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Bliss is ignorance: How the magnitude of expressed happiness influences perceived naiveté and interpersonal exploitation ☆

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ABSTRACT

Across six studies, we examine how the magnitude of expressed happiness influences social perception and interpersonal behavior. We find that happiness evokes different judgments when expressed at high levels than when expressed at moderate levels, and that these judgments influence opportunistic behavior. Specifically, people perceive very happy individuals to be more naïve than moderately happy individuals. These perceptions reflect the belief that very happy individuals shelter themselves from negative information about the world. As a result of these inferences, very happy people, relative to moderately happy people, are more likely to receive biased advice from advisors with a conflict of interest and are more likely to be chosen as negotiation partners when the opportunity for exploitation is salient. Our findings challenge existing assumptions in organizational behavior and psychology by identifying a significant disadvantage of expressing happiness, and underscore the importance of examining emotional expressions at different magnitudes. We call for future work to explore how the same emotion, experienced or expressed at different levels, influences judgment and behavior.

1. Introduction

"A person is never happy except at the price of some ignorance."
[Anatole France]

Decades of research in psychology and organizational behavior have emphasized the advantages of being and appearing happy. Happiness is not only pleasant (Barrett & Russell, 1999), but it is also associated with success in many life domains, including marriage, friendship, income, work performance, and health (Lyubomirsky, King, & Diener, 2005). Happiness has been shown to improve creativity (Isen, Daubman, & Nowicki, 1987; Isen, Johnson, Mertz, & Robinson, 1985), performance on managerial tasks (Cropanzano & Wright, 2001; Staw & Barsade, 1993), and decision-making speed and efficiency (Isen & Means, 1983). Not surprisingly, people value and seek happiness (Barrett, 1996; Diener, 2000; Myers, 2000; Rusting & Larsen, 1995; Tamir & Ford, 2012).

Interpersonally, expressing happiness also invokes a "halo effect" of positive trait inferences (Nisbett & Wilson, 1977). For instance, individuals who smile in their yearbook photos are rated to be higher in affiliation and competence, even when the judge never interacts with these targets (Harker & Keltner, 2001). In social exchanges, happiness also elicits interpersonal benefits. For example, during customer-employee interactions, "service with a smile" increases satisfaction, because customers judge service quality to be higher when employees display happiness (Barger & Grandey, 2006).

Though a substantial literature has documented the benefits of being happy and expressing happiness, we argue that this work has drawn conclusions from a surprisingly limited range of emotional expressions. Prior work has failed to consider how the *magnitude* of emotion might influence perceptions and performance. In our investigation, we consider a range of happiness expressions, and we describe the role of emotion magnitude in moderating the relationship between emotion expression and social perception.

Our work builds on prior research that has documented an inverted-U shaped relationship for positive traits and experiences (Ames & Flynn, 2007; Grant & Schwartz, 2011; Gruber, Mauss, & Tamir, 2011; Nesse, 2004). This body of research demonstrates that it is possible to have "too much" of a good thing; positive traits and behaviors may have costs at high levels. For example, too much

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practice can lead to overlearning and inflexibility (Langer & Imber, 1979), too much self-efficacy can lead to overconfidence and lower goal achievement (Haaga & Stewart, 1992), and too much empathy can lead to over-arousal and undermined prosocial behavior (Eisenberg et al., 1994). Building on these findings, researchers have recently shown that experiencing (Dutra et al., 2013; Gruber et al., 2011; Oishi, Diener, & Lucas, 2007) or seeking out (Mauss, Tamir, Anderson, & Savino, 2011; Mauss et al., 2012) too much happiness can have cognitive and behavioral costs, such as decreased empathic accuracy, disappointment and loneliness, and lower achievement on outcomes such as income and education. In the present research, we demonstrate that in addition to these *intrapersonal* psychological costs, happiness can also have *interpersonal* social costs.

Across six studies, we show that individuals believe that targets who experience very high levels of happiness do not process information deeply, and thus, are naïve. We replicate this finding with different manipulations and measures, and we document behavioral consequences of expressing high levels of happiness: individuals are more likely to take advantage of very happy people by offering them biased advice and by choosing them in a competitive negotiation when the opportunity for exploitation is salient.

Our research makes an important theoretical contribution by documenting the critical role magnitude plays in our understanding of emotional expression. A substantial literature has documented the trait inferences associated with and interpersonal consequences of emotional expressions. Importantly, however, the emotion inductions and materials scholars have used to study these inferences have focused almost exclusively on *moderate* emotion expressions. This is true of research involving photographs or videos depicting emotional targets (e.g., Brescoll & Uhlmann, 2008; Rothman, 2011; Tiedens, 2001), interactions with an emotional confederate (e.g., "I am angry"; Filipowicz, Barsade, & Melwani, 2011; Lelieveld, Van Dijk, Van Beest, & Van Kleef, 2012; Van Kleef, De Dreu, & Manstead, 2004), and digital avatars expressing emotions (e.g., De Melo, Carnevale, Read, & Gratch, 2012). In this article, we call for future researchers to continue to explore the nuances of how a single emotion *expressed at different levels of intensity* is perceived.

