demands, can influence inferences both about a target's behaviors (Trope, 1986) and about a target's dispositions (Jones & Harris, 1967). Thus, we wanted to explore whether manipulations of a target's warm versus cold *social role* would interact with a target's resources to affect impressions. We expected that perceivers might infer warmth and coldness from role-related information alone, without receiving any explicit warm–cold dispositional information (see Jones, 1979). Additionally, while much work on impression formation employs global measures of target evaluation (e.g., liking) (Asch, 1946; Heider, 1958), other perspectives have emphasized the importance of considering both the social contexts within which impressions are formed and the objectives of the perceiver (Devine et al., 1989; Dubois & Beauvois, 2005; Gill & Swann, 2004; Neuberg & Fiske, 1987; Swann, 1984; Wojciszke et al., 1998). Consistent with these perspectives, we included measures in this study that were more relevant to social relationships and to impressions formed about a target in a specific interaction context—would I want this person as a friend? Would I want this person as a roommate? (*cf.* Dubois & Beauvois, 2005; Peeters et al., 2003).

We selected the classic resource of academic intelligence for two reasons. First, we could investigate whether manipulations of warmth via social role would replicate the interaction between warmth and competence predicted by PAR and obtained in prior studies (Vonk, 1996; Wojciszke et al., 1998). Secondly, we could assess individual differences in the subjective resource value of academic intelligence for participants in our sample. If subjective value ratings were variable, it would enable us to investigate how variations in subjective resource value impact the warmth \times resource interaction. If, however, subjective resource value ratings were uniformly high, then it would suggest that the resource of competence may have emerged as the second major factor in the social perceptual space precisely because it is broadly valued.

Method

Participants and Design

One hundred twelve university students (61 females, 8 participants did not report gender; mean age 23.1 years) participated in this study in exchange for \$5. All participants were randomly assigned to condition in a 2 (type of target role: warm or cold) \times 2 (target resource: high intelligence or low intelligence) design.

Procedure

Participants were told that they would be participating in a study examining how impressions are formed when people are given minimal information about an individual. Participants then read a scenario describing a brief episode in the life of a fellow university student. After reading the scenario, participants completed a number of measures. Participants rated the target on the extent to which they would want the target as a friend or as a roommate on nine-point scales with endpoints of -4 (definitely not want) to $+4$ (definitely want). Given the strong correlation between these two, $r = .58$, $p < .001$, we combined them into a single index in the analyses. Additionally, participants were asked to complete a questionnaire assessing the extent to which they valued 10 different attributes in people with whom they associate (e.g., social connections, serious fitness routine). Ratings were made on a seven-point scale with endpoints of 1 (do not value at all) to

7 (value very much). Included in this list was the critical item, “academic intelligence.” Participants then completed the manipulation checks described below and were fully debriefed and thanked.

Target Scenarios

Each of the four target scenarios introduced the target, a fellow university student, Dan, who was described as being either high (97th percentile on the verbal, quantitative, and writing sections of the GRE, top 10% of his class) or low (40th percentile on the verbal, quantitative, and writing sections of the GRE, middle of his class) in academic intelligence. The scenario context was an interview for a summer internship, in which “the interviewer tells Dan that they are interested in knowing how a person responds in different situations, instead of purely focusing on Dan’s strong [weak] academic record. The interviewer tells Dan that he will be playing a computer game called Teamwork [Outwit] as part of the interview and hands Dan a description of the game.” “Teamwork” requires performing in a “warm” manner (e.g., “to perform well in the game, the player must consider all possible solutions, evaluate the impact of each approach, and figure out how to best relate to and cooperate with the other players to overcome the challenges presented”) while “Outwit” requires performing in a “cold” manner (e.g., “to perform well in the game, the player must analyze all possible solutions, evaluate the benefits and costs of each strategy, and figure out how to best outwit and deceive other players to get ahead.”). Thus, the social role is assigned to Dan; he has no choice in selecting the game.

