Journal of Experimental Social Psychology 49 (2013) 33–41

Contents lists available at SciVerse ScienceDirect

Journal of Experimental Social Psychology

journal homepage: www.elsevier.com/locate/jesp

Downplaying positive impressions: Compensation between warmth and competence in impression management☆

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HIGHLIGHTS

- ► Compensation between warmth and competence occurs in impression management.
- ► People who want to appear warm (vs. control group) downplay their competence.
- ► People who want to appear competent (vs. control group) downplay their warmth.
- ► Compensation does not extend to other dimensions (health, political interest).

ARTICLE INFO

Article history:
Received 13 February 2012
Revised 23 August 2012
Available online 11 September 2012

Keywords:
Warmth
Competence
Impression management
Self-presentation

ABSTRACT

The compensation effect demonstrates a negative relationship between the dimensions of warmth and competence in impression formation in comparative contexts. However, does compensation between warmth and competence extend to impression management? Two studies examined whether people actively downplay their warmth in order to appear competent and downplay their competence in order to appear warm. In Studies 1a and 1b, participants selected words pretested to be high or low in warmth and competence to include in an e-mail message to people they wanted to impress. As predicted, participants downplayed their competence when they wanted to appear warm (Study 1a) and downplayed their warmth when they wanted to appear competent (Study 1b). In Studies 2a and 2b, compensation also occurred when participants introduced themselves to another person, as evidenced by the questions they selected to answer about themselves, their self-reported goals, and their open-ended introductions. Compensation occurred uniquely between warmth and competence and not for other dimensions, such as healthiness (Study 2a) and political interest (Study 2b), which suggests that the compensation effect extends beyond a mere zero-sum exchange between dimensions.

Introduction

People desire to make positive impressions on others. They smile and laugh at social gatherings in the hopes of being liked, and they subtly mention their accolades in order to be respected. Indeed, the top two impressions people seek relate to warmth and competence (Leary, 1995; Nezlek, Schutz, & Sellin, 2007), perhaps because people care about these dimensions the most when making judgments about other people (Abele & Wojciszke, 2007; Fiske, Cuddy, & Glick, 2007; Wojciszke, 2005). The warmth dimension reflects traits related to other-profitable intent, such as friendliness, communion, morality, and trustworthiness; by contrast, the competence dimension captures traits related to self-profitable ability, such as intelligence, agency, and skill (Peeters, 2001). Although both warmth and competence judgments are essential to person perception, warmth judgments account for a greater portion of the impressions people form of others (Abele & Wojciszke, 2007; Wojciszke, Banzinska, & Jaworski, 1998) and occur prior to competence judgments (Willis & Todorov, 2006). Given the weight of warmth and competence judgments in impression formation, it is unsurprising that people also care deeply about how warm and competent they appear.

People strive to appear warm or competent by displaying certain behaviors that are likely to elicit these attributions from others; in other words, they engage in impression management (Goffman, 1959; Leary, 1995; Schlenker & Pontari, 1973). When people want to appear warm, they tend to agree, compliment, perform favors, and encourage others to talk (Godfrey, Jones, & Lord, 1986; Jones & Pittman, 1982). When people want to appear competent, they emphasize their accomplishments, exude confidence, and control the conversation (Godfrey et al., 1986; Jones & Pittman, 1982). Although researchers have theorized

☆ A National Science Foundation Graduate Research Fellowship supported the first author and Princeton University funds supported this research. We thank Hilary Bergsieker, J. Nicole Shelton, and Matthew Trujillo for their helpful comments on this paper and Lauren Kiernan for assistance with data collection.

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0022-1031/$ – see front matter © 2012 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.jesp.2012.09.001

that these different self-presentation strategies need not be mutually exclusive, the majority of impression management research has treated the goals of appearing warm and competent as largely separate, each goal associated with different behaviors (e.g., Godfrey et al., 1986; Jones & Pittman, 1982). By contrast, the present research explores the possibility that warmth and competence are fundamentally and inversely linked. Extending work on the *compensation effect* (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Kervyn, Yzerbyt, Judd, & Nunes, 2009) – the negative relationship between warmth and competence found in impression formation – we seek to establish that warmth and competence have a compensatory relationship in impression management. Specifically, we predict that people act less competent in order to appear warm and act less warm in order to appear competent. First, we will review evidence of the compensation effect in impression formation as groundwork for our main hypothesis: People strategically utilize the compensatory[1] relationship between warmth and competence to manage their impressions.

Warmth and competence in impression formation

Many social groups tend to be characterized by ambivalent stereotypes related to mixed warmth and competence. According to the Stereotype Content Model (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, Glick, & Xu, 2002; Fiske et al., 2007), for example, society views elders as friendly but incompetent and Asians as intelligent but cold. Although some groups are seen uniformly positively or negatively on these two dimensions, a majority of social groups are characterized by ambivalent stereotypes. Cross-cultural data collected from 44 samples around the world revealed that most groups received ratings that were higher on one dimension than the other (Cuddy et al., 2009; Durante, Fiske, Cuddy, & Kervyn, in press).

Perhaps due to the prevalence of ambivalent stereotypes, people form inferences about both warmth and competence even when they have information only about one dimension. In a series of studies conducted by Judd et al. (2005), participants learned about two fictive groups that differed in warmth or competence. One group was described as being high on one dimension and the other group was described as being low on the same dimension. Although participants primarily received information about just one of the dimensions, they inferred information about the unmanipulated dimension as well. Specifically, they saw the high-competence group as less warm than the low-competence group, and the high-warmth group as less competent than the low-warmth group. The compensation effect also manifests in behavioral confirmation (Kervyn et al., 2009). Participants learned about two fictive groups that were high or low on warmth or competence. Consistent with the compensation effect, participants preferred to ask questions that were low on the unmanipulated dimension to members of the high group and questions that were high on the unmanipulated dimension to members of the low group.

People perceive compensation between warmth and competence even when evaluating ingroup members. After taking a fake psychological test, participants were categorized as members of the Green group. The Green group was allegedly higher in competence or warmth compared with the Blue group. Regardless of group membership, participants perceived the high-competence group as less warm than the low-competence group and the high-warmth group as less competent than the low-warmth group. Membership in actual social groups also demonstrates compensation. For example, Belgian and French participants perceive each other in terms of ambivalent stereotypes (Yzerbyt, Provost, & Corneille, 2005). French and Belgian participants described their group as being higher in one of the dimensions but lower in the other dimension, whereas they viewed the other group as the reverse.