Our findings also inform a number of practical implications. For example, managers should use caution when prescribing and encouraging the expression of happiness for salespeople (Pugh, 2001; Rafaeli & Sutton, 1990; Totterdell & Holman, 2003) or leaders (Damen, Van Knippenberg, & Van Knippenberg, 2008a, 2008b; George & Bettenhausen, 1990; Newcombe & Ashkanasy, 2002). By expressing high levels of happiness, employees may convey the impression that they are naïve and thus may be targets of exploitation.

1.1. Happiness

Happiness is one of the most basic and desirable human emotions, and it has been closely associated with intrapersonal and interpersonal benefits. Happiness can enhance psychological resilience, improve coping behavior, and promote physical and mental well-being (Fredrickson & Joiner, 2002), and a number of studies have found that happy individuals are more successful across a variety of domains (Abel & Kruger, 2010; Harker & Keltner, 2001; Hertenstein, Hansel, Butts, & Hile, 2009; Lyubomirsky et al., 2005). Furthermore, by conveying happiness, individuals can increase their perceived attractiveness and competence, and promote affiliation, trust, and liking (e.g., Harker & Keltner, 2001; Mueser, Grau, Sussman, & Rosen, 1984; Tracy & Beall, 2011).

Because happiness is felt and perceived as a positive state, many individuals strive to experience happiness as much as possible (Diener, Sapyta, & Suh, 1998; Rusting & Larsen, 1995; Sommers, 1984b; Tamir & Ford, 2012). Within these pursuits, there is an implicit assumption that more happiness is better. This assumption is reinforced by the self-help literature, in which happiness is positioned as the solution to life satisfaction (e.g., Foster & Hicks, 1999; Lyubomirsky, 1986; Rubin, 2009). Similar claims have been made in the positive psychology literature, which suggests that happiness is a way to achieve better life outcomes (Diener, 2000; Diener & Biswas-Diener, 2008; Myers, 2000; Seligman & Csikszentmihalyi, 2000). Clearly, the view that happiness is inextricably linked with success is embedded in both the popular press (e.g., Gretchen Rubin's 2009 book, *The Happiness Project*, sold over 1 million copies) and academic work (e.g., happiness is "the hallmark of well-being"; Lyubomirsky et al., 2005).

Important recent research, however, has studied whether someone can experience too much happiness (Grant & Schwartz, 2011; Gruber et al., 2011; Oishi et al., 2007). For example, recent work suggests that although moderate happiness can promote creativity, extreme levels of happiness may not (Davis, 2008). Similarly, extremely cheerful people may engage in riskier behaviors (Cyders & Smith, 2008; Martin et al., 2002) and even live shorter lives than less cheerful people (Friedman et al., 1993). In the extreme, very high levels of happiness may serve as a marker of psychopathology, such as mania (Gruber, 2011; Kang & Gruber, 2013) or psychopathy (Fowles, 1980).

Recent work has even begun to call into question the pursuit of happiness (Ford & Mauss, 2014; Ford, Shallcross, Mauss, Floerke, & Gruber, 2014). Although many people seek happiness, for some, the pursuit of happiness may decrease psychological health and well-being (Mauss et al., 2011, 2012; Schooler, Ariely, & Loewenstein, 2003). Ford and Mauss (2014) suggest that valuing happiness may be "self-defeating" for several reasons: as people seek happiness, they may engage in ineffective activities, set unattainable standards, and monitor their goal attainment in ways that impair their ability to achieve their goal. In addition, people who seek happiness may experience disappointment when their outcomes fall short of their expectations (Mauss et al., 2011; Schooler et al., 2003), or they may experience loneliness if they pursue individual goals at the expense of developing social relationships (Mauss et al., 2012). This body of research demonstrates that experiencing and seeking out too much happiness can have psychological and behavioral costs.

We build on this research by considering the traits that very happy people project. To our knowledge, no research has studied how people *perceive* very happy individuals. In this article, we explore how expressions of high levels of happiness elicit less favorable social impressions than moderate expressions of happiness.

Specifically, we expect that the magnitude of an individual's displayed happiness will influence perceptions of naiveté. According to the proverb "ignorance is bliss," being uninformed and unaware fosters a naïve state of bliss. In the present research, we investigate the *reverse inference*: bliss signals ignorance. We expect that observers believe that to be very happy, individuals must limit their exposure to negative information and use biased information processing strategies to maintain their positive feelings. As a result, we expect observers to infer naiveté from high magnitude expressions of happiness.

