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## The hubris hypothesis: The downside of comparative optimism displays <sup>☆</sup>

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### ABSTRACT

According to the hubris hypothesis, observers respond more unfavorably to individuals who express their positive self-views comparatively than to those who express their positive self-views non-comparatively, because observers infer that the former hold a more disparaging view of others and particularly of observers. Two experiments extended the hubris hypothesis in the domain of optimism. Observers attributed less warmth (but not less competence) to, and showed less interest in affiliating with, an individual displaying comparative optimism (the belief that one's future will be better than others' future) than with an individual displaying absolute optimism (the belief that one's future will be good). Observers responded differently to individuals displaying comparative versus absolute optimism, because they inferred that the former held a gloomier view of the observers' future. Consistent with previous research, observers still attributed more positive traits to a comparative or absolute optimist than to a comparative or absolute pessimist.

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### 1. Introduction

Most people like optimists and prescribe optimism. For example, when asked to judge others, most people favor optimists over pessimists (Carver, Kus, & Scheier, 1994; Le Barbenchon, Milhabet, Steiner, & Priolo, 2008). Also, when asked to indicate what the outlook of a vignette protagonist should be on various life events, most people advocate optimism over pessimism and even over accuracy (Armor, Massey, & Sackett, 2008).

Optimism does have some advantages. Research shows that optimists—individuals holding generalized favorable expectancies for the future—are happier and better adjusted than pessimists (Taylor & Brown, 1988). Optimists, for example, approach challenges more energetically and constructively, cope more effectively with adversity, engage in healthier behaviors, and even show a stronger will to live than pessimists (Peeters, Czapinski, & Hoorens, 2001). Not surprisingly, they reap the benefits of their outlook in terms of greater academic success, larger income, and improved psychological or physical health (Carver, Scheier, & Segerstrom, 2010). In regards to health, for instance, optimists have better immune

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function, experience less pain when afflicted by a chronic disease, and recover faster from surgery (Rasmussen, Scheier, & Greenhouse, 2009).

On the basis of such research findings, one might argue that optimism ought to be encouraged, nurtured, and even flaunted. This advice, however, may be problematic. To begin, optimism entails social drawbacks, as it risks giving off impressions of naïveté, self-indulgence, or arrogance (Hoorens, 2011; Sedikides, Gregg, & Hart, 2007; Sedikides, Hoorens, & Dufner, 2015). Moreover, optimists are likely to become disappointed when their rosy expectations are unmet (Krizan & Sweeny, 2013; McGraw, Mellers, & Ritov, 2004). Furthermore, the idea that optimism enhances task performance in others may be questionable. Participants in one set of studies forecasted their colleagues' performance on an experimental task (i.e., photograph-based age judgments), in full knowledge that the researchers had manipulated their colleagues' optimism about their performance by giving them false feedback on practice trials. Participants expected that optimism would enhance their colleagues' performance, when, in fact, optimism had no influence on performance (Tenney, Logg, & Moore, 2015). Finally, displays of optimism may entail interpersonal costs, as predicted by the hubris hypothesis (Hoorens, Pandelaere, Oldersma, & Sedikides, 2012).

The hubris hypothesis was developed to account for how and why individuals (i.e., observers) respond differently to various types of self-flattering expressions of others (i.e., claimants). It states that observers respond more unfavorably to claimants who express their positive self-views explicitly (i.e., involving direct social comparison) than to those who express them implicitly (not involving direct social comparison), because observers infer that the former hold a more disparaging view of others and particularly of observers. In this article, we extend the hubris hypothesis in the domain of optimism. We begin by distinguishing between expressions of comparative versus absolute optimism, and then describe what the hubris hypothesis predicts about them.

### 1.1. Comparative versus absolute optimism

*Comparative optimism* refers to the belief that positive events are more likely and negative events are less likely in one's future than in others' future. *Absolute optimism* refers to the belief that positive events are likely and negative events are unlikely in one's future. Comparative optimism occurs in conjunction with a variety of life events, including events that people spontaneously think of while imagining their future and events that are presented to them, among both women and men, in different ages, and across cultures (Harris, Griffin, & Murray, 2008; Hoorens, Smits, & Shepperd, 2008; Klein & Helweg-Larsen, 2002; Shepperd, Klein, Waters, & Weinstein, 2013; Shepperd, Waters, Weinstein, & Klein, 2015; Weinstein, 1980). It belongs to a family of self-superiority beliefs that includes the better-than-average effect (the conviction that one possesses desirable personality traits to a greater degree, and undesirable personality traits to a lesser degree, than others), the sensitive-self phenomenon (the conviction that one's emotions are more intense than others'), and the multifaceted-self phenomenon (the conviction that one has a richer personality than others; Alicke & Sedikides, 2009; Hoorens, 1993; Sedikides & Gregg, 2008).

It has been argued that studies on comparative optimism show absolute optimism in disguise (Chambers & Windschitl, 2004; Chambers, Windschitl, & Suls, 2003). That is, participants respond to questions about the likelihood of experiencing events "compared to others" in the same way as they respond to questions about the likelihood of experiencing events happening to them. When participants believe the likelihood of experiencing an event is low, they report that it is "lower than others'," and, when they believe the likelihood of experiencing an event is high, they report that it is "higher than others'."

Granted, some comparative optimism studies have used rare negative events (whose likelihood participants may perceive as low) and common positive events (whose likelihood participants may perceive as high). As such, these studies may have conflated comparative optimism with absolute optimism. However, a large and diverse literature indicates that comparative and absolute optimism have different correlates, predict risk behaviors in a different manner, and jointly predict risk behaviors better than they do separately (Davidson & Prkachin, 1997; Drace, Desrichard, Shepperd, & Hoorens, 2009; Fowler & Geers, 2015; Geers, Wellman, & Fowler, 2013; Klein, 2002; Lipkus, Klein, Skinner, & Rimer, 2005; Radcliffe & Klein, 2002; Rose, 2010; Siegler & Rimer, 2000). These findings indicate that comparative and absolute optimism are entitled to treatment as distinct concepts.