[1] Although compensation can also be defined as attempts to offset shortcomings in one area through excellence in another (e.g., Bäckman & Dixon, 1992), we use the definition of compensation consistent with prior work in impression formation (e.g., Kervyn et al., 2009).

Furthermore, compensation in impression formation extends beyond groups to perceptions of individuals. Judd et al. (2005; Study 3) asked participants to form impressions of either two groups or two individuals who were described as being high or low in competence. Consistent with compensation, participants saw high-competence targets to be less warm than low-competence targets, regardless of whether the targets were groups or individuals. These results occurred despite the researchers finding a significant positive correlation between warmth- and competence-related traits in pretests, consistent with prior research on the halo effect (Rosenberg, Nelson, & Vivekananthan, 1968; Thorndike, 1920). Behaviors that were deemed positive on one dimension were also seen positively on the other dimension. Results from a later study reconciled these seemingly discrepant results by revealing that the comparative context of two targets leads to compensatory judgments whereas evaluations of single targets lead to a positive correlation between judgments (Judd et al., 2005; Study 4). In addition, omitting a dimension causes people to infer negativity on that dimension (Kervyn, Bergsieker, & Fiske, 2012), which parallels the work showing that stereotypes about groups have changed over the last century to accentuate each group's positive dimension and omit its negative dimension (Bergsieker, Leslie, Constantine, & Fiske, 2012).

Warmth and competence in impression management

Given that people perceive a trade-off between warmth and competence in impression formation, do they also utilize this pattern when cultivating their own impressions? Several findings suggest compensation in impression management. People become overly critical (i.e., low warmth) when they want to appear highly competent (Amabile & Glazebrook, 1982; Gibson & Oberlander, 2008). Although criticism may signal intelligence, it also entails being unfriendly or disagreeable. Participants given the goal of appearing smart by having to interact with a doctoral candidate or assistant professor became more critical of the attitude objects under discussion (Amabile & Glazebrook, 1982). Moreover, participants given the goal of appearing smart were more likely to choose a discussion topic that fostered disagreement with their interaction partner, compared with participants in the control conditions (Gibson & Oberlander, 2008). These studies provide initial evidence that people act less warmly through hypercriticism when they want to appear competent.

People also downplay their competence when they want to appear likable. The most common reason to “play dumb” is to increase one's desirability and relational value to someone who might be threatened by competence (Leary, 2010). People who are sensitive about being the target of a threatening upward comparison (STTUC; Exline & Lobel, 1999) experience distress when they feel that others are making envious upward comparisons against the self. To reduce their distress, they may engage in self-deprecation or conceal their superior performance. Although this phenomenon is stereotypically associated with women behaving in ways to appeal to men, men tend to report playing dumb to a greater extent than do women (Gove, Hughes, & Geerken, 1980; Thornton, Audesse, Ryckman, & Burckle, 2006). Downplaying competence, then, is not confined to a particular gender but stems from warmth-related motives, such as affiliating with others and appeasing others' feelings of threat.

Despite preliminary evidence of the compensation effect in impression management, one limitation of the aforementioned work is that the researchers examined only one dimension – warmth or competence – at a time. To test our predictions regarding compensation, we need to examine whether people who want to appear warm downplay their competence and whether people who want to appear competent downplay their warmth relative to participants in control conditions. To our knowledge, only one prior study (Godfrey et al., 1986) examined both dimensions simultaneously. Pairs of unacquainted participants engaged in unstructured interactions, which served as the baseline control of

warmth- and competence-related behavior. In a second interaction, one of the participants received the goal to ingratiate (i.e., be warm) or self-promote (i.e., be competent). Their partners rated how likable and competent the participant appeared after each interaction. Ingratiators did indeed appear more likable in the second interaction, but self-promoters failed to appear more competent. Relevant to compensation, self-promoters decreased significantly in ratings of likability, but ingratiators' ratings of competence did not decrease significantly.

These results provide tentative evidence of compensation, albeit with some limitations. First, because ratings of likability and competence were based on the partner's evaluations, they may not accurately reflect the goals and deliberate behaviors of the self-promoter or ingratiator. Second, researchers coded videotaped participant interactions for behaviors associated with ingratiation (e.g., flattery, showing interest in partner) and self-promotion (e.g., mentioning accomplishments, controlling the conversation); however, they compared the behaviors of the self-promoters and ingratiators only in the second interaction and did not compare them to their baselines in the first interaction. Thus, although their work convincingly demonstrates that ingratiators strive to seem likable and self-promoters strive to seem competent, it does not address whether ingratiators aim to seem less competent and self-promoters aim to seem less likable, which is the focus of our investigation.

Downplaying positivity vs. pursuing negativity

In some ways, utilizing compensation between warmth and competence may be a hazardous impression management strategy. By downplaying warmth and competence, impression managers risk appearing respectively unintelligent or surly. This dilemma poses an intriguing question: To what extent will impression managers forgo positive impressions on one dimension for the sake of maximizing on the other dimension? Will people simply downplay how positively they appear on a given dimension, or will they actively pursue appearing negative? Given that people generally desire for others to perceive them favorably, we predict that people will not actively pursue appearing negative in warmth or competence. Instead, we propose that people will downplay their warmth or competence in order to maintain an overall positively valenced impression.

Overview of studies

Two studies tested whether people strategically downplay their warmth or competence to manage their impressions on the other dimension. First, we manipulated participants' goal for warmth (Study 1a) and competence (Study 1b) and measured the degree of warmth and competence they conveyed in their word selections for an e-mail message. Studies 2 and 2b utilized an online chatting paradigm to examine the degree of warmth and competence participants spontaneously revealed about themselves in their selection of interview questions, self-reported goals, and open-ended self-introductions. These studies included a third dimension, healthiness (Study 2a) and political interest (Study 2b) to test whether compensation occurs uniquely between warmth and competence. Across all studies, we predict that people will downplay their competence in order to appear warm and downplay their warmth in order to appear competent.

Study 1a: Wanting to appear warm

Study 1a tested whether participants with the goal of appearing warm (vs. control condition) would appear less competent when writing an e-mail message. We predicted that when writing the e-mail message, participants wanting to appear warm (vs. control condition) would select words pretested to convey less competence.

Method

Participants

Seventy-one participants (50 women) recruited via Amazon.com Mechanical Turk (Buhrmester, Kwang, & Gosling, 2011) completed the study for a nominal fee. Participants included 63 Whites, 5 Blacks, 2 Latinos, and 1 Asian, with a mean age of 40.0 years ($SD = 13.3$).