1.2. Interpersonal inferences from emotions

Individuals immediately and automatically infer trait information from minimal cues. A single behavior (Uleman, Newman, & Moskowitz, 1996), subtle change in a photograph (e.g. Ames & Bianchi, 2008; Rick & Schweitzer, 2013), or facial feature (Berry & McArthur, 1985) is often sufficient to trigger a trait inference, even when people do not intend to form an impression. One

important cue that impacts the inferences observers make is a target's emotional expression (Frijda, 1986; Lelieveld et al., 2012; Todorov, Said, Engell, & Oosterhof, 2008; Van Kleef, 2009; Weisbuch & Adams, 2012). As lay psychologists, individuals hold implicit theories about the source and meaning of others' emotional displays (Keltner & Haidt, 1999). From these displays, individuals make attributions about the cause of the expression. As a result, individuals infer personality traits from others' emotional expressions. For example, scholars have found that expressions of happiness signal affiliation and warmth, whereas expressions of anger signal dominance and competence (e.g., Brescoll & Uhlmann, 2008; Knutson, 1996; Tiedens, 2001).

Emotional expressions also convey information about intentions (Ekman, Friesen, & Ellsworth, 1972; Fridlund, 1994). Consequently, emotional expressions have powerful effects on interpersonal cooperation, competition, and bargaining (Dehghani, Carnevale, & Gratch, 2014; Lelieveld et al., 2012). For instance, expressions of happiness in a negotiation (e.g., "I feel good about this negotiation") may signal that the expresser intends to reach an agreement (Filipowicz et al., 2011; Van Kleef et al., 2004). Conversely, expressions of anger (e.g., "This negotiation pisses me off") may signal that additional concessions are needed to reach agreement. The inferences individuals make influence subsequent behavior. For example, people make smaller concessions to happy negotiation counterparts than they do to angry negotiation counterparts.

Individuals make inferences by assuming that an emotional expression reveals how a target is evaluating their environment (Ames & Johar, 2009; De Melo, Carnevale, Read, & Gratch, 2014; Hareli & Hess, 2010; Scherer & Grandjean, 2008; Weisbuch & Ambady, 2008). Implicitly, observers assume that emotions reflect cognitive appraisals of events (De Melo et al., 2014; Frijda, 1986; Roseman, 2001; Smith & Ellsworth, 1985), and that a target's emotional display provides insight into those appraisals. This "reverse appraisal" process enables an observer to infer information about the target's personality and intentions. For example, observers who see sad targets may infer that these targets do not feel that they are in control of a situation, and consequently, that they lack confidence (Hareli & Hess, 2010). Similarly, observers who see targets display negative emotions in response to their own behavior may infer that these targets appraise their behavior as inconsistent with their goals (Ames & Johar, 2009). Observers may also draw on this "reverse appraisal" process to make predictions about a target's future behavior, which can cause observers to adjust their own behavior accordingly (De Melo et al., 2012).

In this work, we consider the inferences that individuals draw from expressions of high magnitude happiness, and how individuals subsequently adjust their behavior. First, we review existing literature linking happiness with impaired information processing to build our hypotheses regarding the relationship between happiness and perceptions of naiveté. Then, we consider the relationship between perceived naiveté and exploitation.

1.3. People believe that very happy people are naive

Past research demonstrates that individuals experiencing positive emotions process information differently than individuals experiencing negative emotions. In contrast to neutral or sad individuals, happy individuals are motivated to avoid information that could dampen their happiness (Clark & Isen, 1982). For example, people in a positive mood often suppress negative thoughts (Beevers & Scott, 2001), ignore important negative cues in their environments (Norem & Chang, 2002), and devote attention to mood-congruent information (Isen, 1984). These biased search processes enable people to remain happy at the cost of learning potentially valuable information. This bias can impair thinking, cognitive processing, and memory (Beevers & Scott, 2001; Norem, 2001).

Happy individuals who are exposed to negative information also process that information less deeply than neutral or sad individuals. Prior work has found that happy people avoid thinking carefully, because effortful thinking may disrupt their positive mood (Batra & Stayman, 1990; Bless, Bohner, Schwarz, & Strack, 1990; Isen & Levin, 1972). Happiness has been shown to decrease systematic processing and increase heuristic processing (e.g., Bless et al., 1996), to promote less critical evaluations of negative or weak arguments (Batra & Stayman, 1990), and to cause individuals to be less discriminating between high and low quality messages (Mackie & Worth, 1991; Schwarz, Bless, & Bohner, 1991). Scholars have also found that happy individuals are less discriminating of social cues. Specifically, happy individuals are more trusting and gullible than people in negative moods (Dunn & Schweitzer, 2005; Forgas & East, 2008). For example, Dunn and Schweitzer (2005) found that happy individuals were more trusting of existing relational partners than sad and angry individuals, and Forgas and East (2008) found that happy individuals were less skeptical of others' trustworthiness than individuals in neutral or negative moods. Taken together, these findings suggest that happiness promotes biased information processing: happy individuals are less likely to seek out negative information, and often process negative information in a shallow way.

We postulate that observers make corresponding trait inferences when judging very happy individuals. Specifically, we expect observers to infer that very happy people, relative to moderately happy or neutral individuals, avoid exposure to negative information, and process negative information in a superficial way. Importantly, we expect this inference to lead to perceptions of naiveté. We define naiveté as the *state of being unaware or uninformed about the nature of the world*.