In addition, expressions of comparative optimism convey that a person thinks of others' future as less promising than her or his own, whereas expressions of absolute optimism are seemingly silent on how the person views others' future. Yet, even expressions of absolute optimism arguably rest upon social comparison (Alicke, 2007). For example, absolute claims such as 'I am a good friend' or 'I am not likely to contract HIV' are the outcomes of a process whereby the person compares the self to others and concludes that she or he outvalues most of them as a friend or is less at risk than most of them, respectively (Corcoran & Mussweiler, 2010; Hoorens & Van Damme, 2012). We tested, in the context of the hubris hypothesis to which we next turn, whether observers respond differently to comparative versus absolute optimism.

### 1.2. The hubris hypothesis

The hubris hypothesis purports to account for why observers respond differently to various types of self-flattering statements that a claimant makes (Hoorens et al., 2012). The hypothesis is concerned with situations involving an explicit self-superiority claim (e.g., "I am a better friend than others") and an implicit self-superiority claim (e.g., "I am a good friend"). The hypothesis predicts that, despite the fundamental similarity between the two types of claims (i.e., both involve social

comparison), observers will respond more unfavorably to an explicit self-superiority claimant than an implicit self-superiority claimant, because they judge the former as having a relatively disparaging view of others and particularly of them. The results have been consistent with the hypothesis (Hoorens et al., 2012; Van Damme, Hoorens, & Sedikides, 2016).

So far, the hubris hypothesis has been tested in conjunction with just one instance of self-superiority beliefs, namely, the better-than-average effect (i.e., the claimant making better-than-average statements). Comparative optimism is another instance of self-superiority beliefs. The hubris hypothesis would therefore likely predict more unfavorable observer reactions to a comparatively optimistic claimant than to an absolutely optimistic claimant.

The prediction that observers respond more unfavorably to claimants expressing comparative than absolute optimism does not necessarily imply that they respond unfavorably to comparative optimism per se. If people value optimism highly, they may still respond somewhat favorably to expressions of comparative optimism. Consistent with this notion, observers like comparative optimists better than comparative pessimists. In research by Helweg-Larsen, Sadeghian, and Webb (2002), participants read or listened to an excerpt from an interview depicting a student (“Jason”) who was either comparatively optimistic or comparatively pessimistic about getting injured in a car accident, contracting a sexually transmitted disease, and developing a heart disease, or who described his risks as equal to those of others (neutral condition). Participants wished to affiliate more strongly with a comparatively optimistic Jason than with a comparatively pessimistic Jason, although neither condition differed from the neutral one. To examine whether a greater liking for comparative optimism than comparative pessimism co-occurs with a greater dislike for comparative optimism than absolute optimism, we included conditions where the claimant expressed comparative (and absolute) pessimism as well as a neutral outlook.

### 1.3. Overview

In two experiments, we tested an extension of the hubris hypothesis to statements of optimism. We assessed observers’ responses to comparative versus absolute optimism on the two basic dimensions of human judgment, namely, warmth (also known as communion or other-profitability) and competence (also known as agency or self-profitability). Warmth refers to how well one treats others, and hence consists of characteristics related to sociability and morality, whereas competence refers to how well one is able to achieve one’s personal goals (Abele & Wojciszke, 2007; Fiske, Cuddy, & Glick, 2007; Wojciszke, 2005; Wojciszke & Abele, 2008).

The hubris hypothesis states that observers evaluate an explicit self-superiority claimant unfavorably, because they infer that she or he holds a negative view of others and of them. It therefore predicts that observers will view an explicit self-superiority claimant as lacking in warmth rather than in competence. According to this hypothesis, therefore, observers (1) perceive a comparative optimist as less warm (but not necessarily as less competent) than an absolute optimist, (2) prefer to affiliate less with a comparative than with an absolute optimist, and (3) show this relative dislike for a comparative optimist because they regard her or his claims as an assault on their own optimism (i.e., on their own prospects for a bright future). Although our primary purpose was to test the hubris hypothesis, we also expected that, consistent with Helweg-Larsen et al. (2002), (4) observers would evaluate the claimant more favorably in the comparative optimism than in the comparative pessimism condition and evaluate the claimant more favorably in the absolute optimism condition than in the absolute pessimism condition.

## 2. Experiment 1

Experiment 1 provided an initial test of the hubris hypothesis. We presented participants (observers) with likelihood ratings that a student (claimant) had allegedly made for three desirable or undesirable events on a questionnaire about future expectations. These likelihood ratings were absolute or comparative, and they expressed optimism, pessimism, or neutrality. Participants evaluated the claimant on warmth and competence, and indicated their affiliative preferences for her or him. In line with the hubris hypothesis, we predicted that observers would dislike a claimant (attributing less favorable traits to the claimant on warmth rather than on competence, and showing less desire to affiliate with the claimant) who expressed comparative optimism relative to a claimant who expressed absolute optimism (Hypothesis 1 and 2 above). We also predicted that observers would like a claimant who expressed absolute optimism relative to a claimant who expressed absolute pessimism or a neutral outlook and that observers would still like a claimant who expressed comparative optimism relative to a claimant who expressed comparative pessimism (Hypothesis 4 above), but not necessarily relative to a claimant who expressed a neutral outlook.