Procedure

In an online study, participants imagined that they had recently joined a book club. Members took turns sending a weekly e-mail before each meeting to describe their thoughts about the book. This week, it was the participant's turn to write the e-mail. No other information about the book was given, so participants could write about any particular book they wished. Because the participant had recently joined the club, it was very important that he or she make a good impression. Next, participants were randomly assigned to the control condition, which received no further instructions, or to the experimental condition, which was given the goal of appearing warm:

> "Based on previous meetings, you can tell that above all else, the book club prefers people who are extremely *warm*, *friendly*, and *personable*. Given that the book club values friendliness above all else, you want to make sure that you appear this way in your e-mail."

On the following screen, participants saw a list of 24 words pretested to demonstrate the e-mailer's own high or low warmth or competence in describing a book. These words were rated by a separate sample of 60 participants for how warm or competent the *person* using each word would appear, not necessarily the warmth or competence conveyed by the definition of the word. Warmth was conveyed by positivity, and competence was conveyed by vocabulary sophistication. The list contained six high warmth/high competence words (e.g., *euphoric*), six high warmth/low competence words (e.g., *happy*), six low warmth/high competence words (e.g., *melancholy*), and six low warmth/low competence words (e.g., *sad*). Table 1 contains a complete list of words and the corresponding warmth and competence ratings from the pretest. Participants received instructions to select 12 words that they would use to create an e-mail message on the next page of the study. In actuality, no e-mail message was written. At the end of the study, participants reported demographic information and read a debriefing statement.

Results and discussion

We removed from analyses a participant whose responses on the dependent variables exceeded the group mean by over 3 standard deviations. Participant gender and race did not qualify any analyses in any of the studies and will not be discussed further.

We examined participants' e-mail word selections to measure the degree of competence and warmth participants aimed to convey. We weighted each selected word by the warmth and competence ratings it received in our pretest (see Table 1) in order to account for subtle variations in perceived warmth and competence across individual words. For example, a participant who selected to use the word *euphoric* would receive a warmth rating of 6.15 and a competence rating of 5.48. We then averaged the warmth and competence ratings of all 12 words selected by each participant. These ratings were submitted to a 2 (goal: warm, control) × 2 (dimension: warmth, competence) mixed factorial analysis of variance (ANOVA) with dimension as a repeated measures variable.

A goal × dimension interaction revealed that participants' word selections differed depending on their impression management goal, $F(1, 68) = 15.34$, $p < .001$, $\eta^2_p = .18$ (see Fig. 1). Simple effects analyses confirmed that participants with the goal of appearing warm selected words higher in warmth ($M = 4.94$, $SD = 0.52$) than competence

Table 1
Ratings of warmth and competence by category in pretest.

Category word	Competence rating *M* (*SD*)	Warmth ratings *M* (*SD*)
High competence/High warmth	5.69 (0.23)	5.84 (0.43)
Euphoric	5.48 (0.81)	6.15 (0.84)
Prodigious	6.08 (0.74)	5.47 (1.08)
Unprecedented	5.75 (0.97)	5.17 (1.22)
Exemplary	5.68 (0.77)	6.15 (0.73)
Commendable	5.43 (0.81)	5.88 (0.92)
Exquisite	5.73 (0.76)	6.22 (1.06)
High competence/Low warmth	5.34 (0.27)	2.90 (0.38)
Melancholy	5.32 (0.70)	3.32 (1.48)
Inept	5.22 (0.87)	2.57 (1.66)
Trite	5.48 (1.03)	3.00 (1.40)
Mediocre	5.05 (0.85)	3.30 (1.39)
Deficient	5.15 (1.09)	2.83 (1.53)
Repugnant	5.80 (0.92)	2.37 (1.93)
Low competence/Low warmth	3.54 (0.27)	2.52 (0.49)
Sad	3.85 (0.69)	2.70 (1.09)
Stupid	3.12 (1.17)	2.00 (1.04)
Old	3.72 (0.80)	3.33 (0.90)
Lousy	3.37 (0.90)	2.25 (1.10)
Weak	3.70 (0.81)	2.70 (1.15)
Nasty	3.45 (0.85)	2.12 (1.12)
Low competence/High warmth	3.78 (0.36)	5.23 (0.42)
Happy	4.02 (0.73)	5.68 (0.98)
Brainy	3.77 (1.21)	5.08 (1.05)
New	3.95 (0.57)	4.83 (0.87)
Fab	3.07 (0.95)	4.75 (1.43)
Great	3.97 (0.71)	5.72 (1.12)
Pretty	3.90 (0.73)	5.33 (0.93)

Note. In a pretest, 60 Mechanical Turk participants (20 women) received the following instructions: "If someone were to use the following words, how unintelligent or intelligent (nice or negative) would they sound? We're interested in how intelligent (positive) the person using this word will sound, NOT the meaning of the word necessarily." Ratings were conducted on 1 (very unintelligent/very negative) to 7 (very intelligent/very positive) scales. These words were pretested because they had relatively straightforward synonyms and antonyms that varied in perceived competence (based on the frequency of word usage) and valence (based on word definition). For example, *euphoric* is the high competence/high warmth correlate of *melancholy*, *sad*, and *happy*. Words that belong in the same group are located in the same row number within each category.

($M = 4.69$, $SD = 0.26$), $t(36) = 2.71$, $p = .010$, $d = 0.44$. Participants in the control condition selected words higher in competence ($M = 4.85$, $SD = 0.29$) than warmth ($M = 4.59$, $SD = 0.50$), $t(32) = 2.86$, $p = .007$, $d = 0.50$. Participants with the goal of appearing warm selected words higher in warmth than participants in the control condition, $t(68) = 3.08$, $p = .003$, $d = 0.75$. In support of the compensation hypothesis, participants with the goal of appearing warm selected words lower in competence than did participants in the control condition, $t(68) = 2.34$, $p = .022$, $d = 0.56$.

Consistent with predictions, we found a compensatory relationship between warmth and competence in impression management. Participants who wanted to appear warm preferred to appear less competent than participants who wanted to make a generally positive impression. This finding is particularly striking for two reasons. First, in our pretest we found evidence of a halo effect, such that higher competence words were slightly warmer than the lower competence words. Table 1 shows that the warmth and competence ratings for the stimulus words used in this study were positively (albeit non-significantly) correlated at $r(22) = 0.318$, $p = .130$. In light of this positive correlation, it is surprising to find evidence of a compensatory relationship between wanting to appear warm and selecting words that are lower in competence. This pattern suggests that our stimuli present an especially strong test of a compensatory relationship between warmth and competence.