We expect inferences of naiveté, and the underlying mechanism of biased information processing, to be particularly strong at high levels of happiness for two reasons: extreme emotions may result in stronger reverse appraisals, as well as qualitatively different ones. First, we broadly expect extreme emotions to activate stronger reverse appraisals than moderate emotions. Although all emotion expressions can trigger the reverse appraisal process, extreme emotions are more unusual or surprising, and thus, are likely to attract more attention (Fiske, 1980; Sherif & Sherif, 1967), and increase observers' motivation to identify the source of the emotion. This proposition is consistent with prior work finding that the impressions observers form are disproportionately influenced by extreme attributes and behaviors (for a review, see Skowronski & Carlston, 1989). With happiness in particular, moderate expressions are very common (Ekman, 1973), and expressions of moderate happiness are often organizationally and interpersonally mandated (Hochschild, 1983). As a result, expressions of moderate happiness may not seem particularly diagnostic of an underlying state, trait, or process. That is, rather than triggering an inference about how someone processes information, expressing moderate happiness may simply elicit attributions of impression management or conformity with display norms. However, when individuals observe displays of extreme happiness, they are more likely to be motivated to identify a specific source of the emotion and less likely to attribute extreme happiness to display rules.

Second, expressions of moderate and extreme happiness are likely to elicit qualitatively different inferences. Specifically, we postulate that the reverse appraisal process may change as a function of emotion intensity. Just as different circumstances elicit positive and negative emotions, different circumstances elicit moderate and extreme emotions. Thus, similar to how individuals make different inferences based on the perceived source of positive

versus negative emotions (e.g., De Melo et al., 2014), we expect individuals to make different inferences based on the perceived source of moderate versus extreme happiness. Prior work has examined the specific trait inferences triggered by moderate levels of happiness (competence, trustworthiness, likeability; e.g., Harker & Keltner, 2001). In this work, we explore a novel inference associated with (high magnitude) happiness: naiveté. We hypothesize that individuals believe that very happy people engage in biased search and inference processes, and that this reverse appraisal causes them to infer that very happy people are naïve. We do not expect expressions of mild and moderate happiness to trigger this inference.[1]

1.3.1. Conceptualizing naiveté

We conceptualize naiveté as the opposite of wisdom, which has been defined as "knowledge ... about the course, variations, conditions, conduct and meaning of life" (Baltes & Smith, 1990). We define naiveté as a lack of knowledge about the nature and diversity of life. Naiveté is characterized by a lack of sophistication (Heidhues & Kőszegi, 2010) and experience (Thompson, 1990). We distinguish naiveté from a lack of general intelligence, which includes cognitive ability, measures of IQ, and academic success (Neisser, 1976; Sternberg & Grigorenko, 1997). Rather than reflecting general inability, or low competence (e.g. Fiske, Cuddy, Glick, & Xu, 2002), naiveté reflects a deficiency in learning that arises from experience and a lack of tacit knowledge that cannot be formally taught (Sternberg, 1998; Wagner & Sternberg, 1985). As a result, naïve individuals lack the ability to solve real-world problems (Charlesworth, 1976). Our conceptualization of naiveté is consistent with prior work that has differentiated between practical intelligence and conventional intelligence (e.g., Fox & Spector, 2000; Wagner & Sternberg, 1985).

1.3.2. Naiveté and exploitation

Importantly, because naiveté is associated with gullibility and foolishness (Rotter, 1980), as well as the tendency to inappropriately trust others (Forgas & East, 2008), we expect observers to take advantage of targets they perceive to be naive. When individuals are motivated to deceive and exploit others, they are likely to search for targets who will not be skeptical of their duplicity. Consistent with this proposition, we hypothesize that because participants judge very happy targets to be more naïve than moderately happy targets, they will be more likely to exploit them in competitive contexts.

1.4. The current research

We report the results of one pilot study and six experiments. In our pilot study, we provide evidence that people routinely encounter individuals who express high magnitude happiness in their everyday lives. In Study 1, we examine the inferences people make about individuals who express a range of happiness levels, and we demonstrate that high magnitude happiness elicits perceptions of naiveté. In Study 2, we replicate our findings with a different set of stimuli and explore the underlying mechanism. In Study 3, we rule out several alternative mechanisms, and also introduce a no-information control condition. In Study 4, we identify a boundary condition for the relationship between emotion expression and perceptions of naiveté. In Studies 5 and 6, we link expressions of happiness, perceptions of naiveté, and interpersonal exploitation.

[1] Although we focus on the contrast between high magnitude happiness and moderate happiness in the present manuscript, it is important to note that observers may also judge happy targets as more naïve than sad targets. However, inferences about sad targets are not the focus of the present research.

Across our studies, we manipulate happiness at the dispositional level (Barsade & Gibson, 2007; Frijda, 1986; Watson & Clark, 1984). We expect inferences of naiveté to be particularly strong when a target *consistently* feels high levels of happiness. Although individuals likely make similar inferences from discrete emotional displays, we expect a stable tendency to experience high levels of happiness to be particularly likely to be associated with the intentional emotion regulation process we describe. That is, we expect observers to be more likely to infer that a target avoids or superficially processes negative information when that target feels happy across time and situations than when he or she feels happy in response to a specific event.