In all conditions, the scenario concluded with the interviewer taking Dan to an adjacent room to play the game. Because participants were given no information about the target’s performance, there was no information presented about the dispositional warmth or coldness of the target. Instead, only information about the warmth or coldness required by the game role was provided.

Manipulation Checks

Manipulation checks indicated that both experimental manipulations were successful. For the difference in warmth required by the two game roles, participants reported (on an 11-point scale ranging from -5 to $+5$) that playing the game in a warm manner would be more likely to lead to success in the Teamwork game role ($M = 2.77$) than in the Outwit game role ($M = -1.94$), $F(1,100) = 87.09$, $p < .001$. For the manipulation of the academic intelligence resource, participants rated (on a seven-point scale) the high intelligence target ($M = 6.13$) as more intelligent than the low intelligence target ($M = 3.77$), $F(1,100) = 98.82$, $p < .001$.

Results and Discussion

Participants overwhelmingly rated academic intelligence as a resource they valued highly in others ($M = 5.67$). Indeed, the mode and median responses on the seven-point scale were both 6, with less than 6% of the sample rating the value of academic intelligence in others lower than the midpoint. These results indicate that this resource is valued highly and broadly across participants. Given the uniformly high ratings of academic intelligence, however, we were not able to assess interactions involving subjective resource value. Consequently, we report analyses including only our two manipulated variables.

A 2 (target game role) \times 2 (target resource) univariate analysis of variance with the friendship/roommate index as the dependent variable yielded a main effect of resource $F(1, 100) = 7.84$, $p = .006$, $\eta^2 = .07$, reflecting the fact that participants wanted a high intelligence target more as a friend/roommate than a low intelligence target. This was qualified, however, by a significant target game role \times target resource interaction, $F(1,100) = 10.49$, $p = .002$, $\eta^2 = .10$, reflecting the fact that, as predicted, when the target was high in intelligence (possessed the resource) a target performing a warm game role was desired more as a friend/roommate ($M = 1.19$, $SD = 1.10$) than a target performing a cold game role ($M = 0.17$, $SD = 1.42$), $F(1,51) = 8.61$, $p = .005$, $\eta^2 = .14$, whereas when the target was low in intelligence (did not possess the resource) there was a marginally significant reversal in the warm–cold difference, $F(1,49) = 2.88$, $p = .10$, $\eta^2 = .06$ (see Figure 1).

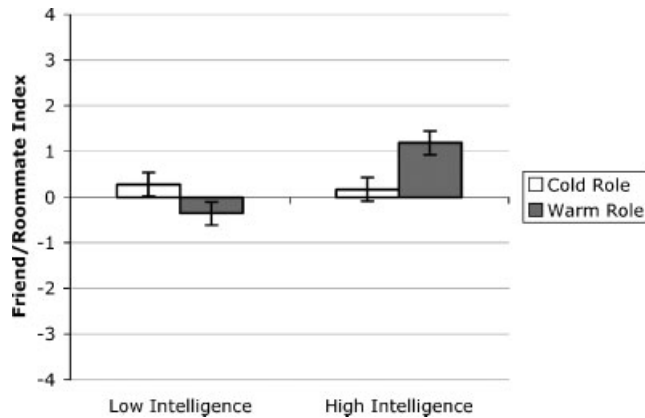


Figure 1. Effect of target role and target resource on friend/roommate index. Error bars represent two standard errors

Study 1 replicated the warmth \times competence interaction that has been found in previous work (Vonk, 1996; Wojciszke et al., 1998) using relational measures of attraction (wanting target for a friend or a roommate) and a role manipulation of warmth (rather than information about dispositional or behavioral warmth). In support of the PAR prediction, information about warm–cold was more important for perceiver impressions when the target possessed a valued resource (i.e., was high in academic intelligence). Target desirability (as both a friend or a roommate) was higher for a target who engaged in a warm versus a cold game when the target was high in academic intelligence but *not* when the target was low in academic intelligence. Given that two valenced dimensions were manipulated (warmth, competence), it is unlikely that the warm–cold effect is simply a valence effect; if so, we would expect that high intelligence (also positively valenced) would always make the impression more positive. However, that was not what we found; rather, the data suggest that warm–cold communicates distinct information beyond simply positivity or negativity.