Second, our data suggest that people are willing to sacrifice appearing low on one dimension in order to appear favorably on the other dimension. This finding contrasts most research on impression management, which focuses on the goal of appearing positive overall (e.g., Schlenker, 2003; Schlenker & Weigold, 1992). The participants do not go so far as to exhibit extreme incompetence, however, as evidenced by a mean rating of competence greater than the midpoint of the scale. Instead, people with the goal of appearing warm conveyed less competence compared with participants in the control condition.

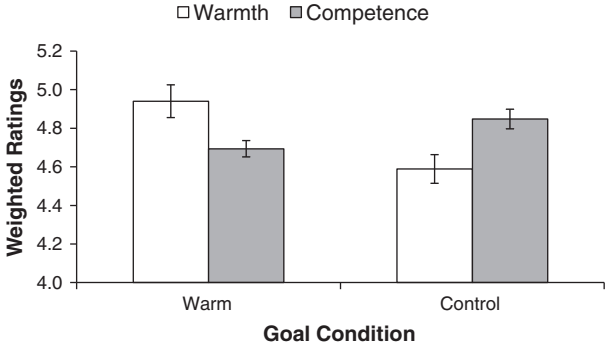

Fig. 1. Word selections by goal condition in Study 1a.

Study 1b: Wanting to appear competent

Study 1b adapted the design of the previous study to test whether participants with the goal of appearing competent (vs. control condition) would try to appear less warm when writing an e-mail message. We predicted that when writing the e-mail message, participants wanting to appear competent (vs. control condition) would select words pretested to convey less warmth.

Method

Participants

Sixty-two participants (42 women) recruited via Amazon.com Mechanical Turk completed the study for a nominal fee. Participants included 53 Whites, 4 Blacks, 2 Asians, 2 Latinos, and 1 biracial, with a mean age of 36.4 years ($SD = 13.5$).

Procedure

Participants read the same vignette as in Study 1a, except that participants with the goal of appearing competent read, "Based on previous meetings, you can tell that above all else, the book club prefers people who are extremely *smart*, *intelligent*, and *competent*." On the following screen, participants saw the same 24 words used in the previous study and selected 12 to include in their e-mail message. At the end of the study, participants reported demographic information and read a debriefing statement.

Results and discussion

We removed from analyses 2 participants whose responses on the dependent variables exceeded the group mean by over 3 standard deviations.

We examined participants' word selections to measure the degree of warmth and competence participants aimed to convey. Consistent with Study 1a, we weighted each of the selected words by the warmth and competence ratings it received in our pretest. We then averaged the warmth and competence ratings of all 12 words selected by participants. These ratings were submitted to a 2 (goal: competent, control) × 2 (dimension: warmth, competence) mixed ANOVA with dimension as a repeated measures variable. Overall, participants selected words higher in competence ($M = 5.07$, $SD = 0.35$) than warmth ($M = 4.72$, $SD = 0.46$), $F(1, 58) = 17.00$, $p < .001$, $\eta^2_p = .23$.

A goal × dimension interaction revealed that participants' word selections differed depending on their impression management goal,

$F(1, 58) = 9.83$, $p = .003$, $\eta^2_p = .15$ (see Fig. 2). Simple effects analyses confirmed that participants with the goal of appearing competent selected words higher in competence ($M = 5.22$, $SD = 0.34$) than warmth ($M = 4.60$, $SD = 0.44$), $t(28) = 4.92$, $p < .001$, $d = 0.92$; these ratings did not differ significantly for participants in the control condition, $t(30) = 0.73$, $p = .472$, *ns*. Participants with the goal of appearing competent selected words higher in competence than participants in the control condition ($M = 4.92$, $SD = 0.31$), $t(58) = 3.68$, $p = .001$, $d = 0.95$. In support of the compensation hypothesis, participants with the goal of appearing competent selected words lower in warmth than did participants in the control condition ($M = 4.84$, $SD = 0.46$), $t(58) = 2.08$, $p = .042$, $d = 0.53$.

Consistent with our predictions and the findings from Study 1a, we find evidence of compensation between the dimensions of warmth and competence in impression management. Notably, the mean rating of warmth is above the midpoint of the scale, indicating that people are unwilling to convey extreme coldness in order to appear competent. Participants who wanted to appear competent downplayed their warmth relative to participants in the control condition.

Study 2a: Compensation between warmth and competence only

In Study 2a, we sought to address the limitations of the previous studies and test the uniqueness of the compensation effect to the dimensions of warmth and competence. First, this study assessed compensation in impression management more directly by instructing participants to introduce themselves to others. In addition, we ran all three goal conditions (warm, competent, control) in a single study. Beyond addressing these limitations, we also investigated whether compensation would occur beyond the dimensions of warmth and competence. Although warmth and competence capture most of the variance in impression formation (Abele & Wojciszke, 2007; Wojciszke et al., 1998), people can also be concerned about other aspects of their impressions as well. This poses the question of whether compensation occurs between any given set of dimensions or if it is particular to warmth and competence. Perhaps the compensation effect reflects a broader phenomenon where the motivation to be seen positively on one dimension causes the downplaying of any other dimension. We predict, however, that warmth and competence are particularly suited for a compensatory relationship and that compensation will not occur for unrelated dimensions. Yzerbyt, Kervyn, and Judd (2008) tested a similar prediction in impression formation by introducing healthiness as an additional dimension to warmth and competence. Based on discussions with study participants and among the experimenters, they chose healthiness as the third dimension because it was relatively unrelated to either warmth or competence. They found that using healthiness as the unmanipulated dimension resulted in a pattern consistent with the halo effect rather than compensation (Yzerbyt et al., 2008). Extending this work, Study 2a examines whether participants choose to downplay the degree to which they appear healthy in order to appear warm or competent.

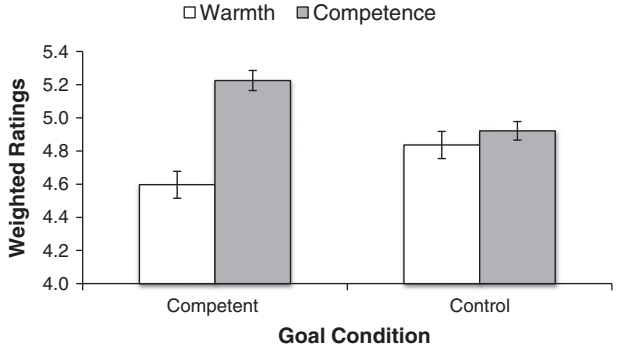

Fig. 2. Word selections by goal condition in Study 1b.