In all studies, our sample sizes were determined in advance and we report every measure we collected. No conditions or participants were dropped from any analyses performed.

2. Pilot study

To highlight the practical importance of this research, we conducted a pilot study that explores the frequency with which individuals encounter people who display high levels of happiness. In this study, we recruited one hundred seventy-nine individuals (40% female; mean age = 33.9) through Amazon Mechanical Turk to fill out a short survey in exchange for a 30-cent payment. First, participants were told to "Imagine someone who is extremely happy. That is, imagine someone who feels and expresses a very high level of happiness." Then, we asked participants to indicate whether they had ever met a person like this before. Respondents who indicated that they had met somebody like this were then asked a few additional questions: "How hard was it to recall a person like this?" (1 = "not at all hard" to 7 = "extremely hard"), "To what extent did this person's extreme happiness change how you interacted with them?" (1 = "not at all" to 7 = "a great deal"), "How memorable is this person? (1 = "not at all memorable" to 7 = "extremely memorable"), and "How often do you interact with people like this" ("Never", "Once/year", "Once/month", "Once/week", "Once/day", "More than once/day").

The vast majority of participants (91%) reported that they had met a person who was extremely happy. Moreover, the average rating of difficulty to recall a person like this was 1.96 (SD = 1.35), significantly below the mid-point of the scale ($t(162) = 19.34$, $p < 0.001$). People also reported that that person's emotional expression changed how they interacted with them (M = 5.10, SD = 1.39; significantly above the mid-point: $t(162) = 10.17$, $p < 0.001$) and that it was particularly memorable (M = 5.90, SD = 1.07; significantly above the mid-point: $t(162) = 22.63$, $p < 0.001$). Finally, we found that interacting with very happy people was a common occurrence: 9.2% reported they interact with an extremely happy person more than once per day, 12.9% reported they interact with an extremely happy person once per day, 25.8% reported they interact with an extremely happy person once per week, and 29.4% reported they interact with an extremely happy person once per month.

This study reveals that it is common to interact with individuals who express high levels of happiness. Interestingly, we also found that people reported that they respond differently to individuals who express high levels of happiness. In the following studies, we systematically examine the specific inferences and behaviors that very happy people elicit.

3. Study 1

In Study 1, we document the relationship between expressions of happiness and perceptions of naiveté. We manipulate the magnitude of a target's typical level of happiness and record

participants' judgments of the target's naiveté. We demonstrate that individuals who express high levels of happiness are judged to be more naïve than individuals who display moderate levels of happiness. Consistent with our theory, we find that inferences of naiveté are particularly strong at high levels of happiness.

In this study we manipulate levels of happiness with precision and control by exposing participants to a target's responses on an "Emotional Inventory" featuring emoticons and text. In addition to affording experimental control, these stimuli provide insight into how individuals evaluate digital expressions of happiness, which are frequently featured on social media sites, and in email and text-based communication. According to Swyft Media, active internet users express themselves using an average of 96 emojis per day (Saiidi, 2014). As a result, many scholars have called for emotion researchers to study perceptions of these digital expressions (Cheshin, Rafaeli, & Bos, 2011; Walther & D'Addario, 2001).

3.1. Method

Three hundred ninety students (66% female; mean age = 22.2) at a Northeastern university participated in this study as part of a one-hour session in exchange for a $10 show-up fee. We told participants that we had previously surveyed people on the internet and had asked them to complete a variety of tasks, such as filling out personality questionnaires. We asked participants to view one individual's survey and to rate him/her on a variety of traits.

Participants viewed a pre-populated survey that consisted of three basic demographic questions (gender, age, hometown) and two emotion-related questions (see Appendix A). The first emotion question asked targets to rate how they typically feel on an 11-point scale, using emoticons. The lowest point on the scale (1) depicted a very sad face with tears, the midpoint (6) depicted a neutral face, and the highest point on the scale (11) depicted a very happy face with a large smile. The second emotion question asked targets, "On a typical day, how do you feel about life in general?" (1 = "Extremely sad" to 11 = "Extremely happy"). We varied responses to this emotional inventory to manipulate the target's typical emotion and signal dispositional affect.

We then randomly assigned participants to one of ten experimental conditions from a 5 (Happiness-level) × 2 (Gender: male, female) between-subjects design. The five happiness-level conditions ranged from the midpoint of each emotion scale to the high end of the scale. Responses to the two emotion questions were always one point apart on the 11-point scale (e.g., 6 and 7) to lend credibility to the survey response. Specifically, at our lowest level of happiness (*happiness-level-1* in our study), the target selected "7" for the emoticon description of how he/she typically feels and "6" for how he/she feels about his/her life in general. At the second happiness level (*happiness-level-2*), the target selected "8" for the emoticon description of how he/she typically feels and "7" for how he/she feels about his/her life in general. The responses to these two questions increased by one point until they reached the highest level of happiness (*happiness-level-5*). At *happiness-level-5*, the target reported "11" for how he/she typically feels and "10" for how he/she feels about his/her life in general. Appendix A depicts the five happiness-level conditions.