### 2.1. Method

#### 2.1.1. Participants and design

We tested 240 undergraduate students (153 women, 87 men), aged between 17 and 24 years ( $M = 18.78$ ,  $SD = 1.18$ ), who participated for course option. The design was a 3 (outlook: optimism, pessimism, neutral)  $\times$  2 (valence: positive events, negative events)  $\times$  2 (type: comparative, absolute)  $\times$  2 (dimension: warmth, competence) mixed ANOVA, with the first three factors being between-subjects (with 20 participants per cell) and the last factor being within subjects. We randomly assigned participants to the conditions of the between-subjects factors.

### 2.1.2. Procedure

An experimenter unaware of hypotheses or conditions welcomed participants in groups of 2–10 for a study “on how people form impressions.” The experimenter seated each participant in a private cubicle and handed them a booklet containing all materials.

The booklet featured a set of three event likelihood ratings allegedly made by a claimant (an unnamed student) as part of a questionnaire on future expectations. Each event was described briefly and was accompanied by a rating scale, with one alternative circled presumably by the claimant. The events referred to longevity, romantic happiness, and family life. For half of participants the events were positive (reaching an old age, having a happy love life, having harmonious family relationships), whereas for the other half they were negative (dying young, having an unhappy love life, having family conflicts).

The claimant ratings were made on 11-point scales that represented either absolute likelihoods ( $-5 = \text{very low chance}$ ,  $5 = \text{very high chance}$ ) or comparative likelihoods relative to the average other student ( $-5 = \text{much lower chance}$ ,  $5 = \text{much higher chance}$ ). The likelihoods conveyed an optimistic, pessimistic, or neutral outlook. In particular, for positive events, optimism was suggested by the scores  $+4$ ,  $+2$ , and  $+3$ , and pessimism by the scores  $-4$ ,  $-2$ , and  $-3$ . For negative events, optimism was suggested by the scores  $-4$ ,  $-2$ , and  $-3$ , and pessimism by the scores  $+4$ ,  $+2$ , and  $+3$ . For both positive and negative events, a neutral outlook was suggested by the scores  $-1$ ,  $+1$ , and  $0$ .

Participants rated the claimant ( $1 = \text{not at all}$ ,  $7 = \text{completely}$ ) on five traits pertaining to warmth (forgiving, helpful, honest, loving, polite) and on five traits pertaining to competence (ambitious, cheerful, competent, independent, intellectual). These 10 traits, which we selected from Peeters (1997), appeared in alphabetical order. Participants also completed affiliation preferences (Helweg-Larsen et al., 2002). Specifically, they rated whether the claimant was fun to hang out with ( $1 = \text{definitely not fun}$ ,  $7 = \text{definitely fun}$ ), and whether they would like to meet the claimant, work together on a class project, have the claimant as a friend, go to a campus party with the claimant, talk to the claimant, and have her/him on their sport team ( $1 = \text{definitely would not}$ ,  $7 = \text{definitely would}$ ).

Participants proceeded to fill out the outlook manipulation checks. They were asked to report, without revisiting the claim, the claimant’s likelihood estimates for each of the three events. That is, they were presented with the same scale as in the claim and requested to indicate which rating the claimant had provided.

## 2.2. Results

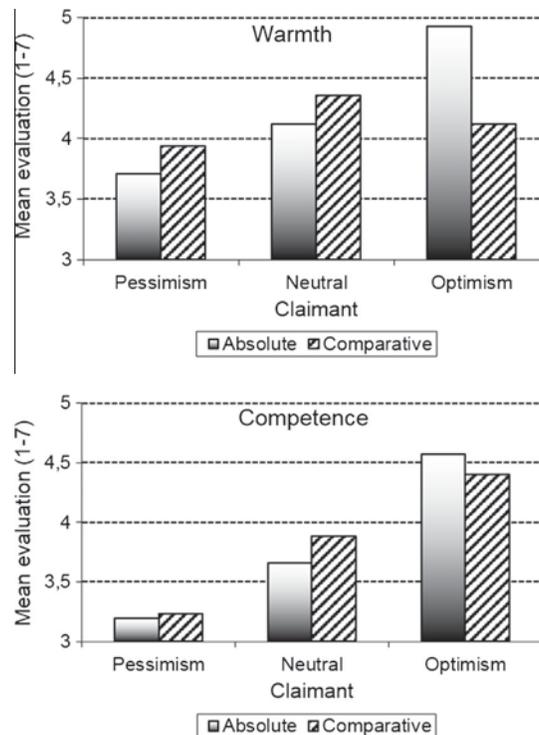
Given the small number of male participants and their somewhat uneven distribution across conditions, we did not include gender in our analysis.

### 2.2.1. Outlook manipulation check

We calculated the mean of the three likelihood ratings for each participant and then entered the mean likelihood ratings into a  $3 (\text{outlook}) \times 2 (\text{type}) \times 2 (\text{valence})$  Analysis of Variance (ANOVA). We obtained the expected Outlook  $\times$  Valence interaction,  $F(1,227) = 1241.76$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.916$ . When the claim expressed optimism, participants correctly remembered the claimant’s ratings as very high for positive events ( $M = 2.93$ ,  $SD = 0.38$ ; different from the scale midpoint at  $t[38] = 48.69$ ,  $p < 0.001$ ) and as very low for negative events ( $M = -2.81$ ,  $SD = 1.03$ ; different from the scale midpoint at  $t[39] = 17.31$ ,  $p < 0.001$ ). When the claim expressed pessimism, participants correctly remembered the claimant’s ratings as very low for positive events ( $M = -2.74$ ,  $SD = 0.79$ ;  $t[39] = 15.51$ ,  $p < 0.001$ ) and as very high for negative events ( $M = 2.73$ ,  $SD = 0.79$ ;  $t[39] = 21.88$ ,  $p < 0.001$ ). Finally, when the claim was neutral, participants also showed accurate memory for the claimant’s ratings (negative events:  $M = -0.01$ ,  $SD = 0.09$ ;  $t[39] = 0.57$ ,  $p = 0.570$ ; positive events:  $M = -0.03$ ,  $SD = 0.13$ ;  $t[39] = 1.67$ ,  $p = 0.103$ ). We also obtained an Outlook  $\times$  Valence  $\times$  Type interaction,  $F(1,227) = 4.56$ ,  $p = 0.011$ ,  $\eta^2_{\text{part}} = 0.039$ . The interaction was ordinal: The overall pattern was identical for absolute and comparative optimism claims, and not in a single Outlook  $\times$  Valence condition did a significant difference emerge between the absolute and comparative optimism claim, all  $t_s < 1.76$ ,  $p_s \geq 0.09$ . No other effects were significant,  $F_s < 1.47$ ,  $p_s > 0.20$ . In all, participants correctly perceived the optimistic, pessimistic, and neutral claims as such.