Our results suggest that warm–cold information can impact impressions *even when inferred from indirect cues*. Although perceivers in this study did not actually expect to engage in interactions with the target, previous research has shown that behaviors tend to be judged in terms of their interpersonal consequences for those interacting with the target (Vonk, 1999). Thus, we believe that this scenario approach was an adequate, even conservative, test of the functional nature of the PAR model.

STUDY 2

Study 2 used a resource even more removed from any association with a personality attribute and directly assessed the subjective value of the resource to perceivers. We decided to use a material resource that is highly valued by some Manhattanites: a car. A pilot test with Columbia University students ($N = 30$) provided a list of 30 resources (e.g., car, social connections, computer skills) and asked participants to indicate the top 10 resources they would value a friend at the university possessing. Fifty percent included a car in their top 10 resources while the remaining 50% did not. By including this variably evaluated resource, we could directly test the PAR prediction that the warmth \times resource interaction should occur *only when individuals value the resource*. We expected that when perceivers highly valued the target resource, target warmth would interact with the presence of a target resource (a car) to affect liking.

Method

Participants and Design

Participants were 73 Columbia University students (45 females, 27 males, and 1 participant who did not report gender; mean age 23.4 years) who were paid for their participation. All participants were randomly assigned to condition in a 2 (warmth: warm or cold) \times 2 (resource: car present or absent) between-participants design.

Procedure

Participants were told that they would be participating in a study examining how impressions are formed when people are given minimal information about an individual. Participants then read a scenario describing a brief episode in the life of a fellow university student. After reading the scenario, participants completed a brief series of questions. To assess liking, participants rated the target on a nine-point scale with endpoints of -4 (dislike very much) to $+4$ (like very much). As part of a battery of unrelated “background and personality questionnaires,” they also completed a subjective resource value measure designed to assess the extent to which participants valued the target resource (described below). Participants also provided basic demographic information (including parental annual income). At the end of the study, they were fully debriefed, thanked, and compensated.

Target Scenarios

Each of the four scenarios introduced the target, a fellow university student (Lisa), who was described in a way that made her appear to be either warm or cold. The scenario context was a discussion among dormitory residents about a gift for their resident advisor. In the warm condition, Lisa “is very engaged in the discussion, offers a variety of ideas, supportively listens to the ideas of others.” In the cold condition, Lisa “is very detached from the discussion, proposes no ideas for the gift, rudely responds to the ideas of others.”

At the end of the scenario, participants learned incidentally (when the students in the scenario are seeking transportation options to Brooklyn) that Lisa either possessed a car (while other residents on her floor apparently did not) or that she did not possess a car (while some residents on her floor apparently did).

Subjective Resource Value

To determine the subjective value of the target resource for the participants in the actual study, participants were asked to complete a questionnaire assessing the extent to which they valued 10 different attributes in people with whom they associate (e.g., social connections, serious fitness routine). Thus, this questionnaire assessed the extent to which individuals valued particular resources *in others*. Ratings were made on a seven-point scale with endpoints of 1 (do not value at all) to 7 (value very much). Included in this list was the critical item, “access to a car.” These ratings were dichotomized, such that participants who indicated a rating below the midpoint (i.e., below “4”) were classified as those who did not value a car as a resource ($N = 49$), and participants who indicated a rating at the midpoint or higher were classified as those who did value a car as a resource ($N = 24$).

As socioeconomic status (SES) may be indicative of a perceiver’s baseline level of resources, we also hypothesized that it could be relevant to subjective resource value. Thus, as a secondary measure of subjective resource value, participants provided information about annual parental income among the demographics information completed as part of the final packet of background questionnaires. Given that our sample was composed of university students, parental income seemed a more valid indicator of socio-economic status than student income level. Participants indicated parents’ combined annual income given five salary ranges (from \$19 999 or less to \$300 000 or more). Analyses including this variable used a tertiary split dividing the sample into low (\$49 999 or less; $N = 19$), middle (\$50 000–\$99 999; $N = 23$) and high (\$100 000 or more; $N = 27$) income groups.