Half of the participants viewed a male target's survey and half of the participants viewed a female target's survey. To control for inferences about age or youthfulness, we held age constant in the demographic portion of the survey (24-years-old). We also held constant the target's hometown (Chicago, IL).

After participants saw the target's survey, we asked them to rate the individual on a Naiveté scale, which consisted of 4 items: naïve, gullible, ignorant, and unaware (rated on 7-point Likert scales ranging from 1 = "Not at all" to 7 = "Extremely"; $\alpha = 0.91$; see Appendix B). Finally, as a manipulation check, we asked participants, "How does the individual typically feel?" on a scale from 1 ("Extremely sad") to 100 ("Extremely happy").

3.2. Results

3.2.1. Happiness-level manipulation check

We first regressed responses to the "How does the individual typically feel?" question against the happiness manipulation, the gender of the target, and the interaction between the two. As we expected, our manipulation strongly influenced participants' perceptions of happiness, B = 10.13, $SE = 0.49$, $t(388) = 20.69$, $p < 0.001$. We found no main or interaction effects for gender ($ps > 0.7$).

3.2.2. Naiveté

We next examined ratings of naiveté. Our central prediction is that happiness will be perceived differently when expressed at extreme levels than when expressed at moderate levels. Consistent with prior research that examines the *intrapersonal* effects of high-level happiness (Oishi et al., 2007), we tested for a curvilinear relationship between happiness and perceived naiveté. We used regression analyses with both linear (coded from 1 to 5) and squared (coded from 1 to 25) terms for happiness level.

In Table 1, we report results from regression models with and without a squared term. When we simply entered happiness-level as a linear predictor, we identified a significant linear effect, B = 0.24, $SE = 0.06$, $t(387) = 3.91$, $p < 0.001$. When we added the squared term to the model, we also identified a significant curvilinear effect, B = 0.11, $SE = 0.04$, $t(387) = 2.94$, $p < 0.01$. In a hierarchical multiple regression, we found that the squared term adds explanatory power above and beyond the linear effect; the R-squared value significantly increased when adding the squared term to the model ($F = 8.64$, $p < 0.01$). We also ran a set of regression analyses in which we included gender and the gender × happiness-level interaction in the model. We found no main or interaction effects of gender for either of our two dependent variables ($ps > 0.6$), and the effects of happiness-level on naiveté are unchanged when we include these independent variables. We depict the pattern of results in Fig. 1.

3.3. Discussion

By exposing participants to different levels of a target's typical happiness using a fictitious survey response, we find that the same emotion, at different levels of intensity, can have different effects on trait inferences. Individuals who display high levels of happiness are perceived to be more naïve than individuals who display moderate levels of happiness. We observe this pattern of results using both male and female targets.

Interestingly, the regression results demonstrate that perceptions of naiveté follow a curvilinear trend, suggesting that inferences of naiveté are particularly strong at extreme levels of happiness.[2] That is, a one-unit increase in a target's reported happiness has the greatest impact on perceived naiveté at high levels of happiness. Although moderately happy individuals are perceived to be directionally less naïve than neutral individuals, this difference was not significant. Consistent with our theory, however, we do find that higher levels of happiness elicit a more extreme trait inference. We note that the mid-point of our naiveté scale is not a neutral

[2] Although we identify a curvilinear trend across levels of happiness, we do not expect the trend to be symmetric across levels of sadness. That is, we do not expect an inverted-U shape across our entire emoticon scale. Sadness is associated with increased information processing and skepticism (e.g., Bless et al., 1990); thus individuals may intuit that very sad people would be more aware and less naïve than neutral subjects.

Table 1
Results of multiple regression model predicting naiveté with happiness-level in Study 1.

		Happiness level			Happiness level^2			Model R^2
		B	*t*	*p*	B	*t*	*p*	
Perceived Naiveté	Linear term only	0.26 (0.04)	5.91	<0.001				0.08
	Linear and square terms	−0.36 (0.22)	−1.72	0.09	0.11 (0.04)	2.94	<0.01	0.10

Note: Standard errors reported in parentheses.

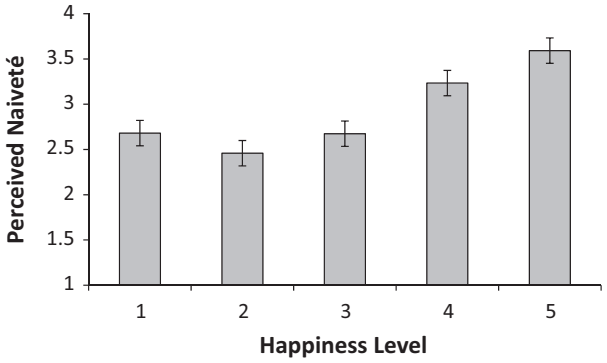


Fig. 1. Perceived naiveté results in Study 1. The naiveté scale ranged from 1 to 7. The squared term is significant ($p < 0.01$). Error bars represent ± 1 standard error.

midpoint. Our scale ranges from "not at all" to "extremely," meaning that perceptions of very happy people, despite falling below the midpoint of the scale, reflect positive levels of naiveté. In the next study, we explore the mechanism underlying this trait inference.