### 2.2.2. Claimant evaluations

We averaged participant ratings for the warmth items ( $\alpha = 0.73$ ) and the competence items ( $\alpha = 0.65$ ), and we entered the means warmth and competence scores into an ANOVA that included the factor dimension along with outlook, valence, and type. We obtained the theoretically relevant Outlook  $\times$  Type interaction,  $F(2,228) = 8.9$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.073$  (Fig. 1). We broke down this interaction by contrasting the two types of claims (absolute vs. comparative) within each outlook (optimism, neutral, pessimism). Participants evaluated the comparative optimism claimant more unfavorably (on warmth and competence combined) than the absolute optimism claimant,  $t(78) = 3.62$ ,  $p = 0.001$ . They evaluated the comparatively neutral claimant somewhat more favorably than the absolutely neutral claimant,  $t(78) = 1.91$ ,  $p = 0.06$ , but they did not evaluate the comparative pessimism and absolute pessimism claimant differently,  $t(78) = 0.94$ ,  $p = 0.35$ . Alternatively, we broke down the interaction by contrasting (via Tukey tests) the three outlooks within each type of claim. When the claim was absolute, participants evaluated the optimism claimant ( $M = 4.75$ ,  $SD = 0.46$ ) more favorably than the neutral one ( $M = 3.89$ ,  $SD = 0.61$ ), and they evaluated the neutral claimant more favorably than the pessimism one ( $M = 3.45$ ,  $SD = 0.71$ ), all  $p_s \leq 0.004$ . When the claim was comparative, in contrast, participants did not evaluate the optimism claimant more favorably ( $M = 4.26$ ,  $SD = 0.73$ ) than the



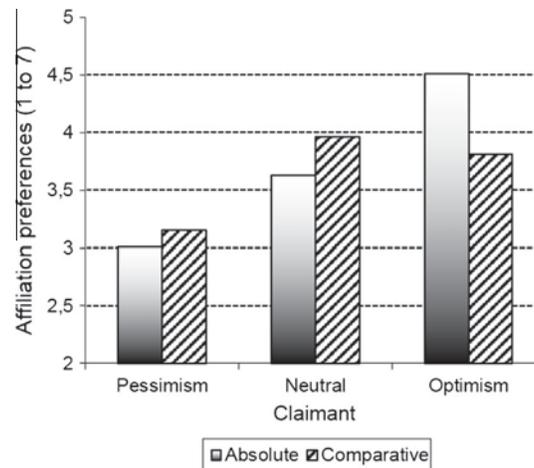
**Fig. 1.** Evaluations of an absolute versus comparative pessimism, neutral, or optimism claimant on warmth (upper panel) and competence (lower panel) in Experiment 1.

neutral one ( $M = 4.12$ ,  $SD = 0.45$ ),  $p = 0.572$ , even though they evaluated both more favorably than the pessimism claimant ( $M = 3.59$ ,  $SD = 0.62$ ),  $ps < 0.001$ .

These results were qualified by the theoretically relevant Outlook  $\times$  Type  $\times$  Dimension interaction,  $F(2,228) = 6.91$ ,  $p = 0.001$ ,  $\eta^2_{\text{part}} = 0.057$  (Fig. 1), which showed that the pattern just described was driven by evaluations of warmth rather than competence. In particular, we broke down the interaction by contrasting the two types of claim (absolute vs. comparative) within each outlook (optimism, pessimism, neutral), separately for each dimension (warmth, competence). In terms of *warmth*, participants perceived the comparative optimism claimant less favorably than the absolute optimism claimant,  $t(78) = 4.56$ ,  $p < 0.001$ . They did not show an absolute versus comparative difference in their perceptions of the pessimism claimant,  $t(78) = 1.39$ ,  $p = 0.17$ , or the neutral claimant,  $t(78) = 1.64$ ,  $p = 0.11$ . In terms of *competence*, participants did not differ in their perceptions of claimants,  $ts(78) < 1.6$ ,  $ps > 0.1$ . Alternatively, we broke down the interaction by contrasting the three outlooks within each type of claim, again separately for each dimension. In terms of *warmth*, participants viewed the absolute optimism claimant more favorably ( $M = 4.94$ ,  $SD = 0.70$ ) than the absolutely neutral claimant ( $M = 4.13$ ,  $SD = 0.70$ ) and the absolute pessimism claimant ( $M = 3.71$ ,  $SD = 0.80$ ), all pairwise Tukey tests  $ps \leq 0.032$ . In contrast, they did not view the comparative optimism claimant more favorably ( $M = 4.12$ ,  $SD = 0.89$ ) than the comparatively neutral claimant ( $M = 4.36$ ,  $SD = 0.58$ ),  $p = 0.313$ , or the comparative pessimism claimant ( $M = 3.94$ ,  $SD = 0.70$ ),  $p = 0.519$ , with the difference between the pessimism and the neutral claimant being significant at  $p = 0.032$ . In terms of *competence*, participants viewed the optimism claimant more favorably than the neutral claimant or the pessimism claimant, regardless of the claim being absolute ( $M_{\text{optimism}} = 4.57$ ,  $SD = 0.57$ ;  $M_{\text{neutral}} = 3.66$ ,  $SD = 0.69$ ;  $M_{\text{pessimism}} = 3.19$ ,  $SD = 0.83$ ) or comparative ( $M_{\text{optimism}} = 4.40$ ,  $SD = 0.75$ ;  $M_{\text{neutral}} = 3.89$ ,  $SD = 0.58$ ;  $M_{\text{pessimism}} = 3.24$ ,  $SD = 0.66$ ),  $ps \leq 0.01$  for pairwise comparisons between outlook levels.

