



The innuendo effect: Hearing the positive but inferring the negative

Nicolas Kervyn ^{a,*}, Hilary B. Bergsieker ^b, Susan T. Fiske ^b

^a University of Louvain, Louvain la Neuve, National Science fund, Belgium

^b Princeton University, USA

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ABSTRACT

Speakers can convey mixed impressions by providing only positive information. As a series of studies shows, when communicators omit information on a salient, relevant dimension of social perception, listeners make negative inferences about the target on that omitted dimension, despite directly receiving only positive information on another dimension (Studies 1 and 2a). These negative inferences mediated the effect of the innuendo manipulation on judgments about the target person's suitability for inclusion in one's group. Simulating communication, Study 2b participants read Study 2a's descriptions and showed this innuendo effect is stronger for descriptions of female as opposed to male targets in an academic domain. We discuss implications of innuendo for the communication and perpetuation of mixed impressions and their prevalence in descriptions of subordinate group members.

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Introduction

Imagine hearing someone described as follows: "Ryan seems like a fun-loving guy." If "fun-loving" Ryan applied to work with you, how well would you expect him to perform on the job? Now consider: "Molly is very gifted, hard-working, and passionate about her job." If "hard-working" Molly sat next to you at a social event, how much would you expect to enjoy chatting with her? Although objectively both descriptions contain only positive descriptors, in a given context they may serve to communicate a very different – even negative – impression. In both cases, you might hold low expectations, a result that could seem surprising given that the descriptions provided only positive information. We use the term *innuendo effect* to describe this tendency for individuals to draw negative inferences from positive descriptions that omit one of the two fundamental dimensions of social perception, warmth and competence (Abele & Wojciszke, 2007; Fiske, Cuddy, & Glick, 2007).

When describing someone, as in other forms of communication, speakers are expected to follow maxims of quality and relation (Grice, 1975) by providing truthful and relevant information. A competing norm exists, however, when it comes to describing people, namely that speakers avoid maligning others. Speaking favorably of others may serve to preserve social harmony and protect the speaker's reputation, because work on trait transference shows that communicating negative impressions often reflects badly on the speaker (Skowronski, Carlston, Mae, & Crawford, 1998). To put it colloquially, the two competing norms are "Tell the truth, the whole truth, and

nothing but the truth," on the one hand, and "If you don't have anything nice to say, don't say anything at all," on the other.

We propose that the innuendo effect allows speakers to reconcile these two seemingly contradictory communication norms when it comes to conveying negative information about others. Innuendo allows communicators to convey negative information on a contextually relevant dimension by conspicuously omitting information on that dimension. We predict that when listeners hear person descriptions that contain objectively positive content but fail to provide relevant information, they will make negative inferences on the omitted dimension about the person described. For instance, when warmth information is expected, giving a positive description only on competence should lead to negative inferences on warmth.

Research has shown that two fundamental dimensions underlie person perception (Abele, 2003; Russell & Fiske, 2008; Wojciszke, 1994; Wojciszke, Bazinska, & Jaworski, 1998). Researchers use various names for these two dimensions, but Abele and Wojciszke (2007) have shown that regardless of names these pairs of dimensions all are similar. Following Fiske, Cuddy, Glick, and Xu (2002), we call them *warmth* and *competence*. According to theorizing on person perception (e.g., Fiske et al., 2007; Wojciszke, 2005), these perceptual dimensions address the two fundamental questions that people need to answer when forming an impression about someone: "Are this person's intentions toward me good or bad?" (inferred warmth) and "Can this person carry out these intentions?" (inferred competence). Warmth and competence perceptions of others have been shown to explain 82% of the variance in general impressions of others (Wojciszke et al., 1998).

Models use these two fundamental dimensions of warmth and competence to map person perception (Russell & Fiske, 2008; Wojciszke, 1994; Wojciszke et al., 1998), and they consider the two

* Corresponding author at: 10 Pl. Cardinal Mercier, 1348 Louvain la Neuve, Belgium.
E-mail address: nicolas.o.kervyn@uclouvain.be (N. Kervyn).

dimensions orthogonal, creating four combinations of high or low warmth and high or low competence. Critically, perceivers can – and often do – form ambivalent or mixed impressions that include positive content on one dimension and negative content on the other. Mixed impressions are common both for individual targets, sometimes dubbed “sinful winners” or “competent jerks” and “virtuous losers” or “lovable fools” (Casario & Lobo, 2005; Wojciszke, 1994), and for societal group targets, such as “cold and competent” working professionals or the “warm and incompetent” elderly (Fiske et al., 2002). We consider these mixed impressions particularly interesting and aim to show that speakers subtly convey this kind of impression via innuendo.

If both warmth and competence are indeed fundamental to social perception (Abele, Cuddy, Judd, & Yzerbyt, 2008; Fiske et al., 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Wojciszke et al., 1998), what happens when communicators defy the Gricean relevance maxim and omit one dimension, while providing positive information on the other? Will listeners draw positive inferences, consistent with the classical halo effect? The halo effect, namely, the tendency to “think of a person in general as rather good or rather inferior and to color the judgment of the separate qualities by this feeling” (Thorndike, 1920, p. 25), is widely documented in person perception research (Asch, 1946; Kelley, 1950; Nisbett & Wilson, 1977; Srull & Wyer, 1989). The halo effect implies that providing positive information on one dimension should lead to positive inferences across the board.