4. Study 2

In Study 2, we explore the mechanism underlying the relationship between expressions of happiness and perceived naiveté: observers infer that very happy individuals engage in biased search and inference processes. To do so, we focus our attention on three of the five happiness levels from the previous study (levels 1, 3, and 5). Including fewer conditions enables us to study a range of magnitudes, but affords greater statistical power to test the mechanism.

In addition to testing the mechanism, we also introduce new stimuli in Study 2. Although the emoticon-based stimuli we employ in Study 1 allowed us to cleanly manipulate several levels of happiness and reflects externally-valid expressions that individuals may use during online or text-based conversations, it is possible that they are not viewed the same as natural facial expressions of happiness. To explore this possibility, we manipulate happiness level using facial expressions and photographic stimuli in the next two studies.

Finally, we demonstrate that the inferences people make about very happy individuals are specific to naiveté. A potential limitation of Study 1 is that we only measured naiveté, which may have resulted in demand effects. We rule this out in Study 2 by measuring several traits and showing that the inferences from expressions of high magnitude happiness do not extend to perceptions of very happy individuals' general competence or likeability.

4.1. Method

Two hundred thirty-nine students (61% female; mean age = 20.8) at a Northeastern university participated in a study as part of a one-hour session in exchange for a $10 show-up fee. Participants read a scenario describing an acquaintance from work that they run into at the office every few weeks. We asked participants to imagine they had seen this colleague four times in the past month, and that each time they asked their colleague how s/he was doing.

We randomly assigned participants to one of twelve experimental conditions from a 3 (Emotion: *happy, very happy, neutral*) × 2 (Gender: male, female) × 2 (Stimulus sampling: photographs of two different women and two different men) between-subjects design. The only difference between the three emotion conditions was the photo of the colleague and how the colleague responded to the question of how s/he was doing. In the *neutral* condition, the colleague said "Fine." In the *happy* condition, the colleague answered "Good." In the *very happy* condition, the colleague responded "Great!" Each description was accompanied by a photo of the colleague with an emotional expression that corresponded to the condition (either a neutral, happy, or very happy expression). In this study, half the participants were shown pictures of a female ("Jennifer"); half were shown pictures of a male ("Brian"). To mitigate the concern that our effects were driven by a specific individual's photograph, we used photographs of two different people for each gender. We provide examples of the photos we used to represent the female and male targets in Appendix C.

After participants read the scenarios, they rated the colleague using the same naiveté scale we used in Study 1 ($\alpha = 0.91$), and completed the same emotion manipulation check. Participants also rated their colleague on a scale intended to test our hypothesized mechanism.

4.1.1. Biased search and inference processes

To assess whether participants believed that the target engaged in biased search and inference processes, we asked participants to rate how much they agree with seven measures, such as "The colleague finds ways to avoid unpleasant information," and "The colleague processes negative events in a superficial way." In an exploratory factor analysis (varimax rotation), these seven items loaded together, and formed a distinct factor from Naiveté. Consequently, we combined them to form a Biased Processes measure ($\alpha = 0.85$). We include the full list of items in Appendix B.

Finally, participants rated their colleague on four variables in order to explore whether high magnitude happiness had similar effects on traits unrelated to naiveté.

4.1.2. Warmth and competence

Although prior work suggests that certain groups of people face penalties in perceived competence when they display warmth (e.g., Cuddy, Fiske, & Glick, 2007; Fiske et al., 2002), we conceptualize naiveté as distinct from competence. In this study, we rule out the possibility that perceptions of naiveté simply reflect a trade-off in perceived warmth and competence. Consistent with existing work, we measured perceived Competence using five items: competent, confident, intelligent, independent, and competitive ($\alpha = 0.77$) and we measured perceived Warmth using four items: warm, kind, tolerant, and sincere ($\alpha = 0.89$).

4.1.3. Likeability

Participants also rated the target on how likeable and unlikeable (reverse-coded) they were on 7-point Likert scales, averaged

to form a Likeability measure ($r = -0.53$, $p < 0.001$). This allows us to test whether a high level of happiness is globally associated with negative trait inferences, or whether our effects are specific to perceptions of naiveté.

4.1.4. Authentic display

Finally, to ensure participants believed that the individuals were similarly authentic and genuine in their emotional expression, we asked participants the extent to which they agreed with "[Jennifer/Brian] acts exactly how [she/he] actually feels" from (1 = "Strongly disagree" to 7 = "Strongly agree").