Method

Participants

Eighty undergraduate students (43 women) participated in the study to be entered into a lottery to receive $10 gift certificates. Participants included 40 Whites, 21 Asians, 8 Blacks, 2 Latinos, 1 Arab, and 8 multiracial individuals, with a mean age of 20.0 years ($SD = 1.1$).

Procedure

Participants logged on to a website that allegedly allowed researchers to conduct experiments with college students in a chat room interface. After completing demographic questions, participants created a screen name for themselves. They read instructions indicating that they would be randomly connected to another user accessing the website at the same time. Participants connected to a fictive user who was a student at the same university as the participant. The other user had the gender-neutral screen name of taylor90.

At this point, we told participants the cover story of the experiment and manipulated their impression management goals. We informed participants that the purpose of the experiment was to investigate whether people can successfully convey specific impressions to others. Participants were told that they were randomly assigned to convey a particular impression and that the other user would try to guess what kind of impression the participant was attempting to convey. Participants received one of the three impression management goals: appear warm, appear competent, or make a generally positive impression (control). After completing the dependent measures, participants read a debriefing statement.

Measures

This study had three primary measures. The first measure was *question interest*. We instructed participants to convey their desired impression by selecting questions to answer about themselves. Participants saw a list of eight questions adapted from previous work (Kervyn et al., 2009) related to competence or warmth and rated their interest in answering each question using a 1 (*very uninterested*) to 7 (*very interested*) scale. Participants saw two high-competence questions (e.g., "What personal characteristics do you possess that help you succeed?"), two low-competence questions (e.g., "In your studies, which subjects are the most difficult for you and why?"), two-high warmth questions (e.g., "What makes you smile and feel happy?"), and two-low warmth questions (e.g., "What traits do you find annoying in other people?"). The two questions for each category were significantly correlated with one another at $ps < .01$, so they were averaged to form a composite of question interest for that category. In addition, participants saw two high-health questions (e.g., "What is your favorite vegetable?") and two low-health questions (e.g., "What are some junk foods that you like to eat?"). A pretest conducted on a separate sample of participants indicated that the health items were significantly diagnostic of healthiness, but not significantly diagnostic of warmth or competence.

Second, for *self-reported goals*, participants rated themselves on eight self-presentation trait goals related to warmth and competence (Kervyn et al., 2009). As a measure of competence, participants answered to what extent they wanted to appear *capable*, *skilled*, *lazy*, and *disorganized*. As a measure of warmth, participants answered to what extent they wanted to appear *caring*, *sociable*, *friendly*, and *insensitive*. We reverse-scored negative items and averaged the ratings on each trait to form composites of competence ($\alpha = .69$) and warmth ($\alpha = .87$). Ratings were made on 1 (*not at all*) to 7 (*very*) scales.

Third, in an *open-ended introduction*, participants submitted a few sentences about themselves for the other user to read. We instructed them to write as much as they could so that the other user could get to know them better. We used the Linguistic Inquiry Word Count

(LIWC; Pennebaker, Booth, & Francis, 2007) text analysis software to determine the degree to which words related to warmth, competence, and health appeared in the introductions. We used the following built-in categories to assess competence: *words longer than six letters*, *work*, and *achievement*. For warmth, we used the following built-in categories: *social processes*, *friends*, *positive emotions*, *you*, and *question marks*. Because people who want to appear warm tend to show more interest in other people (Godfrey et al., 1986), we reasoned that they would be more likely to refer to the other person (use the word "you") and ask the other person more questions. Finally, we used the *health* category as a measure of health. See Table 3 for examples of each category.

Results

We removed from analyses 3 participants whose responses on the dependent variables exceeded the group mean by over 3 standard deviations. Participant gender and race did not qualify any findings and will not be discussed further.

Question interest

To calculate how competent, warm, and healthy participants wanted to appear, we used an analytic method employed by Judd et al. (2005) by subtracting preference for answering questions that were low on a given dimension from preference for answering questions that were high on the same dimension. Submitting question interest to a mixed factorial ANOVA revealed a significant 3 (goal: warm, competent, control) × 3 (dimension: warmth, competence, health) interaction, $F(4, 148) = 11.25$, $p < .001$, $\eta^2_p = .23$. A significant main effect of dimension also emerged, $F(2, 148) = 35.80$, $p < .001$, $\eta^2_p = .33$, with interest in answering warmth questions, $F(2, 74) = 9.14$, $p < .001$, $\eta^2_p = .20$, and competence questions, $F(2, 74) = 6.27$, $p = .003$, $\eta^2_p = .15$, differing by goal. Notably, participants showed similar levels of interest in answering health questions regardless of goal condition, $F(2, 74) = 1.42$, $p = .25$, *ns*. Simple effects analyses supported the compensation hypothesis. Participants with the goal of appearing competent were less interested in answering warmth questions compared to participants in the control condition, $t(48) = 3.58$, $p = .001$, $d = 1.02$. Similarly, participants with the goal of appearing warm were less interested in answering competence questions compared to participants in the control condition, $t(48) = 1.66$, $p = .104$, $d = 0.47$. Thus, compensation occurred between the dimensions of warmth and competence, yet participants did not utilize the dimension of healthiness to facilitate their impression management goals. See Table 2 for means and additional comparisons.

Self-reported goals

Submitting self-reported goals to a mixed factorial ANOVA revealed a significant 3 (goal: warm, competent, control) × 2 (dimension, warmth, competence) interaction, $F(2, 74) = 76.65$, $p < .001$, $\eta^2_p = .67$. A significant main effect of dimension also emerged, $F(1, 74) = 23.92$, $p < .001$, $\eta^2_p = .24$, with goal conditions producing differences in wanting to appear warm, $F(2, 74) = 26.60$, $p < .001$, $\eta^2_p = .42$, and competent, $F(2, 74) = 40.70$, $p < .001$, $\eta^2_p = .52$. Simple effects analyses supported the compensation hypothesis. Participants with the goal of appearing competent wanted to appear less warm than participants in the control condition, $t(38.95) = 5.51$, $p < .001$, $d = 1.61$. Similarly, participants with the goal of appearing warm wanted to appear less competent than participants in the control condition, $t(48) = 2.09$, $p = .042$, $d = 0.59$.