Two recent lines of research, however, lead us to make the opposite prediction, anticipating an innuendo effect instead. Work on stereotyping by omission shows that although expression of the negative dimensions in mixed stereotypes of ethnic and national outgroups has decreased over the past 70 years, people increasingly omit rather than reverse the historically negative warmth and competence stereotypes (Bergsieker, Leslie, Constantine, & Fiske, 2011). For example, modern samples describe African Americans (historically stereotyped as warm but incompetent) as “loud, loyal to family ties, talkative, very religious, musical” and Germans (historically seen as competent but cold) as “industrious, intelligent, methodical, scientifically-minded, efficient,” conspicuously omitting competence and warmth information, respectively. Moreover, speakers increasingly omit the negative warmth or competence information (and emphasize the positive information) when describing individual targets who display mixed behaviors (as opposed to only positive or only negative behaviors) and when presenting to more public audiences, an effect driven by self-presentation concerns (Bergsieker et al., 2011). Omission increases as social pressures mount for both individual and group targets, suggesting a strategic dimension to this phenomenon.

The second relevant line of research involves the compensation effect (Judd et al., 2005; Kervyn, Yzerbyt, & Judd, 2010; Kervyn, Yzerbyt, Judd, & Nunes, 2009). This work establishes that people typically bias their impressions of both groups and individuals to preserve a negative, or hydraulic, relation between warmth and competence. When presented with two targets of ambiguous warmth – one competent and one incompetent – participants viewed the former as less competent but also warmer than the latter (Judd et al., 2005). The same compensation effect emerged for warmth: Participants perceived a target presented to be cold (vs. warm) as more competent. Notably, this compensation effect also impacts categories of language (Semin & Fiedler, 1988) used to describe a target. When presented with a competent and an incompetent target group, participants selected more abstract (i.e., generalizable) descriptions of pictures presenting cold behaviors for the competent group, and more abstract warm behaviors for the incompetent group (Kervyn, Yzerbyt, & Judd, 2011). Thus, this Language Expectancy Bias (Wigboldus, Semin, & Spears, 2000; Wigboldus, Spears, & Semin, 2005) provides more evidence supporting a compensation effect.

Perceivers may form mixed impressions of some individuals and groups more readily than others. Although societal ingroups tend to be seen as both warm and competent, outgroups and subordinate groups are frequently characterized as high on one dimension and low on the other (Fiske et al., 2002). For example, women, as targets of ambivalent sexism (Glick & Fiske, 1996), are more often than men the objects of mixed impressions. Benevolent sexism portrays some women as warm and caring but less competent than men, whereas hostile sexism portrays other women as competent but cold and calculating. Both strains of sexism thus express a mixed impression of women, and moreover, these stereotypic perceptions of women are widespread across cultures (Glick et al., 2000). Some data place housewives in the incompetent-and-warm quadrant of the Stereotype Content Model, while placing business women and feminists in the competent-and-cold quadrant (Fiske et al., 2002). Moreover, compared to childless working women, working mothers are perceived as warmer but also less competent, and are less likely to be hired, promoted, or trained (Cuddy, Fiske, & Glick, 2004). Working fathers, by contrast, are seen as warmer than childless men but do not suffer a perceived drop in competence or disparate treatment. Thus, if innuendo indeed conveys mixed impressions and if women are more readily typecast as high on one dimension and low on the other, we predict that innuendo should be especially effective when the person described is female. That is, the innuendo effect should be especially strong for high-warmth/low-competence mixed impressions, which parallel the stereotype attached to traditional women, the cultural default for women.

Overview

Study 1 tests for an innuendo effect by assessing whether participants draw negative inferences from a positive person description that covers only one dimension (i.e., warmth or competence). We designed Study 2a to replicate this innuendo effect and test for moderation by target gender. Finally, Study 2b simulates a communication process by having a new set of participants read and draw inferences from the descriptions written by Study 2a participants, to test whether listeners pick up on communicators' innuendo and whether target gender moderates this innuendo effect.

Study 1

We designed the first study to provide a basic test of the innuendo effect. Participants read a vignette in which peers described a target person in one of two contexts. Between participants, the description provided objectively positive information focused on warmth, competence, or the speakers' general impression of the target. The context was either social (a travel group) or work (an academic group), to make warmth versus competence salient, respectively. We expected the strongest innuendo effects (i.e., negative inferences on an unmentioned dimension) following a warmth description in the academic context and a competence description in the social context. In contrast, when the description matched the context (e.g., warmth description in the social context) we expected the innuendo effect to be either weaker or absent.

With respect to inclusion, we expected that statements containing innuendo would lower participants' estimation of the target's suitability for inclusion in their work or social group primarily because they evaluated him or her more negatively on whichever dimension – warmth or competence – was more salient in that particular context. Thus, we predicted that ratings on the salient (omitted) dimension would mediate the effect of the innuendo manipulation on the decision to accept the target as a group member. We theorized that, in general, people want to select fellow ingroup members who are both warm and competent – even when the specific context emphasizes one dimension over the other – meaning that

positivity on a contextually non-salient dimension should lead to a favorable halo effect and boost a target's chances of inclusion. Thus, in the control condition, participants' evaluations of the target on the contextually non-salient dimension should correlate positively with their inclusion ratings. We predicted, however, that innuendo could undermine or even reverse this relationship: Innuendo may "taint" perceptions of a target such that his or her excellence even on the praised (contextually non-salient) dimension does not improve his or her perceived fitness for inclusion in the group and might ironically reduce it. For instance, not only might a "smart, hard-working, and competent" prospective travel partner be excluded from the group due to his or her perceived lack of warmth, but the description's use of innuendo might also cause the target's high competence per se to have a neutral or negative effect on inclusion. Therefore, we hypothesized that innuendo would moderate the relationship between evaluations of the target on the contextually non-salient dimension and inclusion, which should be positive in the control condition but nonexistent or negative in the innuendo condition.

Method

Participants and design

We recruited 160 undergraduates through a university-based paid experiments website for a chance to win a \$10 prize. Excluding 21 participants who failed manipulation checks, the retained sample comprised 139 students (102 females, mean age = 20.2). This study used a 2 (context: social vs. work) \times 3 (description: warmth-only vs. competence-only vs. control) between-participants design with participants randomly assigned to condition.