We obtained a few other effects of secondary relevance, which were all qualified by the above-described interactions. These effects were: (1) an Outlook  $\times$  Valence interaction,  $F(2,228) = 5.23$ ,  $p = 0.006$ ,  $\eta^2_{\text{part}} = 0.044$ ; (2) an Outlook  $\times$  Dimension interaction,  $F(2,228) = 12.55$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.099$ ; (3) a main effect of outlook,  $F(2,228) = 56.46$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.331$ ; and (4) a main effect of dimension,  $F(2,228) = 60.28$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.209$  (with the claimant being evaluated as more warm [ $M = 4.20$ ,  $SD = 0.82$ ] than competent [ $M = 3.82$ ,  $SD = 0.86$ ]). No other effects were significant,  $F_s < 2.89$ ,  $ps > 0.09$ .

To summarize, our evaluation findings supported the hubris hypothesis in that participants, as predicted in Hypothesis 1, viewed the comparative optimism claimant as less warm (but not as less competent) than the absolute claimant. We also found that participants evaluated a comparative optimism claimant more positively than a comparative pessimism claimant, as in past research and as predicted by Hypothesis 4, but this finding occurred for competence only and not for warmth.



**Fig. 2.** Affiliation preferences with an absolutely versus comparatively pessimism, neutral, or optimism claimant in Experiment 1.

### 2.2.3. Affiliation preferences

We entered the mean affiliation preference ratings ( $\alpha = 0.89$ ) into a full ANOVA. The outlook main effect was significant,  $F(2,228) = 28.87$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.202$ . Participants wished to affiliate most with an optimism claimant ( $M = 4.16$ ,  $SD = 0.91$ ), less with a neutral claimant ( $M = 3.80$ ,  $SD = 0.93$ ), and least with a pessimism claimant ( $M = 3.08$ ,  $SD = 1.00$ ),  $ps \leq 0.036$ .

Importantly, we also found an Outlook  $\times$  Type interaction,  $F(2,228) = 6.98$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.058$  (Fig. 2). Participants wished to affiliate most with the absolute optimism claimant ( $M = 4.51$ ,  $SD = 0.68$ ), less so with the absolute neutral claimant ( $M = 3.63$ ,  $SD = 1.04$ ), and least with the absolute pessimism claimant ( $M = 3.01$ ,  $SD = 1.12$ ),  $ps \leq 0.012$ . Participants did not differ in their affiliative preferences for the comparative optimism claimant ( $M = 3.81$ ,  $SD = 0.98$ ) or the comparative neutral claimant ( $M = 3.96$ ,  $SD = 0.79$ ),  $p = 0.735$ , but they wished to affiliate more with either of them than the comparative pessimism claimant ( $M = 3.15$ ,  $SD = 0.88$ ), Tukey test  $ps < 0.003$ . Alternatively, participants preferred to affiliate less with the comparative optimism claimant than with the absolute optimism claimant,  $t(78) = 3.69$ ,  $p < 0.001$ , although they did not differ in their affiliative preferences for the comparative versus the absolute pessimism claimant,  $t(78) = 0.62$ ,  $p = 0.537$ , or the two neutral claimants,  $t(78) = 1.58$ ,  $p = 9.118$ . No other effects were significant,  $F_s < 2.61$ ,  $ps > 0.075$ .

Similarly with the evaluation findings, the affiliation findings supported the hubris hypothesis in that participants wished to affiliate less with the comparative optimism claimant than with the absolute claimant (Hypothesis 2). As in past research, participants wished to affiliate more with an optimism claimant than with a pessimism claimant.

### 2.3. Discussion

Consistent with prior research (Carver et al., 1994; Helweg-Larsen et al., 2002; Le Barbenchon et al., 2008), observers evaluated optimism claimants more favorably than pessimism claimants. Crucially, we obtained support for the hubris hypothesis (Hoorens et al., 2012; Van Damme et al., 2016). First, observers liked a claimant who expressed comparative optimism less than a claimant who expressed absolute optimism. Observers attributed less desirable characteristics to, and reported a weaker desire to affiliate with, the comparative optimism claimant than the absolute optimism claimant. Second, although observers liked the absolute optimism claimant more than a neutral claimant, they did not like the comparative optimism claimant more than the neutral claimant. This pattern was more clearly evident in evaluations of warmth than competence. Observers perceived more warmth in the absolute optimism claimant than in the neutral claimant, but perceived no more warmth in the comparative optimism claimant than in the neutral claimant.