Results and Discussion

A $2 \times 2 \times 2$ analysis of variance was used to analyze the effect of target intention (warm; cold), target resource (car; no car), and extent to which perceivers valued the resource (valued resource; did not value resource) on liking for the target. Replicating the classic finding, there was the expected main effect of target warmth, $F(1,65) = 36.10$, $p < .001$, $\eta^2 = .55$, such that participants liked a warm target ($M = 1.54$, $SD = 1.33$) more than a cold target ($M = -0.83$, $SD = 1.52$). Most important for the purpose of our study, there was a significant three-way interaction between target warmth, target

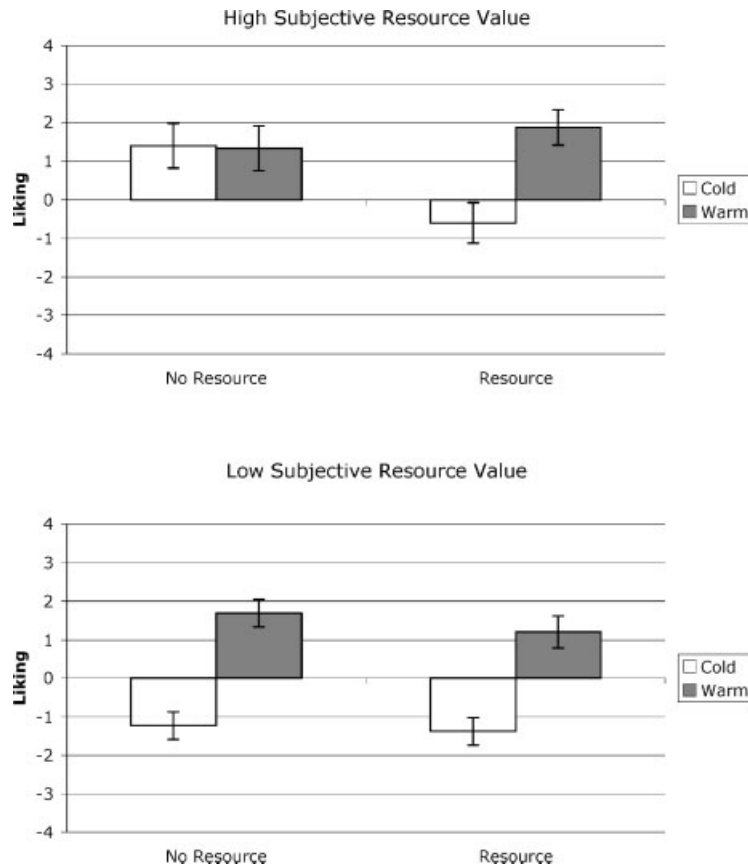


Figure 2. Effect of target warmth, target resource, and subjective resource value on liking. Error bars represent two standard errors

resource, and subjective resource value, $F(1, 65) = 4.78, p = .03, \eta^2 = .07$. As expected, for participants who *did* value the car as a resource, analyses revealed the predicted target intention by target resource interaction, $F(1,20) = 5.73, p = .03, \eta^2 = .22$, reflecting the fact that liking was greater for a warm versus a cold target when the target *did* possess the resource ($M = 1.88, SD = 0.83$ vs. $M = -0.60, SD = 0.89$) but not when the target *did not* possess the resource ($M = 1.33, SD = 0.52$ vs. $M = 1.40, SD = 2.41$) (see Figure 2). In contrast, for participants who *did not* value the car as a resource, there was no significant interaction of target warmth by target resource, $F(1,45) < 1$. Rather, liking varied only as a main effect of target warmth, $F(1,45) = 53.08, p < .001, \eta^2 = .54$.¹