Procedure

Participants first read that their participation in this online study was voluntary and anonymous, then recorded their age and gender. We asked participants to imagine being in a three-person group that needed to select a fourth member for either "traveling during the next academic break" or "working on a major class assignment" together. Next, participants were asked to imagine having missed one of their group's meetings with prospective new members and asking the other two group members to give a brief description of Pat, a potential new group member (of unspecified gender). These others "pause for a moment" and then say, "Well, Pat made a very positive overall impression," without referencing warmth or competence in the control condition. In the two experimental conditions, the speakers, likewise, paused then stated, "Well, Pat seems like a very nice, sociable, and outgoing person" in the warmth-only condition, or "Well, Pat seems like a very smart, hard-working, and competent person" in the competence-only condition.

Participants indicated their perception of their fellow group members' impression of Pat, based on this description. They did so first in an open-ended description of Pat. Then they rated Pat on the following dependent measures: (a) absolute ratings of warmth and competence in the eyes of the speakers, (b) relative likeability and capability compared with other prospective group members, and (c) suitability for inclusion in the group. Eight traits presented in random order assessed absolute competence (*conscientious, efficient, lazy, disorganized*; $\alpha = .75$) and absolute warmth (*warm, friendly, cold, irritable*; $\alpha = .85$) on scales from 1 (*not at all*) to 7 (*extremely*), with negative traits reverse-scored. Next, two items presented in random order assessed whether participants considered Pat more or less capable and likeable than other potential group members on two scales from 1 (*definitely less*) to 7 (*definitely more*). Finally, participants rated whether they thought Pat would make a good group member on a scale from 1 (*not at all*) to 7 (*definitely*). At the end, two manipulation check questions had participants select which vignette topic and description of Pat they had read from two lists of four options (including foils).

Results

Each dependent measure was submitted to a 2 (context: social vs. work) \times 3 (description: warmth-only vs. competence-only vs. control) analysis of variance (ANOVA) with both factors varying between participants, followed as needed by pairwise comparisons using the Tukey procedure and the $p < .05$ threshold for significance. Participant gender did not significantly qualify any of the following results. Table 1 reports all means and standard deviations.

Absolute warmth and competence

Participants' ratings of how warm and competent their fellow group members perceived Pat to be depended on the description they read, respective $F_s(2, 133) = 31.55$ and 38.25 , $p_s < .001$, $\eta^2_s = .32$ and $.37$ (see Fig. 1). Relative to the control condition ($M = 4.98$), Pat's absolute warmth was rated significantly higher in the warmth-only condition ($M = 5.59$) and – consistent with an innuendo effect – significantly lower in the competence-only condition ($M = 3.84$). Relative to the control condition ($M = 5.02$), Pat's absolute competence was rated significantly higher in the competence-only condition ($M = 5.78$) and – again showing an innuendo effect – significantly lower in the warmth-only condition ($M = 4.18$). Pat's absolute warmth and competence did not vary significantly by context, nor did context qualify the aforementioned description effects, all $p_s > .10$.

Relative likeability and capability

Participants' ratings of Pat's likeability and capability relative to other potential group members showed innuendo effects parallel to those observed for absolute warmth and competence, though the innuendo effect for relative capability varied across contexts. Pat's relative likeability did not differ significantly between the control and warmth-only conditions (respective $M_s = 4.23$ and 4.53), but was – consistent with our innuendo hypothesis – significantly lower in the competence-only condition ($M = 3.10$) than in both other conditions. A context main effect also emerged, $F(1, 132) = 3.92$, $p = .050$, $\eta^2 = .03$, such that Pat seemed less likeable in the social ($M = 3.74$) than the work ($M = 4.17$) context, but this effect did not vary by description, $p > .50$.

Relative capability ratings did not differ overall by context, $p > .30$, and did differ by description, $F(1, 132) = 27.59$, $p < .001$, $\eta^2 = .30$, but these results were qualified by a significant description by context interaction, $F(1, 132) = 4.79$, $p = .010$, $\eta^2 = .07$, so the effect of description on relative capability ratings were analyzed for each context separately (see Table 1 for means). Capability ratings varied by description in both the social and work contexts, respective $F_s(2, 132) = 23.88$ and 9.64 , $p_s < .001$, $\eta^2_s = .49$ and $.19$. In the social context, relative capability ratings were significantly higher in the competence-only than the control condition, and significantly lower in the warmth-only condition than the competence-only condition, as predicted. (The warmth-only and control conditions did not differ significantly in the social context, although the means were in the expected direction.) In the work context, Pat's relative capability did not differ significantly between the control and competence-only conditions, but was significantly lower in the warmth-only condition than in both other conditions, consistent with an innuendo effect.

Inclusion suitability

Finally, we analyzed participants' ratings of Pat's suitability for inclusion in the group. Inclusion ratings were higher overall in the work than the social context, $F(1, 133) = 22.75$, $p < .001$, $\eta^2 = .15$, and also varied by description, $F(1, 133) = 6.72$, $p = .002$, $\eta^2 = .09$. Because context and description interacted significantly, we examined the effects of description separately for each context (see Table 1 for means). Inclusion ratings varied by description in both the social and work contexts, respective $F_s(2, 133) = 4.38$ and 7.26 , $p_s = .014$ and $.001$, $\eta^2_s = .06$ and $.10$. In the social context, inclusion ratings

Table 1
Mean (SD) ratings of target warmth, competence, and inclusion by target gender, context, and description.