## 3. Experiment 2

In Experiment 2, we examined a key tenet of the hubris hypothesis, namely, that the comparative (vs. absolute) optimism claimant comes across as holding more unfavorable future expectations for the observers. We presented participants with likelihood ratings that a student had allegedly made for four undesirable events on a questionnaire about future expectations. These likelihood ratings were always optimistic, and they were either absolutely or comparatively so. As in the prior experiment, participants evaluated the claimant and stated their affiliative preferences for him or her. In addition, they indicated (i.e., inferred) how likely the claimant thought the events were in his or her future and in participants' future. As in Experiment 1 we predicted that observers would perceive the comparative optimist as less warm (but not necessarily as less competent) than the absolute optimist (Hypothesis 1) and that they would prefer to affiliate less with the

comparative than with the absolute optimist (Hypothesis 2). Of crucial importance, we predicted that participants' relative dislike for a comparative optimist would occur because participants would regard her or his claims as an assault on their own optimism (Hypothesis 3).

### 3.1. Method

#### 3.1.1. Participants and design

We tested 162 undergraduate students (117 women, 45 men), aged between 17 and 51 years ( $M = 19.16$ ,  $SD = 3.04$ ), who fulfilled a course option.<sup>1</sup> We excluded one female participant for giving uniform ratings on the claimant evaluation and affiliation measures, leaving a sample of 161. We used a two-factor design, with type (comparative, absolute) being between-subjects and dimension (warmth, competence) being within-subjects. We randomly assigned participants to the conditions of the between-subjects factor (with  $n = 80$  in the comparative condition and  $n = 81$  in the absolute condition).

#### 3.1.2. Procedure

The procedure of Experiment 2 was similar to that of Experiment 1, with the following exceptions. The booklet that each participant received featured likelihood ratings for four negative events (dying young, having an unhappy love life, having a boring life, becoming poor). The likelihood ratings always reflected optimism: Scores were  $-4$ ,  $-2$ ,  $-3$ , and  $-3$  on a  $-5$  to  $+5$  scale. The warmth and competence scales included seven (instead of five) items each. The competence items were: ambitious, confident, decisive, energetic, resourceful, sharp, willful. The warmth items were: helpful, trustworthy, honest, loving, just, respectful, tolerant.

Besides having participants evaluate the claimant and indicate their affiliative preferences, we wished to ask them to judge how likely the claimant thought each of the events were in his or her life (claimant-on-self) and in the participant's life (claimant-on-participant), and how likely the participant thought these events truly were (participant-on-claimant, participant-on-self). It is possible, however, that participants in the absolute optimism condition would on the claimant-on-self items reproduce the claim rather than report their view of how the claimant truly estimated his or her own likelihood. To control for this possibility, we presented all participants with positive versions of the negative events (i.e., reaching an old age, having a happy love life, having an exciting life, becoming rich). Participants estimated how likely these events were (1 = *extremely small*, 8 = *extremely large*): (1) according to the claimant, in the claimant's life, (2) according to the participant, in the claimant's life, (3) according to the claimant, in the participant's life, and (4) according to the participant, in the participant's life (in that order).

### 3.2. Results

A preliminary analysis did not produce main effects or interactions involving gender, and so we removed this variable from the reported analyses.

#### 3.2.1. Claimant evaluations and affiliation preferences

We averaged participants' ratings for the warmth items ( $\alpha = 0.79$ ) and the competence items ( $\alpha = 0.87$ ), and we subsequently entered the mean warmth and competence scores into a full ANOVA. We did not obtain a significant effect of type,  $F(1, 159) = 0.98$ ,  $p = 0.324$ , but we did obtain a marginal Type  $\times$  Dimension interaction,  $F(1, 159) = 3.41$ ,  $p = 0.067$ ,  $\eta^2_{\text{part}} = 0.021$  (Fig. 3). Participants perceived the comparative optimism claimant as less warm ( $M = 4.03$ ,  $SD = 0.66$ ) than the absolute optimism claimant ( $M = 4.27$ ,  $SD = 0.66$ ),  $t(159) = 2.26$ ,  $p = 0.025$ , but they did not differ in their competence perceptions of the comparative optimism ( $M = 5.22$ ,  $SD = 0.84$ ) and absolute optimism ( $M = 5.16$ ,  $SD = 0.85$ ) claimant,  $t(159) = 0.46$ ,  $p = 0.648$ . Thus, we again obtained support for the hubris hypothesis. The dimension main effect was also significant,  $F(1, 159) = 166.63$ ,  $p < 0.001$ ,  $\eta^2_{\text{part}} = 0.512$ . Participants perceived claimants as more competent ( $M = 5.19$ ,  $SD = 0.84$ ) than warm ( $M = 4.15$ ,  $SD = 0.67$ ).

We averaged affiliation preference ratings ( $\alpha = 0.87$ ) and subjected the means to a  $t$ -test. Participants wished to affiliate less with the comparative optimism claimant ( $M = 3.74$ ;  $SD = 0.99$ ) than with the absolute optimism claimant ( $M = 4.14$ ,  $SD = 0.82$ ),  $t(159) = 2.80$ ,  $p = 0.006$ .

#### 3.2.2. Likelihood estimates

We averaged likelihood estimates (Cronbach's alphas ranged from 0.61 to 0.91) and subjected the mean estimates to  $t$ -tests (Fig. 4). Participants did not infer that the claimant considered the positive events more likely in his or her (the claimant's) own life when the claimant expressed comparative optimism ( $M_{\text{claimant-on-self}} = 5.99$ ,  $SD = 0.88$ ) rather than absolute optimism ( $M_{\text{claimant-on-self}} = 5.91$ ;  $SD = 0.80$ ),  $t(159) = 0.56$ . As predicted by the hubris hypothesis, however, participants did infer that the claimant considered the positive events less likely in their (the participants') life when the claimant expressed comparative optimism ( $M_{\text{claimant-on-participant}} = 4.22$ ,  $SD = 1.09$ ) rather than absolute optimism ( $M_{\text{claimant-on-participant}} = 5.36$ ,

<sup>1</sup> Experiment 2 involves data re-analysis. It was originally designed to test the effect of induced value orientation (competitive vs. cooperative vs. control) on reactions to optimistic displays. The value orientation manipulation was largely unsuccessful. Here, we collapse across that manipulation.