Open-ended introductions

We coded participants' open-ended introductions using the LIWC text analysis program. Prior to analyses and blind to condition, the first author corrected all typographical errors in the text. Means for the following categories were transformed by taking the square root because they showed significant skewness and kurtosis (Kline, 2005): question mark and health. Table 3 presents non-transformed means and statistical comparisons between groups.

Analysis of competence-related words revealed that participants differed by goal in the extent to which they used words that were longer than six letters, $F(2, 74) = 14.44$, $p < .001$, $\eta^2_p = .28$, were related to work, $F(2, 74) = 24.21$, $p < .001$, $\eta^2_p = .40$, and were related to achievement, $F(2, 74) = 12.56$, $p < .001$, $\eta^2_p = .25$. Tukey post-hoc tests confirmed that, as predicted, the introductions written by participants with the goal of appearing competent contained more competence-related words as compared with the introductions written by participants in the other conditions ($ps < .05$). Participants with the goal of appearing warm showed a non-significant tendency to mention fewer competence-related words than participants in the control group ($ps > .05$, *ns*).

Analysis of warmth-related words revealed that participants differed by goal in the extent to which they mentioned the word "you," $F(2, 74) = 10.89$, $p < .001$, $\eta^2_p = .23$, friends, $F(2, 74) = 6.53$, $p = .002$, $\eta^2_p = .15$, positive emotions, $F(2, 74) = 10.60$, $p < .001$, $\eta^2_p = .22$, and asked questions, $F(2, 74) = 6.43$, $p = .003$, $\eta^2_p = .15$. Consistent with the compensation hypothesis, introductions written by participants with the goal of appearing competent contained fewer warmth-related words than participants in the control condition.

By contrast, analysis of health-related words revealed no significant differences by goal, $F(2, 74) = 0.66$, $p = .522$, *ns*. Taken together, this pattern of results suggests that the compensatory relationship between warmth and competence is not part of a broader phenomenon where people downplay all dimensions irrelevant to their desired goal; rather, warmth and competence uniquely possess a negative relationship.

Discussion

Study 2a found evidence of a compensatory relationship between warmth and competence in individuals' self-presentations, but not with health.[2] Instead of trying to maximize on all dimensions, participants chose to downplay warmth (if they wanted to appear competent) or competence (if they wanted to appear warm). Nevertheless, participants maintained an overall positive impression without exhibiting extreme incompetence or unfriendliness, as evidenced by mean ratings greater than zero (question interest) and the midpoint of the scale (self-reported goals).

Contrary to predictions, participants who wanted to appear warm and make a generally positive impression (control) often failed to significantly differ from one another in their demonstration of warmth- and competence-related behavior. This may be due to the interpersonal nature of the experimental paradigm. It is likely that the framing of the study as an online chat between two individuals heightened all participants' desire to appear warm and friendly. Other studies have found that even participants in the control condition who were not given explicit instructions to appear warm did so anyway (e.g., Gibson & Oberlander, 2008; Godfrey et al., 1986).

Study 2b: Compensation between warmth and competence, not political interest

Study 2b further examines the unique compensatory relationship between warmth and competence by introducing a third variable: political interest. Given that previous work failed to find evidence of compensation in impression formation with health (Yzerbyt et al., 2008), perhaps it is unsurprising that we also did not find compensation with health in impression management. A pretest with 36

[2] In addition, we replicated these findings with a separate sample of 60 undergraduates using the same chatting paradigm, albeit without the health dimension. We chose not to report all results in order to avoid redundancies between this study and Studies 2a and 2b. Participants in this study demonstrated evidence of compensation in question interest, self-reported goals, and open-ended instructions.

Table 2
Question interest and self-reported goals by goal condition in Studies 2a and 2b.

Dependent Variable	Study 2a			Study 2b		
	Warm	Competent	Control	Warm	Competent	Control
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Question interest						
Warmth	3.13 (1.90)$_a$	1.19 (1.86)$_b$	3.11 (1.93)$_a$	3.30 (1.79)$_a$	0.79 (2.78)$_b$	3.84 (1.78)$_a$
Competence	0.20 (1.72)$_a$	2.11 (2.00)$_b$	1.13 (2.23)$_{ab}$	0.46 (1.79)$_a$	1.77 (2.14)$_b$	0.03 (1.91)$_a$
Health/political	−0.02 (1.52)$_a$	0.35 (1.57)$_a$	0.76 (1.83)$_a$	0.22 (1.17)$_a$	0.56 (2.10)$_a$	0.43 (1.05)$_a$
Self-report goals						
Warmth	6.40 (0.80)$_a$	4.79 (1.10)$_b$	6.11 (0.54)$_a$	6.12 (0.75)$_a$	4.28 (1.41)$_b$	5.97 (0.79)$_a$
Competence	4.64 (0.90)$_a$	6.66 (0.52)$_b$	5.22 (1.06)$_c$	4.91 (0.78)$_a$	6.61 (0.47)$_b$	5.24 (0.68)$_a$
Political	–	–	–	4.24 (2.15)$_a$	4.50 (2.02)$_a$	4.66 (1.67)$_a$

Note. Distinct subscripts within a row indicate means that differ significantly at $p<.05$. The control categories are health (Study 2a) and political interest (Study 2b).

participants revealed that people are as interested in shaping impressions on political interest as warmth and competence, and that the items we used for political interest are not significantly diagnostic of warmth or competence (i.e., they are not correlated with either dimension). Consequently, we determined political interest to be a suitable alternative dimension.

Method

Participants

Eighty-three undergraduate students (49 women) participated in the study for $5 gift certificates. Participants included 37 Whites, 28 Asians, 8 Blacks, 4 Latinos, and 6 multiracial individuals, with a mean age of 19.8 years ($SD = 1.0$).

Procedure

We used the same experimental procedures as with Study 2a. Participants believed they were chatting with another college student in a chat room interface and were asked to convey a particular impression to the other person. As with Study 2a, participants received one of the three impression management goals: appear warm, appear competent, or make a generally positive impression (control). After completing the dependent measures, participants read a debriefing statement.

Measures

We primarily used the same measures as Study 2a. For *question interest*, participants saw the same list of competence- and warmth-related questions and rated their interest in answering each question using a 1 (*very uninterested*) to 7 (*very interested*) scale. In contrast to the previous study, we replaced the health questions with questions regarding political interest. Participants saw two high-political interest questions (e.g., "What is one political issue you strongly care about?") and two low-political interest questions (e.g., "Which political topics do you care the least about?"). The two questions for each category were significantly correlated with one another, $ps<.001$.