Another way of operationalizing the subjective resource value aspect of the model is to examine perceivers' probable level of baseline resources—socio-economic level. Using a tertiary split on income, we found once again a significant three-way interaction among target warmth, target resource, and subjective resource value, $F(2, 57) = 4.46, p = .02, \eta^2 = .14$. The predicted target warmth by target resource interaction emerged at the lowest income level, $F(1, 18) = 8.40, p = .01, \eta^2 = .36$, but not at the middle income level, $F(1, 19) < 1$ nor at the high income level, $F(1, 23) < 1$. For perceivers at the lowest income level, the pattern of results replicated those found for participants who valued the target resource. For these low income participants, there was no difference in liking by target warmth when the target *did not* possess the resource, but when the target *did* possess the valued resource, there was a significant difference in liking by target warmth, such that a warm target with the resource was liked more than a cold target with the resource ($M = 2.40, SD = 0.55$ vs. $M = -0.6, SD = 0.89$). In contrast, for perceivers at the middle and high income levels, we found, once again, just the main effect of target warmth ($F(1,18) = 18.23, p < .001, \eta^2 = .49$ for middle income; $F(1,23) = 64.40, p < .001, \eta^2 = .74$ for

¹There were some unpredicted gender effects when we included gender in these analyses. Full details can be obtained from the first author; importantly, the critical three-way interaction did not vary as a function of gender.

Table 1. Mean liking ratings as a function of perceiver SES, target warmth, and target resource

	Low SES		Mid-SES		High SES	
	Warm	Cold	Warm	Cold	Warm	Cold
No resource	1.17 (0.98)	1.33 (2.31)	1.00 (1.41)	-0.86 (0.90)	2.43 (0.79)	-1.57 (1.13)
Resource	2.40 (0.55)	-0.60 (0.89)	0.17 (0.98)	-1.75 (0.50)	1.80 (1.79)	-1.38 (0.92)

Note: Values enclosed in parentheses represent standard deviations.

high income) (see Table 1). Thus, whether valuing the resource was indexed by participants' reports that they value a friend possessing a car or by their own relatively low SES level, the predicted target warmth \times target resource pattern emerged, such that warmth really mattered when the target possessed a resource that the perceiver valued.

The results of Study 2 provide additional support for the PAR model using a novel resource and a direct measure of subjective resource value. When perceivers cared about the target's resource (access to a car) and the target possessed the resource, the warmth or coldness of the target affected liking. However, when the target did not possess the valued resource, target warmth or coldness had little impact on liking. This effect emerged both when interest in the resource was assessed directly and when SES was used as a proxy for perceiver's own baseline level of resources (a potentially important component of subjective resource value). For perceivers who did not care about this resource, this interaction did not emerge. These participants simply exhibited the classic main effect of target warmth, suggesting that information about this particular resource (the car) was irrelevant.

GENERAL DISCUSSION

The present studies add to the growing call for functional accounts of impression formation by providing preliminary evidence that the importance of warm and cold is determined, at least in part, by the role they play in predicting how valued target resources will be used in relation to a perceiver. In two studies employing two different resources, warm versus cold information had a greater impact on target evaluation when the target possessed a valued resource. This prediction grows out of our proposed PAR model of impression formation which suggests that perceivers are not simply interested in being able to predict a target's behavior generally, but are interested in determining the target's relational value to them personally in social interactions (*cf.* Abele & Wojciszke, 2007; Gill & Swann, 2004; Peeters & Czapinski, 1990; Vonk, 1996; Wojciszke et al., 1998). Perceivers want to know if a target has resources that make their warm versus cold intentions interpersonally significant and consequential. While warmth itself may serve as a resource, both studies provide evidence that *warm* and *cold* also communicate critical information about the direction of target resource use. The greater attraction of perceivers to warm versus cold target persons depends on whether the target has resources that are subjectively valuable to the perceiver—resources beyond competence-related traits or even personality attributes generally (e.g., owning a car).