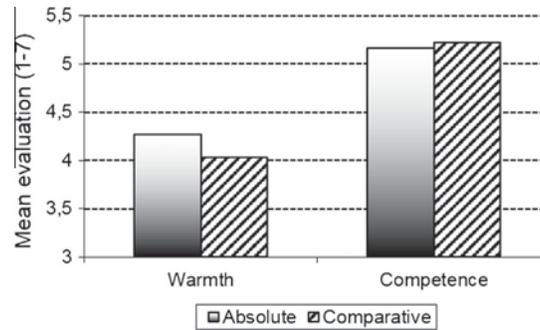


Fig. 3. Evaluations of an absolute versus comparative optimism claimant on warmth and competence in Experiment 2.

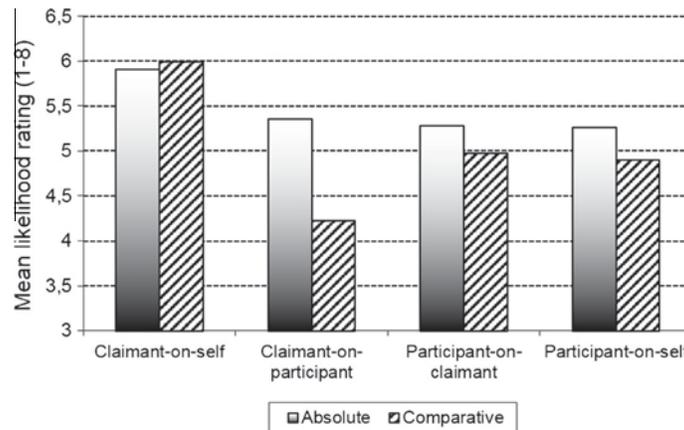


Fig. 4. Likelihood estimates for positive events in Experiment 2.

$SD = 0.87$ ),  $t(159) = 5.41$ ,  $p = 0.021$ . Moreover, participants also inferred that the events were truly less likely to happen both to the claimant and themselves, when the claimant expressed comparative optimism rather than absolute optimism (Comparative optimism:  $M_{\text{participant-on-claimant}} = 4.98$ ,  $SD = 0.60$ ,  $M_{\text{participant-on-self}} = 4.90$ ,  $SD = 0.70$ ; Absolute optimism:  $M_{\text{participant-on-claimant}} = 5.28$ ,  $SD = 0.80$ ,  $M_{\text{participant-on-self}} = 5.26$ ,  $SD = 0.71$ ), comparative-absolute contrast  $ts(159) > 2.60$ ,  $ps \leq 0.01$ . Thus, as predicted, after exposure to an expression of comparative optimism, participants reported less optimism about both their own and the claimant's future than after exposure to an expression of absolute optimism.

### 3.2.3. Mediation analysis

We conducted a series of mediational analyses to examine whether our key finding (i.e., participants' dislike for the comparative vs. absolute optimism claimant) could be explained by participants' inference that the comparative optimism claimant saw their (the participants') future more unfavorably rather than by participants' inference that the comparative claimant saw his or her own future more favorably. Generally stated, mediational analysis is a statistical procedure that allows researchers to test whether the effect of variable X on variable Z occurs via an effect of variable X on variable Y (or variables  $Y_1$ ,  $Y_2$ , etc.) and an effect of variable Y (or variables  $Y_1$ ,  $Y_2$ , etc.) on variable Z. The current standard for mediational analysis is Hayes' (2013) method. Hayes developed a program (PROCESS macro) that can be integrated into a statistical package (i.e., SPSS) and applied readily. We used version 2.15 of this program.

We used the mean claimant-on-self likelihoods and mean claimant-on-participant likelihoods over the four events. We conducted two mediational analyses, each with type as an independent variable (variable X in the explanation given above) with two levels (0 = *absolute*, 1 = *comparative*), and mean claimant-on-self likelihoods (i.e., how likely the claimant thought each of the events were in his or her life) and claimant-on-participant likelihoods (i.e., how likely the claimant thought each of the events were in the participant's life) as mediating variables (variables  $Y_1$  and  $Y_2$  in the explanation given above). Given that type did not affect perceived competence but did affect perceived warmth as well as affiliative preferences, we carried out the mediational analyses on the latter two dependent variables (variable Z in the explanation given above). Reports of bootstrapping approaches to mediational analysis typically include information on the number of re-samples being drawn and on the confidence interval being used. In both analyses, we based the bootstrap estimates on 5000 re-samples. We report

95% confidence intervals. The result of this procedure is expressed as parameter  $B$  that indicates a significant effect if it differs from zero. Statistical significance is inferred when the confidence interval does not include the value zero.

The path from type (i.e., comparative vs absolute) to perceived warmth via claimant-on-participant likelihoods was significant,  $B = -0.28$ , CI  $[-0.46, -0.14]$ . The path from type to perceived warmth via claimant-on-self likelihoods was not,  $B = 0.00$ , CI  $[-0.01, 0.05]$ . The effect of type on warmth,  $B = -0.33$ ,  $t(148) = 2.19$ ,  $p = 0.03$ , became nonsignificant when the mediators were controlled for,  $B = 0.04$ ,  $t(146) = 0.31$ ,  $p = 0.755$ . The path from type to affiliation via claimant-on-participant likelihoods was significant,  $B = -0.43$ , CI  $[-0.69, -0.24]$ , but the path via claimant-on-self likelihoods was not,  $B = -0.01$ , CI  $[-0.02, 0.08]$ . Again, the effect of type on affiliation,  $B = -0.40$ ,  $t(148) = 2.69$ ,  $p = 0.01$ , became nonsignificant when the mediators were controlled for,  $B = 0.02$ ,  $t(146) = 0.12$ ,  $p = 0.90$ .