For *self-reported goals*, participants rated themselves on the same eight self-presentation trait goals related to warmth and competence as in Study 2a. In addition, we asked participants how *political* and *non-political* (reverse-scored) they wanted to appear. We averaged the ratings on each trait to form composites of competence, warmth, and political interest. Ratings were made on 1 (*not at all*) to 7 (*very*) scales.

As with the previous study, participants submitted an *open-ended introduction* about themselves for the other user to read. These introductions were analyzed by LIWC for the same warmth- and competence-related categories used in Study 2a. In addition, we also analyzed the introductions for political interest. The first author read all of the introductions while blind to experimental condition and compiled a list of words related to politics. These words include *politics*, *issue*, *debate*, *government*, *law*, *news*, *president*, *global*, *council*, *rights*, *campaign*, *justice*, and *national*. This category also accounts for various forms of each word (e.g., plural, gerund).

Results and discussion

We removed from analyses participants whose responses on the dependent variables exceeded the group mean by over 3 standard deviations (n = 2), participants who failed to correctly recall which impression management goal they were assigned (n = 1), and participants who failed to follow instructions by not interacting with their chatting partner (n = 2).

Table 3
LIWC results by goal condition in Studies 2a and 2b.

Category	Examples	Study 2a			Study 2b		
		Warm	Competent	Control	Warm	Competent	Control
		M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Word count	–	58.26 (30.70)$_a$	69.15 (42.67)$_a$	66.39 (35.97)$_a$	73.52 (48.29)$_a$	71.88 (38.19)$_a$	68.07 (48.97)$_a$
Competence-related							
Long words	–	14.74 (5.85)$_a$	25.54 (10.97)$_b$	15.99 (5.74)$_a$	15.44 (6.92)$_a$	23.69 (6.74)$_b$	15.77 (6.44)$_a$
Work	Job, major	3.20 (3.11)$_a$	11.67 (6.33)$_b$	5.10 (3.82)$_a$	4.20 (3.37)$_a$	11.60 (7.45)$_b$	5.47 (4.31)$_a$
Achievement	Earn, win	0.79 (1.22)$_a$	3.31 (2.70)$_b$	1.38 (1.43)$_a$	1.26 (1.52)$_a$	2.64 (2.94)$_b$	1.45 (1.64)$_{ab}$
Warmth-related							
You	–	3.80 (4.97)$_a$	0.94 (2.30)$_b$	2.36 (2.69)$_a$	4.01 (3.79)$_a$	0.95 (1.85)$_b$	3.74 (7.06)$_a$
Social processes	Mate, talk	11.98 (5.24)$_a$	8.81 (7.99)$_a$	10.94 (5.57)$_a$	12.71 (8.04)$_a$	6.75 (5.49)$_b$	10.98 (6.43)$_a$
Friends	Buddy	1.06 (1.06)$_a$	0.09 (0.46)$_b$	1.38 (1.43)$_a$	0.66 (1.62)$_{ab}$	0.11 (0.38)$_b$	0.64 (1.01)$_a$
Positive emotion	Love, nice	10.57 (7.92)$_a$	3.67 (2.94)$_b$	7.54 (4.26)$_a$	6.54 (3.82)$_b$	4.34 (3.85)$_b$	6.65 (4.06)$_a$
Question marks	–	2.90 (4.49)$_a$	0.03 (0.14)$_b$	1.51 (2.31)$_a$	2.63 (3.61)$_a$	0.11 (0.40)$_b$	2.73 (6.92)$_{ab}$
Health/Politics	Flu, president	0.31 (1.03)$_a$	0.47 (1.18)$_a$	0.65 (1.55)$_a$	0.30 (1.04)$_a$	0.78 (2.06)$_a$	0.12 (0.42)$_a$

Note. All means except word count are percentages of based on the total number of words in a given text. Non-transformed means are displayed. Distinct subscripts within a row indicate means that differ significantly at $p<.05$. The control categories are health (Study 2a) and political interest (Study 2b).

Question interest

We assessed preference for competence, warmth, and political interest questions as a difference score between questions that were high and low on a given dimension. Submitting question interest to a mixed factorial ANOVA revealed a significant 3 (goal: warm, competent, control) × 3 (dimension: warmth, competence, political interest) interaction, $F(4, 150) = 15.82$, $p < .001$, $\eta^2_p = .30$. A significant main effect also emerged for dimension, $F(2, 150) = 41.60$, $p < .001$, $\eta^2_p = .36$, with interest in answering warmth questions, $F(2, 75) = 14.67$, $p < .001$, $\eta^2_p = .28$, and competence questions, $F(2, 75) = 5.51$, $p = .006$, $\eta^2_p = .13$, differing by goal. Notably, participants showed similar levels of interest in answering political questions regardless of goal condition, $F(2, 75) = 0.33$, $p = .712$, *ns*. Simple effects analyses partially supported the compensation hypothesis. Participants with the goal of appearing competent were less interested in answering warmth questions compared to participants in the control condition, $t(37.72) = 4.65$, $p < .001$, $d = 1.34$. However, participants with the goal of appearing warm did not significantly differ in their interest in answering competence questions, $t(52) = 0.84$, $p = .404$, *ns*. See Table 2 for means and additional comparisons.

Self-reported goals

Self-reported goals submitted to a mixed-factorial ANOVA revealed a significant 3 (goal: warm, competent, control) × 2 (dimension: warmth, competence, political interest) interaction, $F(2.82, 105.59) = 13.01$, $p < .001$, $\eta^2_p = .26$. Mauchly's (1940) test indicated a violation of the sphericity assumption, $\chi^2(2) = 0.58$, $p < .001$, so the Greenhouse–Geisser (1959) correction for degrees of freedom was used ($\varepsilon = .70$). A significant main effect of dimension also emerged, $F(1.41, 105.59) = 41.58$, $p < .001$, $\eta^2_p = .18$, with goal conditions producing differences in wanting to appear warm, $F(2, 75) = 25.47$, $p < .001$, $\eta^2_p = .41$, and competent, $F(2, 75) = 46.32$, $p < .001$, $\eta^2_p = .55$. As predicted, goal condition did not produce differences in wanting to appear politically interested, $F(2, 75) = 0.31$, $p = .735$, *ns*. Simple effects analyses supported the compensation hypothesis. Participants with the goal of appearing competent reported wanting to appear less warm compared to participants in the control condition, $t(34.55) = 5.26$, $p < .001$, $d = 1.55$. Similarly, participants with the goal of appearing warm reported wanting to appear less competent compared to participants in the control condition, $t(52) = 1.67$, $p = .10$, $d = 0.46$. See Table 2 for means and additional comparisons.