Target gender	Context	Description	n	Absolute warmth	Absolute competence	Relative likeability	Relative capability	Inclusion suitability	
<i>Study 1</i>									
Unspecified	Social	Warmth-only	21	5.27 (0.87)	4.33 (0.80)	4.14 (1.31)	3.90 (0.97)	3.81 (1.03)	
		Control	26	4.97 (1.40)	4.86 (0.87)	4.12 (1.63)	4.15 (1.16)	4.15 (1.41)	
		Competence-only	24	3.76 (1.00)	5.82 (0.88)	2.96 (1.02)	5.13 (1.15)	3.17 (1.31)	
	Work	Warmth-only	24	5.90 (0.72)	4.03 (0.84)	4.92 (0.93)	3.42 (0.97)	3.96 (1.16)	
		Control	23	4.98 (1.08)	5.17 (0.88)	4.35 (1.34)	4.96 (0.82)	5.26 (0.96)	
		Competence-only	21	3.92 (1.11)	5.74 (0.91)	3.24 (1.22)	5.33 (0.80)	4.81 (1.17)	
<i>Study 2a</i>									
Male	Social	Innuendo (competence-only)	11	4.20 (0.58)	5.84 (0.70)	3.55 (0.69)	4.91 (1.04)	5.00 (1.00)	
		Neutral	16	5.48 (1.04)	5.05 (0.93)	4.25 (1.18)	4.81 (1.17)	5.38 (1.09)	
	Work	Innuendo (warmth-only)	15	5.42 (0.75)	4.18 (0.83)	4.33 (1.29)	3.80 (1.15)	4.47 (0.99)	
		Neutral	10	5.10 (1.33)	4.85 (0.94)	4.10 (1.37)	4.50 (1.35)	5.20 (1.23)	
	Female	Social	Innuendo (competence-only)	14	4.34 (1.10)	6.21 (0.27)	3.00 (0.96)	5.14 (1.17)	4.07 (0.83)
		Neutral	9	5.42 (0.80)	5.06 (0.62)	4.22 (1.72)	4.44 (1.33)	4.33 (1.22)	
Work	Innuendo (warmth-only)	13	5.88 (1.01)	4.21 (1.48)	5.00 (1.47)	3.23 (1.01)	3.85 (1.41)		
	Neutral	14	5.32 (0.98)	5.52 (0.71)	4.21 (1.85)	4.64 (1.28)	4.29 (1.44)		
<i>Study 2b</i>									
Male	Social	Innuendo (competence-only)	20	4.18 (0.86)	5.94 (0.74)				
		Neutral	19	5.37 (1.03)	5.09 (0.71)				
	Work	Innuendo (warmth-only)	20	5.42 (0.79)	4.74 (0.93)				
		Neutral	21	4.69 (1.00)	4.57 (0.70)				
Female	Social	Innuendo (competence-only)	22	4.05 (1.10)	5.41 (1.06)				
		Neutral	19	5.04 (0.80)	4.75 (0.69)				
	Work	Innuendo (warmth-only)	19	6.11 (0.71)	3.78 (0.90)				
		Neutral	21	5.19 (0.75)	5.40 (0.82)				

Note. Boldface identifies the more salient dimension in each context.

were not significantly higher in the warmth-only condition than in the control condition; however, consistent with our innuendo prediction, they were lower in the competence-only condition than the control condition. Similarly, consistent with our innuendo prediction in the work context, inclusion ratings were significantly lower in the warmth-only condition than in the control and competence-only conditions, while the latter two conditions did not differ from one another.

Mediation

Finally, averaging across the specific contexts (work vs. social) and dimensions (warmth vs. competence) measured, we conducted mediation and moderation analyses focused simply on the presence or absence of innuendo. To do so, we combined the two conditions in which we predicted and indeed observed robust innuendo effects – with a prospective traveling companion described as “very smart, hard-working, and competent” or work partner described as “very nice, sociable, and outgoing” – into an “innuendo” condition (coded “1”), which we then compared with the control condition (coded “0”). Also, because the innuendo manipulation always involved omitting the more

salient dimension in a given context, we recoded warmth/likeability and competence/capability as respectively salient and non-salient in the social context, and vice-versa in the work context.

To allow for the possibility that evaluations of the target on the non-salient dimension might also influence inclusion ratings, we tested a multiple-mediator model (Preacher & Hayes, 2008) that simultaneously assessed four possible mediators of innuendo’s effect on inclusion, namely, absolute and relative evaluations of the target on the salient and non-salient dimensions (see Fig. 2). As predicted, the combined effect of these four mediators proved significant, $Z=3.05$, $p=.002$, and fully mediated the effect of innuendo (vs. control) descriptions on inclusion suitability: The direct path from innuendo to inclusion dropped from $\beta=-0.39$ ($p<.001$) to $\beta=-0.12$ ($p=.22$). Notably, the only significant mediating variables were evaluations of the target on the contextually salient dimension, both absolute ($Z=2.11$, $p=.035$) and relative ($Z=3.46$, $p<.001$), whereas evaluations on the non-salient dimension were not significant, both $ps>.25$. (Moreover, testing reverse-mediation models confirmed that inclusion ratings failed to significantly mediate the effect of innuendo on evaluation.) Thus, reading the innuendo (vs.

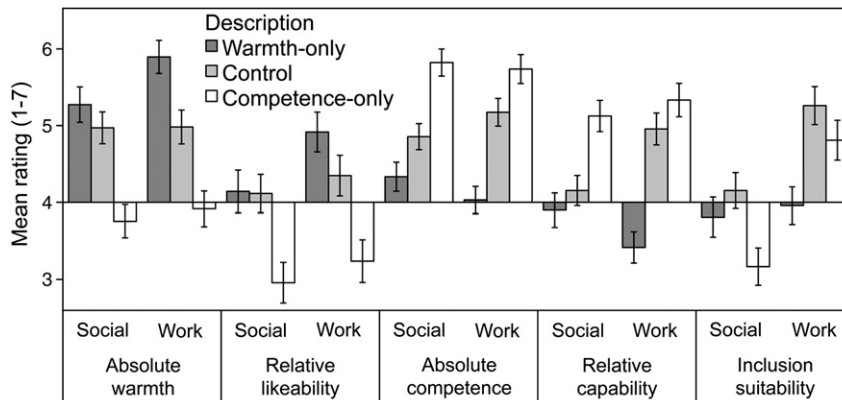


Fig. 1. Mean (±SE) ratings of target warmth, competence, and inclusion by context and description in Study 1.

control) description praising a target on only the contextually non-salient dimension led participants to derogate that target on the other dimension, and this negative evaluation on the contextually salient dimension in turn reduced participants' perception that the target would make a good group member.