In summary, as predicted, the mediation analyses indicated that observers' liking for the claimant depended on observers' inferences about how the claimant viewed their future, but not on observers' inferences about how the claimant viewed his or her own future (Hypothesis 4).

### 3.3. Discussion

In support of the hubris hypothesis and in replication of Experiment 1 findings, Experiment 2 demonstrated that participants perceive claimants who express comparative (vs. absolute) optimism as less warm and show less interest in affiliating with them. Experiment 2 also tested the mechanism that, according to the hubris hypothesis, accounts for unfavorable evaluations of comparative optimists. Participants inferred a more pessimistic view of their own future, but did not infer a more optimistic view of the claimant's future, from a comparative than an absolute optimism claim. Also, participants' evaluations of the comparative optimism claimant were mediated by the view of their future that they inferred from the relevant claims. The more pessimistic this view was, the less warmth participants attributed to the claimant and the less they wished to affiliate with that claimant. These findings are consistent with the hubris hypothesis.

## 4. General discussion

Given the ostensible benefits of optimism (Carver et al., 1994, 2010; Taylor & Brown, 1988), we asked how well a claimant who displays optimism is liked, perceived, or preferred as an affiliation partner, and why. We were guided in our quest for answers by the hubris hypothesis (Hoorens et al., 2012; Van Damme et al., 2016). Two experiments converged in providing support for this hypothesis. More specifically, we found that optimism loses some of its appeal when it is expressed in a comparative than an absolute manner and that it does so because comparative expressions of optimism suggest that the claimant views the observers' future gloomily.

The finding that optimism is less appealing when it is expressed in a comparative than an absolute manner is intriguing for at least two reasons. The first reason is that from a normative point of view the two expressions ought to be equally impactful. Each expression involves social comparison (Alicke, 2007; Corcoran & Mussweiler, 2010; Hoorens & Van Damme, 2012). The second reason has to do with the generality of comparative optimism. Most people regardless of age, gender, or culture, believe that their future will in many respects be better than others' futures on a variety of life domains (Shepperd et al., 2013, 2015). Yet, when they witness an individual expressing that belief, they respond less favorably relative to witnessing an individual expressing absolute optimism.

Our results and, more generally, findings supporting the hubris hypothesis indicate that people process others' communicative displays in a fundamentally egocentric manner (Sedikides, 2003; Sedikides & Skowronski, 1993). Indeed, whenever a claimant expresses a future expectation or a self-view, observers assign primary weight to the consequences of these self-expressions for them rather than for others or even the claimant. Future research might consider the circumstances under which egocentric social information processing can be curtailed (Sedikides & Luke, 2008; Sedikides & Strube, 1997). Relevant foci include claimant attributes (e.g., being likeable vs. dislikeable), observer characteristics (e.g., being high vs. low on empathy), and personal importance of the dimension underlying claimant's self-expressions (e.g., referring to a central attribute of the observers' self-concept, such as intelligence, vs. a peripheral attribute, such as predictability).

One unanswered question, and hence a direction for future research, is the question why observers make diverging inferences about how the claimant views them from comparative and absolute expressions of optimism. Observers are either overtaken by the social comparison explicit in comparative optimism or overlook the social comparison implicit in absolute optimism. Which of the two possibilities occurs, or which is the more important, is an issue that awaits empirical resolution.

Another question is why observers evaluate comparative (vs. absolute) optimism less favorably. Observers, after all, may also believe that they are better friends, or are less likely to contract HIV, than their peers. Perhaps observers fail to recognize that they hold such belief themselves (i.e., lack of self-insight; Dunning, 2005). Alternatively, observers may be aware of their comparative optimism, but think theirs is grounded, whereas others' is unfounded (i.e. the bias black spot, Pronin, Lin, & Ross, 2002). Finally, observers may attempt to devalue the source of their perceived insult, that is, the possibility of them having a gloomy future (i.e., self-protection; Sedikides, 2012). Again, future research will need to address these possibilities.

Claimants may be, and perhaps typically are, unaware of an observer's strong inclination to prioritize the implications of claimants' comparative self-expressions for himself or herself. As such, claimants who routinely or carelessly use comparative self-expressions may be misunderstood by their social interactants, even though they have all but noble intentions.

This would explain why sometimes claimants may feel puzzled as to why they are shunned by others when they have caused no ostensible offence.

At least one line of research indeed shows that claimants are aware that observers dislike comparative pessimism relative to comparative optimism, but are unaware that comparative optimism yields no interpersonal benefits above and beyond a neutral outlook. In particular, Tyler and Rosier (2009, Experiment 1) found that claimants expect a favorable evaluation from observers when they present themselves as comparatively optimistic. Claimants provided comparative likelihood estimates for desirable and undesirable events after having been instructed to make a good impression, to be spontaneous, or to make a bad impression. When claimants were instructed to make a good impression, they expressed stronger comparative optimism than when they were instructed to be spontaneous. When instructed to make a bad impression, they expressed comparative pessimism. Judging from these findings, claimants erroneously expect to give off a highly favorable impression when they express comparative optimism.

## 5. Conclusion

Observers evaluate an optimistic (more so than a pessimistic) claimant favorably. However, observers view a claimant who expresses comparative (vs. absolute) optimism as less likable, less warm, and less worthy as a friend. Observers do so, because they infer that the comparatively optimistic claimant regards their own future as bleak.

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