The three-way interaction obtained in Study 2 is difficult to account for using strictly associative or additive models of impression formation. If the presence of the resource simply had positive value for perceivers generally, we would expect that the presence of the car would lead to greater liking across conditions. Instead, for perceivers who valued the car, a target who had a car but was cold was liked significantly *less* than a target who was cold but had no car. Furthermore, the presence of the car when the target was warm led only to greater liking when perceivers reported placing high subjective value in the resource or when their own baseline level of resources was relatively low. While the current studies provide preliminary support for the functional claims of the PAR model, future research, using more naturalistic presentation of potential targets, will provide better tests of the model.

Our results also indicate that the *types* of resources that can impact impression formation extend beyond competence-related traits or even personality attributes generally. Differences in the nature of the resource may produce differences in the impact of warm versus cold information. For instance, information about the warmth and coldness of the target may interact with some target resources (e.g., competence) to suggest whether the resource will be used *for* or *against* the perceiver. However, it is also possible that in some cases, information about the warmth or coldness of the

target may more subtly communicate information about whether the perceiver will be able to gain access (or not) to a valued resource (e.g., a car). Moreover, there are other motivational factors that could impact how perceiver impressions unfold. If a perceiver feels that s/he is unable to reciprocate the receipt of a valued resource, the presence of a target resource could raise other motivational concerns that decrease liking or desire to interact (see Tesser, 1988; Walster, Berscheid, & Walster, 1973). The PAR predictions may occur only in certain circumstances, when the relevant motivational conditions are set.

Concluding Remark

The PAR model is a model of process, not content. It suggests that perceiver motivations matter in the impression formation process and that the presence or absence of valued target resources has an impact on how impressions are formed. This framework provides one way to understand both the general importance of warmth and competence for impressions (for reviews see Fiske et al., 2006; Judd et al., 2005; Wojciszke, 2005) while emphasizing the motivational factors that affect how interactions unfold and impression are formed. Our model does not dictate what resources are relevant, but suggests that in the complex social world that we navigate, the impact and importance of warm–cold information on impressions may vary considerably depending on the extent to which targets possess resources valued by perceivers. Most of the time, people are not simply interested in categorizing others just for the sake of detached classification; they are motivated to assess potential relational value. They want to know whom to approach and avoid, whom to befriend and oppose. People care about building relationships that will sustain and fulfil them; these motivations, we argue, will be reflected early in the impression formation process.

ACKNOWLEDGEMENT

We thank Lara Kamrath and anonymous reviewers for helpful comments on earlier versions of this article.

REFERENCES

- Abele, A. E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology*, *93*, 751–763.
- Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, *41*, 258–290.
- Beauvois, J. L., & Dubois, N. (2000). Affordances in social judgment: Experimental proof of why it is a mistake to ignore how others behave towards a target and look solely at how the target behaves. *Swiss Journal of Psychology*, *59*, 16–33.
- 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.
- Devine, P. G., Sedikides, C., & Fuhrman, R. W. (1989). Goals in social information processing: The case of anticipated interaction. *Journal of Personality and Social Psychology*, *56*, 680–690.
- Diener, E., & Fujita, F. (1995). Resources, personal strivings, and subjective well-being: A nomothetic and idiographic approach. *Journal of Personality and Social Psychology*, *68*, 926–935.
- Dubois, N., & Beauvois, J.-L. (2005). Normativeness and individualism. *European Journal of Social Psychology*, *35*, 123–146.
- Fiske, S. T. (1992). Thinking is for doing: Portraits of social cognition from daguerreotype to laser photo. *Journal of Personality and Social Psychology*, *63*, 877–889.
- Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2006). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, *11*, 77–83.
- Fitzsimons, G. (2006). Pursuing goals and perceiving others: A self-regulatory perspective on interpersonal relationships. In K.D. Vohs, & E. J. Finkel (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes* (pp. 32–53). New York: Guilford Press.
- Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: Nonconscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, *84*, 148–163.
- Foa, U. G., & Foa, E. B. (1974). *Societal structures of the mind*. Oxford, England: Charles C Thomas.