Moderation

As predicted, tests of interaction in regression confirmed that the innuendo manipulation significantly moderated the relationship between relative evaluation of the target on the contextually non-salient dimension and inclusion, $t(93) = 2.62, p = .010$. Whereas this relationship was positive and significant in the control condition, $r(49) = .47, p = .001$, it was non-significantly negative in the innuendo condition, $r(47) = -.07, p = .63$.

Discussion

These results provide strong evidence of an innuendo effect on all three dependent variables. Indeed, this innuendo effect turned out to be stronger than expected, insofar as it occurred for the absolute warmth, absolute competence, and relative likeability ratings in both contexts. Relative to targets described in generally positive terms, targets described using innuendo came across as less warm and likeable when praised for high competence and less competent when praised for high warmth. The innuendo effect was even stronger than predicted: Although we initially expected little or no innuendo effect if the positive information provided was on the more contextually salient dimension, an innuendo effect emerged on the omitted dimension. For example, when speakers described only Pat's (positive) competence in the work context, participants inferred that Pat lacked warmth. The relative capability and inclusion ratings, however, did provide evidence that context can moderate innuendo effects, insofar as we observed a clear innuendo effect only when a positive target description omitted the more contextually salient (vs. non-salient) dimension.

The mediation results also support our innuendo hypothesis, showing that target derogation on the omitted dimension does not end there, but also leads to more negative decisions concerning the target's inclusion. Finally the moderation results suggest that even the ostensible praise involved in innuendo may ring hollow: Not only are targets penalized in evaluations on the omitted dimension, but also even the positive impressions conveyed about them on the mentioned dimension may not improve their odds of inclusion.

Introducing the speakers' description with "These others pause for a moment and then say, 'Well,...'" may appear to invite negative inferences, such that our results might overestimate the innuendo effect. This account seems unlikely, however, for two reasons. First, although all participants (in both the experimental and control conditions) read this introduction, we observed innuendo effects in only the experimental conditions and on only the omitted dimension. Second, the relative sparseness of these vignettes – compared with live interactions that involve non-verbal cues as well as potentially longer, richer, and more vivid descriptions with intonation – would tend, if anything, to underestimate the negativity of inferences that listeners would draw.

Study 2a

Encouraged by the evidence of an innuendo effect in Study 1, we designed Study 2a to test our hypothesis that this innuendo effect would be stronger for female than male targets, because of the two polarized subtypes common for women (warm but incompetent, competent but cold). This study replicates the Study 1 procedure but adds a target gender factor: instead of reading about a target with a gender-neutral name (Pat), Study 2a participants were randomly assigned to read about a target with a name clearly male (Ryan) or female (Molly). We expected the male target to be less affected by innuendo than the female target. As in Study 1, we predicted that participants' absolute and relative evaluations of the target on the contextually salient dimension would mediate the effect of innuendo on inclusion suitability.

Method

Participants and design

We recruited 112 student participants through a university-based paid experiments website for a chance to win a \$10 prize. Excluding 10 participants who failed manipulation checks, the sample retained for analysis comprised 102 students (79 females, mean age = 22.3).

To focus on the innuendo effect, we adopted a simplified 2 (description: innuendo vs. control) × 2 (context: social vs. work) × 2 (target gender: male vs. female) between-participants design with participants randomly assigned to condition. Study 1 showed that contextually salient positive descriptions produce an equal or weaker innuendo effect on warmth and competence ratings than do contextually non-salient positive descriptions, presumably because omitting the more salient dimension of person perception – warmth in a social context and competence in a work context – is especially conspicuous. Thus, in each context, we dropped the contextually salient positive description and kept only the control description and the contextually non-salient description (e.g., praising warmth but omitting competence in a work setting).

Procedure

The procedure was identical to Study 1, except that (a) the target was named Ryan or Molly instead of Pat and (b) the class assignment (work) scenario included just the control or warmth-only description and the travel (social) scenario included just the control or competence-only description. Thus, each context contained a general and an innuendo condition. In the class assignment context, the innuendo condition was a warmth-only description, whereas in the travel scenario, the innuendo condition was a competence-only description. The dependent variables – absolute warmth ($\alpha = .78$), absolute competence ($\alpha = .79$), relative likeability, relative capability, and inclusion suitability – and manipulation checks paralleled Study 1.

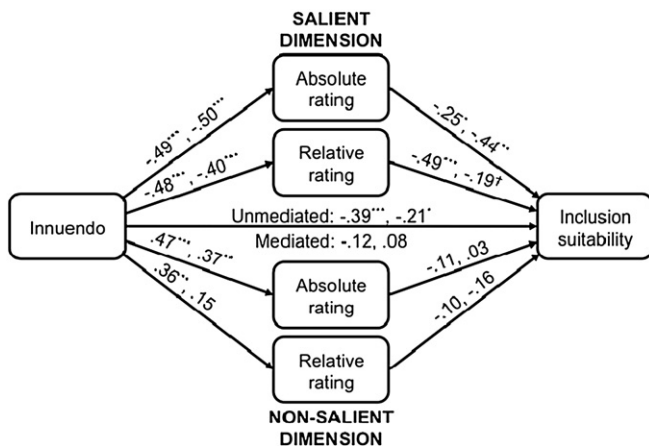


Fig. 2. Multiple mediation model for effect of innuendo on inclusion suitability. Path coefficients are standardized regression estimates (β s) from Studies 1 and 2a, respectively. Dummy coding: Innuendo = 1, Control = 0. *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$.