Open-ended introductions

We coded participants' open-ended introductions using the LIWC text analysis program. Prior to analyses and blind to condition, the first author corrected all typographical errors in the text. Means for the following categories were transformed by taking the square root because they showed significant skewness and kurtosis (Kline, 2005): *you*, *friend*, *question mark*, and *political interest*. Table 3 presents non-transformed means and statistical comparisons between groups.

Analysis of competence-related words revealed that participants differed by goal in the extent to which they used words that were longer than six letters, $F(2, 75) = 12.12$, $p < .001$, $\eta^2_p = .24$, were related to work, $F(2, 75) = 14.00$, $p < .001$, $\eta^2_p = .27$, and were related to achievement, $F(2, 75) = 3.15$, $p = .048$, $\eta^2_p = .08$. As predicted, Tukey post-hoc tests confirmed that the introductions written by participants with the goal of appearing competent contained more competence-related words as compared with the introductions written by participants in the control condition (long words and work, $ps < .001$, achievement, $p = .10$). Participants with the goal of appearing warm showed a non-significant tendency to mention fewer competence-related words than participants in the control group ($ps > .05$, *ns*).

Analysis of warmth-related words revealed that participants differed by goal in the extent to which they mentioned the word "you," $F(2, 75) = 5.85$, $p = .004$, $\eta^2_p = .14$, social processes, $F(2, 75) = 5.08$, $p = .009$, $\eta^2_p = .12$, friends, $F(2, 75) = 2.85$, $p = .064$, $\eta^2_p = .07$, positive emotions, $F(2, 75) = 2.76$, $p = .069$, $\eta^2_p = .07$, and asked questions, $F(2, 75) = 6.25$, $p = .003$, $\eta^2_p = .14$. Consistent with the compensation hypothesis, introductions written by participants with the goal of appearing competent contained fewer warmth-related words than participants in the control condition ($ps < .10$).

By contrast, analysis of words related to political interest revealed no significant differences by goal, $F(2, 75) = 1.41$, $p = .250$, *ns*. Collectively, these data confirm the unique compensatory relationship between warmth and competence.

General discussion

Our research proposes a compensatory relationship between warmth and competence in impression management. Although people generally want to maintain favorable impressions, at times they strategically choose to downplay their positivity on one dimension in order to create a particularly positive impression on the other dimension. Across four studies, people downplay their competence – but not their healthiness – when they want to appear warm, and that they downplay their warmth when they want to appear competent. Evidence of compensation emerged across participants' word preferences, the kinds of questions they wanted to answer about themselves, self-reported goals, and open-ended introductions. However, compensation emerged for the dimensions of competence and warmth only and not healthiness or political interest.

These impression management findings parallel the compensation effect in impression formation (e.g., Judd et al., 2005). Given that people perceive those who are high on one dimension as low on the opposite dimension, individuals who strategically downplay their warmth or competence in order to compensate on the other dimension are in some ways right to do so. At first glance, then, the processes of compensation in impression formation and impression management appear to be in sync with one another.

Although the present research provides evidence of compensation between warmth and competence in impression management, further research needs to explore the underlying mechanisms for this effect. In impression formation, Yzerbyt et al. (2008) propose that compensation arises from system justification processes (Jost & Banaji, 1994): People balance their views about others as having both positive and negative characteristics in order to justify the extant social structure. Yzerbyt et al. (2008) found across three studies that people balance their perceptions of others in a compensatory manner, but only for competence and warmth-related judgments. Impression managers may be aware of these perceptual tendencies and draw upon them in order to create their desired impressions for warmth and competence while ignoring unrelated dimensions such as healthiness or political interest. If so, they may be exhibiting other-focused strategies by aligning their impressions with the perceived expectations of their audience. However, the system-justification explanation applies mainly to beliefs about groups, and further research needs to address how much it applies to individuals.

Relatedly, additional research needs to examine whether compensation in impression management is accurately calibrated to compensation in impression formation. An intriguing possibility is that impression managers misjudge how negatively they need to appear on a given dimension in order to appear positive on the other dimension, which causes them to risk rejection by their audience. A potential drawback, then, is that there may be some point where appearing too negative on one dimension may overshadow how positively one appears on the other dimension. To what degree should self-presenters downplay one dimension of their appearance in order to successfully make their desired impression? Our findings indicate that people are unwilling to adopt extremely negative behaviors, which may suggest that self-enhancement motives still play a role in shaping impressions. However, if participants were to display more extreme levels of incompetence or unfriendliness, would they still be successful in appearing positive on the other dimension? This is an area for future exploration.

Despite the risks of downplaying positivity, one benefit of our findings is that it provides a solution to two problems associated with strategic self-presentation: the ingratiator's dilemma and the self-promoter's paradox (Jones & Pittman, 1982). According to Jones and Pittman (1982), the probability of being liked decreases as the motive to ingratiate increases; this is due to greater salience of one's possibly ulterior motives underlying benevolent actions toward others. The solution to appearing friendly, then, may not be merely to increase one's friendliness but also to downplay intelligence. Utilizing both the dimensions of warmth and competence in tandem may overcome the ingratiator's dilemma by preventing excessive displays of warmth.

Similarly, appearing less friendly in order to maintain an air of competence helps overcome the self-promoter's paradox. The paradox occurs because people who are truly competent need not explicitly promote themselves as being competent; therefore, declarations of competence may in fact cause others to perceive the self-presenter as "full of hot air" (Leary, 1995). Our research suggests that people may avoid this paradox by appearing also less warm instead of merely trying to aggressively promote their competence.

Throughout the paper, data demonstrated that warmth and competence are fundamentally linked. However, we examined how people behave when they want to appear warm or competent and found that they tend to appear respectively less competent and less warm. A more complete test of compensation, however, would also examine how people behave when they want to appear actually incompetent or cold. When people want to appear incompetent – perhaps because they do not want to be assigned a particularly challenging task at work – do they appear nicer? Or when people want to appear less friendly – such as when they want to escape from an unappealing blind date – do they act more intelligent? Such behavior may provide even stronger evidence of the compensation effect in impression management.

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