- 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.
- Heider, F. (1958). *The psychology of interpersonal relations*. Hoboken, NJ: John Wiley.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*, 513–524.
- Jones, E. E. (1979). The rocky road from acts to dispositions. *American Psychologist*, *34*, 107–117.
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 219–266). New York: Academic Press.
- Jones, E. E., & deCharms, R. (1957). Changes in social perception as a function of the personal relevance of behavior. *Sociometry*, *20*, 75–85.
- Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, *3*, 1–24.
- Jones, E. E., & Thibaut, J. W. (1958). Interaction goals as bases of inference in interpersonal perception. In R. Taguiri, & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 151–178). Stanford: Stanford University Press.
- 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.
- McArthur, L. Z., & Baron, R. M. (1983). Toward an ecological theory of social perception. *Psychological Review*, *90*, 215–238.
- Neuberg, S. L., & Fiske, S. T. (1987). Motivational influences on impression formation: Outcome dependency, accuracy-driven attention, and individuating processes. *Journal of Personality and Social Psychology*, *53*, 431–444.
- Peeters, G. (1992). Evaluative meanings of adjectives in vitro and in context: Some theoretical implications and practical consequences of positive-negative asymmetry and behavioral-adaptive concepts of evaluation. *Psychologica Belgica*, *32*, 211–231.
- Peeters, G., Cornelissen, I., & Pandelaere, M. (2003). Approach-avoidance values of target-directed behaviours elicited by target-traits: The role of evaluative trait dimensions. *Current Psychology Letters*, published online on: 20 November 2006. URL <http://cpl.revues.org/document396.html>
- Peeters, G., & Czapinski, J. (1990). Positive-negative asymmetry in evaluations: The distinction between affective and informational negative effects. In W. Stroebe, & M. Hewstone (Eds.), *European review of social psychology* (Vol. 1, pp. 33–60). London: Wiley.
- Phalet, K., & Poppe, E. (1997). Competence and morality dimensions of national and ethnic stereotypes: A study in six eastern-European countries. *European Journal of Social Psychology*, *27*, 703–723.
- Rosenberg, S., Nelson, C., & Vivekananthan, P. S. (1968). A multidimensional approach to the structure of personality impressions. *Journal of Personality and Social Psychology*, *9*, 283–294.
- Singh, R., Onglatco, M. L. U., Sriram, N., & Tay, A. B. G. (1997). The warm-cold variable in impression formation: Evidence for the positive-negative asymmetry. *British Journal of Social Psychology*, *36*, 457–477.
- Swann, W. B. (1984). Quest for accuracy in person perception: A matter of pragmatics. *Psychological Review*, *91*, 457–477.
- Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 181–227). New York: Academic Press.
- Trope, Y. (1986). Identification and inferential processes in dispositional attribution. *Psychological Review*, *93*, 239–257.
- Vonk, R. (1996). Negativity and potency effects in impression formation. *European Journal of Social Psychology*, *26*, 851–865.
- Vonk, R. (1999). Effects of other-profitability and self-profitability on evaluative judgments of behaviours. *European Journal of Social Psychology*, *29*, 833–842.
- Walster, E., Berscheid, E., & Walster, G. W. (1973). New directions in equity research. *Journal of Personality and Social Psychology*, *25*, 151–176.
- Wentura, D., Rothermund, K., & Bak, P. (2000). Automatic vigilance: The attention-grabbing power of approach- and avoidance-related social information. *Journal of Personality and Social Psychology*, *78*, 1024–1037.
- Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, *49*, 1283–1293.
- Wojciszke, B. (2005). Morality and competence in person-and self-perception. *European Review of Social Psychology*, *16*, 155–188.
- Wojciszke, B., Bazinska, R., & Jaworski, M. (1998). On the dominance of moral categories in impression formation. *Personality and Social Psychology Bulletin*, *24*, 1251–1263.
- Ybarra, O., Chan, E., & Park, D. (2001). Young and old adults' concerns about morality and competence. *Motivation and Emotion*, *25*, 85–100.
- Zebrowitz, L. A., & Collins, M. A. (1997). Accurate social perception at zero acquaintance: The affordances of a gibsonian approach. *Personality and Social Psychology Review*, *1*, 204–223.