Results

Because our innuendo manipulation involved omitting the more salient dimension in each context – describing a prospective traveling companion as “very smart, hard-working, and competent” or work partner as “very nice, sociable, and outgoing” – we recoded the dependent measures based on whether they represented the salient or non-salient dimension in each context. Thus, warmth/likeability and competence/capability were respectively salient and non-salient in the social context, and vice-versa in the work context. Each dependent measure was submitted to a 2 (context: social vs. work) × 2 (description: innuendo vs. control) × 2 (target gender: male vs. female) ANOVA with all factors varying between participants. Participant gender did not significantly affect the following results. Table 1 reports all means and standard deviations.

Absolute evaluation

As predicted, the innuendo manipulation affected participants' ratings of how warm or competent their fellow group members perceived the target to be. Unsurprisingly, evaluations on the non-salient dimension were more positive in the innuendo condition (when speakers praised the target on that dimension) than the control condition (when speakers said the target made “a very positive overall impression”), $F(1, 94) = 16.40, p < .001, \eta^2 = .15$, respective $M_s = 5.83$ and 5.13 .

On the salient dimension a robust innuendo effect emerged: Participants provided much lower ratings in the innuendo ($M = 4.24$) than control ($M = 5.32$) condition, $F(1, 94) = 29.72, p < .001, \eta^2 = .24$. Context and target gender did not affect absolute evaluation on either dimension or interact with other factors, all $p_s > .10$.

Relative evaluation

Likewise, participants' evaluations of the target's relative likeability or capability varied according to the description provided. This time, the tendency to rate the target more positively in the innuendo (vs. control) condition on the non-salient dimension did not attain significance, $p = .10$, but a robust innuendo effect again emerged on the salient dimension, with participants evaluating the target more negatively in the innuendo ($M = 3.39$) than control ($M = 4.40$) condition, $F(1, 94) = 18.16, p < .001, \eta^2 = .16$. Again, context and target gender did not affect relative evaluations on either dimension, all $p_s > .10$.¹

Inclusion suitability

With respect to whether the target would make a good fourth member of their group, participants marginally preferred targets in the control condition ($M = 4.80$) over the innuendo condition ($M = 4.35$), $F(1, 94) = 3.74, p = .056, \eta^2 = .04$, consistent with our hypothesis. They also significantly preferred Ryan ($M = 5.01$) to Molly ($M = 4.13$), in general, $F(1, 94) = 14.02, p < .001, \eta^2 = .13$. No other effects attained significance, all $p_s > .10$.

Mediation

We tested a multiple-mediator model that simultaneously assessed absolute and relative evaluations of the target on the salient and non-salient dimensions as mediators (see Fig. 2). As in Study 1, these four mediators yielded a significant total effect, $Z = 3.67$,

$p < .001$, and fully mediated the effect of innuendo (coded “1,” vs. control coded “0”) descriptions on inclusion, reducing the direct path from $\beta = -0.21$ ($p = .035$) to $\beta = 0.08$ ($p = .48$). Again, both absolute ($Z = 3.34, p < .001$) and relative ($Z = 1.70, p = .089$) evaluation of the target on the contextually salient dimension mediated the effect of innuendo on inclusion, whereas evaluations on the non-salient dimension were not significant, both $p_s > .25$. (Reverse-mediation models failed to attain significance.) Consistent with the Study 1 results, the innuendo description led participants to derogate the target on the contextually non-salient dimension, which in turn reduced their inclusion ratings.

Moderation

Drawing on the results of Study 1, we expected that innuendo might neutralize or even reverse the otherwise favorable influence on inclusion ratings of positively evaluating a target on a contextually non-salient dimension. Once again, the innuendo manipulation significantly moderated the relationship between relative evaluation of the target on the contextually non-salient dimension and inclusion, $t(98) = 2.24, p = .028$. This relationship was positive and significant in the control condition, $r(49) = .30, p = .035$, but non-significantly negative in the innuendo condition, $r(53) = -.14, p = .33$.

Discussion

These results provide strong support for the innuendo effect. Compared to a general description, a description presenting positive information only about the less salient dimension leads to more negative perception on the salient dimension. Relative to targets described in generally positive terms, participants considered targets less warm and likeable when praised for high competence in a social context and less competent and capable when praised for high warmth in a work context. Moreover, inclusion of the prospective group member was (marginally) lower in the innuendo conditions than in the control condition. Counter to our predictions, however, we did not find a stronger innuendo effect for female (vs. male) targets in the participants' ratings.

As in Study 1, the mediation results showed that the negative evaluations of the target on the omitted dimensions mediate the effect of innuendo on inclusion judgments about the target. And the moderation results imply that even when innuendo leads listeners to form a positive impression about a target on the mentioned dimension, this positive impression fails to make him or her appear better suited for the group.

Study 2b

Consider the following descriptions: “He seems to be a mature guy who gets good grades. I'm not sure how much fun he would be on the trip though. [...]” and “Molly is bubbly, talkative and has trouble paying attention. She also has trouble concentrating on the task at hand and so would not get work done.” Both of these target descriptions were written by Study 2a participants (prior to viewing the quantitative dependent measures) and came from conditions involving innuendo.

We designed Study 2b as a follow-up of Study 2a with three primary aims. First, we wanted to show that Study 2a participants communicated mixed impressions on the two specific dimensions of warmth and competence, not only in their ratings but also in the open-ended description they wrote before even reading the warmth and competence measures. Second, because we consider innuendo a tool for communicating mixed impressions, we wanted to simulate a chain of communication and assess the propagation of mixed impressions from one set of participants to another. Third, although the Study 2a quantitative responses revealed no effect of target gender, we wanted to test whether target gender had nevertheless

¹ Preliminary evidence of the hypothesized target gender effect emerged in the work context for the salient dimension (competence). Innuendo (vs. control) descriptions significantly lowered both absolute and relative competence ratings for female targets, respective $F_s(1, 94) = 11.87$ and $9.74, p_s = .001$ and $.002$, but not male targets, respective $F_s(1, 94) = 2.75$ and $2.13, p_s > .10$. As the description by target gender interaction failed to attain significance in the work context, possibly due to low (~20%) power for a small effect ($\eta^2 \approx .03$), we decline to interpret this result.

influenced their open-ended qualitative answers. To do so, we used participants' written descriptions of the targets generated in Study 2a as the stimuli in Study 2b.

If the innuendo effect allows speakers to convey mixed impressions effectively, the descriptions written by Study 2a participants in the innuendo condition should communicate these mixed impressions about the target to new audiences. If the innuendo effect tends to be stronger for female than male targets, Study 2b participants should report more mixed impressions after reading descriptions written by Study 2a participants who were in the innuendo/female-target, as opposed to innuendo/male-target, condition.

Method

Participants and design

We recruited 161 U.S. adults (102 females, mean age = 37.9 years) through Amazon.com's Mechanical Turk program to complete our online survey in exchange for a small monetary compensation. Participants were randomly assigned to read the descriptions generated in one of the eight conditions of Study 2a. Thus, the present study matched Study 2a's 2 (description: innuendo vs. control) × 2 (context: social vs. work) × 2 (target gender: male vs. female) design.

Procedure

Participants were first informed that their participation was voluntary and anonymous, then asked to "form an impression about an individual based on other people's descriptions of him [her]." All the descriptions (9 to 16, depending on the condition) generated by participants in one condition of Study 2a were presented in a random fixed order, preceded by the instructions: "Imagine that you have never met this person (Ryan [Molly]) and are hearing about him [her] for the first time. Here are several different people's descriptions of him [her]." On the next page, participants reported their impression of the target's warmth ($\alpha = .76$) and competence ($\alpha = .71$), measured using the eight traits from Studies 1 and 2a presented in random order and assessed on 7-point scales. Finally, participants recorded their own age and gender.

Results

Because this study used the same experimental design as Study 2a, we again recoded the dependent measures to represent the salient or non-salient dimension in each context. Warmth was salient in the social context but non-salient in the work context and vice-versa for competence. Each dependent measure was submitted to a 2 (context: social vs. work) × 2 (description: innuendo vs. control) × 2 (target gender: male vs. female) ANOVA with all factors varying between participants. Participant gender did not significantly affect the following results. Table 1 reports all means and standard deviations.

Target evaluation

Participants' ratings of the target on the contextually non-salient dimension – praised explicitly in the innuendo description – were higher in the innuendo ($M = 5.72$) than the control ($M = 4.93$) condition, $F(1, 153) = 36.72, p < .001, \eta^2 = .19$. No target gender or context effects interacted significantly with innuendo to affect ratings on the non-salient dimension, all $ps > .40$, but the effect of target gender did vary by context, $F(1, 153) = 15.63, p < .001, \eta^2 = .09$. Participants evaluated female targets ($M = 5.65$) more positively (i.e., as warmer) than male targets ($M = 5.05$) in the work context, $F(1, 153) = 10.53, p = .001, \eta^2 = .06$, while rating male targets ($M = 5.51$) more positively (i.e., as more competent) than female targets ($M = 5.08$) in the social context, $F(1, 153) = 5.51, p = .020, \eta^2 = .04$ (see Fig. 3).

Consistent with our innuendo hypothesis, participants rated targets more negatively on the salient dimension – omitted from the innuendo description – in the innuendo ($M = 4.18$) than the control ($M = 5.10$) condition, $F(1, 153) = 41.11, p < .001, \eta^2 = .21$. This innuendo effect was qualified, however, by target gender, $F(1, 153) = 6.42, p = .006, \eta^2 = .05$, and moreover, the three-way interaction of innuendo, target gender, and context proved significant, $F(1, 153) = 12.19, p = .001, \eta^2 = .08$. In the social context, participants rated the target more positively on the salient dimension (warmth) in the control ($M = 5.21$) than innuendo ($M = 4.11$) condition, $F(1, 153) = 29.37, p < .001, \eta^2 = .25$, and no other effects attained significance, all $ps > .20$.

In the work context, participants also evaluated the target more positively on the salient dimension (competence) in the control ($M = 4.99$) than innuendo ($M = 4.26$) condition, $F(1, 153) = 13.26, p < .001, \eta^2 = .17$, but target gender qualified this effect, $F(1, 153) = 19.97, p < .001, \eta^2 = .23$. Participants ascribed less competence in the innuendo (vs. control) condition to a female target, $F(1, 153) = 32.46, p < .001, \eta^2 = .49$, but not a male target, $p > .50$ (see Table 1).

Discussion

These results support our prediction that innuendo effects emerge from the open-ended descriptions written by Study 2a participants prior to viewing any dependent measures that could suggest a warmth-competence trade-off or even bring these two specific dimensions to mind. Moreover, Study 2b offers strong support for the innuendo effect as a means of communicating and perpetuating mixed impressions. Participants in Study 2a who read a target description that focused on only the contextually non-salient dimension wrote descriptions that led participants in Study 2b to form a mixed impression. Finally, Study 2b supports our hypothesis that innuendo effects may be stronger for female (vs. male) targets. In the work context, Study 2a participants demonstrated an innuendo effect that did not differ significantly for male versus female targets – judging those targets praised as nice to be less competent than those described in general terms – but the open-ended descriptions that they passed on to Study 2b participants failed to convey the male target's lack of competence. By contrast, Study 2a participants who read an innuendo description of a female target then

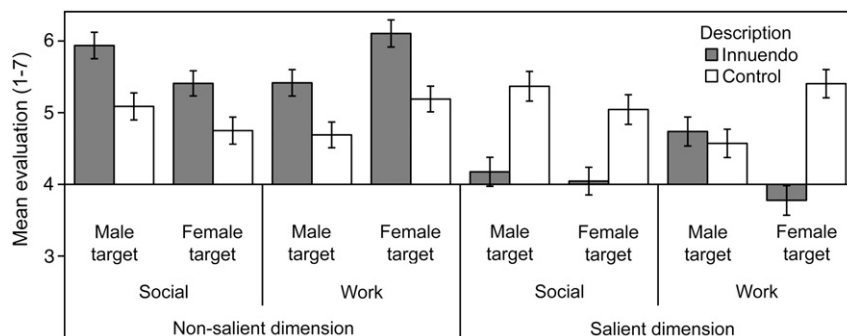


Fig. 3. Mean (±SE) target evaluations on contextually salient and non-salient dimensions by context, description, and target gender in Study 2b.

characterized her such that Study 2b participants ascribed her positive warmth but negative competence.

General discussion

This series of studies shows strong support for an innuendo effect. When information on a contextually salient dimension is omitted, listeners draw negative inferences about it, despite explicitly receiving only positive information. Notably, in Study 1, even when the information provided on a single dimension was contextually salient, an innuendo effect on the other dimension frequently emerged. Moreover, descriptions involving innuendo led participants to see targets as less suitable for inclusion in their group, an effect mediated by negative inferences that participants drew about the targets on the contextually salient (omitted) dimension. Interestingly, even the favorable impressions that participants formed about targets on the other dimension – based on the explicitly positive information the communicators provided on that dimension – failed to boost inclusion ratings in the innuendo condition. Instead, participants who received innuendo-laden descriptions of targets appeared to decouple their favorable impression of the target on the described dimension from their judgment about targets' suitability to join their group. Unidimensional praise enhances evaluations of the target on the mentioned dimension, yet prevents these favorable evaluations from translating into valued outcomes. Innuendo not only leads perceivers to derogate targets on the dimension omitted from the description, lowering their chances of inclusion in the group, but also undermines the otherwise positive relationship between perceptions of targets on the praised dimension and inclusion.

This innuendo effect adds to converging evidence that in some cases the relation between the two fundamental dimensions of warmth and competence cannot uniformly be predicted by the classical halo effect and instead resembles a hydraulic relationship (Kervyn et al., 2010). Consistent with Wojciszke (1994) and Fiske et al. (2007), we view these two fundamental dimensions as orthogonal, such that both positive and negative relations between warmth and competence coexist. Although we argue against applying the halo effect uniformly to predict all relations between warmth and competence, in some cases it can create warm-and-competent and cold-and-incompetent impressions. Correspondingly, innuendo (and compensation) effects give rise to cold-and-competent and warm-and-incompetent impressions in other cases.

Omitting negativity from descriptions of others increases as a function of speakers' self-presentation concerns (Bergsieker et al., 2011), so audiences may perceive innuendo, as opposed to halo, effects more readily when cues suggest that speakers are self-censoring. Politeness theory in sociolinguistics (Brown & Levinson, 1987) identifies the pervasive use of indirect speech – including hedges (e.g., “Well”) or delayed responses – to signal a violation of the Gricean quality maxim, providing a “trigger [that] serves notice to the addressee that some inference must be made” (p. 211). Although indirect speech is commonplace across cultures (Brown & Levinson, 1987), and speakers indeed spontaneously omit negative content in describing mixed-valence targets (Bergsieker et al., 2011), little research has examined reception processes in collaborative social cognition. Our novel demonstration of systematic negative inferences arising from positive (indirect) speech suggests that these seemingly counterintuitive innuendo effects may, in fact, be widespread.

Additionally, the present research provides evidence concerning which effect will apply when and for whom, underscoring innuendo's functional significance. Study 2b results showed that in the work context, an innuendo effect emerged for female but not male targets. This result parallels recent findings that letter writers for female (vs. male) academics more often described them in terms of warmth (vs. competence), and that warmth was inversely related to hiring (Madera, Hebl, & Martin, 2009). Women tend to be the object of mixed impressions (Cuddy et al., 2004; Fiske et al., 2002; Glick et al., 2000) whereas men, the normative group, are more easily perceived

as both warm and competent. We do not claim that warmth and competence are necessarily hydraulically related; indeed, ample evidence shows that they can correlate positively (e.g., Suitner & Maass, 2008; Thorndike, 1920). Instead, we assert that social perceivers variously use halo, compensation, omission, and innuendo effects to construct, maintain, and convey impressions consistent with social norms and stereotypic perceptions of social groups.

We believe that combining Studies 2a and 2b to simulate communication provides insight about how mixed impressions are perpetuated across different sets of social perceivers. Study 2a participants (“writers”) read a brief description of a target focused on warmth, competence, or a general impression, then wrote a few lines describing the target in their own words. The Study 2b participants (“readers”) gave target ratings based on these written descriptions, confirming that writers who had been exposed to a target described with only positive information on the contextually non-salient dimension communicated mixed impressions to readers. Specifically, writers exposed to only positive competence information in the social context conveyed cold-and-competent impressions, whereas writers exposed to only positive warmth information in the work context conveyed warm-and-incompetent impressions of female targets but warm-and-competent impressions of male targets. This latter finding shows the value of going beyond the quantitative results of Study 2a – showing an innuendo effect for both contexts and both target genders – to find in Study 2b that the gender of the target can indeed moderate innuendo effects. Although the writers picked up on the innuendo present in the original target description, as is evident from the ratings they produced, they wrote descriptions that led readers to form generally positive impressions of male targets in a work context. Given the efficacy of innuendo for subtly conveying negative information about people without outwardly violating any anti-negativity or anti-prejudice norms, innuendo may play a powerful role in allowing members of the normative group to maintain a positive image while perpetuating mixed societal stereotypes.

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