4.2. Results

In Study 1, we manipulated continuous levels of happiness, so regression was the most appropriate analysis. In contrast, in this study (as well as Studies 3–6), we chose specific, discrete levels of happiness to examine. Thus, we utilized ANOVA to test our predictions. We first conducted a 3 (Emotion: *very happy, happy, neutral*) × 2 (Gender: male, female) × 2 (Stimulus sampling) between-subjects ANOVA. We found no interaction effects of gender or stimuli across our primary dependent measures; therefore, we collapsed across gender and stimulus samples for the remainder of the analyses.

4.2.1. Emotion manipulation check

Our manipulation check confirmed that participants perceived substantial differences in the level of displayed happiness across the three emotion conditions, $F(2, 236) = 88.08$, $p < 0.001$, $\eta_p^2 = 0.427$. Participants rated the target as significantly happier in the *very happy* condition ($M = 76.00$, $SD = 18.44$) than in both the *happy* condition ($M = 58.33$, $SD = 15.05$) and the *neutral* condition ($M = 43.43$, $SD = 12.82$), F's > 50, p's < 0.001. Participants rated the target in the *happy* condition as happier than the target in the *neutral* condition, $F(1, 236) = 36.60$, $p < 0.001$, $\eta_p^2 = 0.134$.

4.2.2. Naiveté

Supporting our thesis, emotion expression significantly influenced perceived naiveté, $F(2, 236) = 9.62$, $p < 0.001$, $\eta_p^2 = 0.075$. Although participants rated the target as similarly naïve in the *happy* condition ($M = 2.59$, $SD = 1.27$) and the *neutral* condition ($M = 2.79$, $SD = 1.30$), $F(1, 236) = 1.03$, $p = 0.31$, $\eta_p^2 = 0.004$, they rated the target as significantly more naïve in the *very happy* condition ($M = 3.42$, $SD = 1.16$) than both the *happy* condition, $F(1, 236) = 17.57$, $p < 0.001$, $\eta_p^2 = 0.069$, and the *neutral* condition, $F(1, 236) = 10.42$, $p = 0.001$, $\eta_p^2 = 0.042$. We depict these results in Fig. 2.

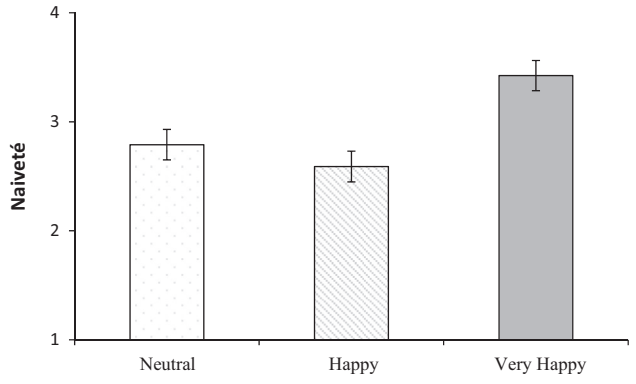


Fig. 2. Naiveté results in Study 2. The naiveté scale ranged from 1 to 7. The *very happy* condition is significantly higher than the *happy* and *neutral* conditions (p's < 0.001). Error bars represent ± 1 standard error.

4.2.3. Biased search and inference processes

A one-way ANOVA also revealed a significant effect of Emotion on biased search and inference processes, $F(2, 236) = 9.38$, $p < 0.001$, $\eta_p^2 = 0.074$. Participants believed that the target engaged in more biased search and inference processes in the *very happy* condition ($M = 4.32$, $SD = 0.79$) than they did in the *happy* condition ($M = 3.81$, $SD = 0.95$), $F(1, 236) = 13.84$, $p < 0.001$, $\eta_p^2 = 0.055$, and the *neutral* condition ($M = 3.80$, $SD = 0.86$), $F(1, 236) = 14.34$, $p < 0.001$, $\eta_p^2 = 0.057$. There was no difference in perceptions of biased processes between the *happy* and the *neutral* conditions, $F(1, 236) = 0$, $p = 0.98$.

4.2.4. Competence

Measuring competence allowed us to distinguish a lack of wisdom (naiveté) from a lack of general competence. Consistent with this distinction, the competence items loaded separately from the naïve items in an exploratory factor analysis (varimax rotation). Furthermore, we did not find a significant effect of emotion on perceived competence, ($M_{neutral} = 4.29$, $SD_{neutral} = 1.05$ vs. $M_{happy} = 4.03$, $SD_{happy} = 0.92$ vs. $M_{very\ happy} = 4.25$, $SD_{very\ happy} = 0.70$), $F(2, 236) = 1.91$, $p = 0.15$, $\eta_p^2 = 0.016$. Importantly, we found no difference in perceived competence between the *very happy* and the *happy* conditions, $F(1, 236) = 2.28$, $p = 0.13$, $\eta_p^2 = 0.010$.

4.2.5. Warmth

We did, however, find a significant effect of Emotion on perceived warmth, $F(2, 236) = 45.61$, $p < 0.001$, $\eta_p^2 = 0.279$. Participants rated the target as warmer in the *very happy* condition ($M = 4.95$, $SD = 0.87$) than they did in both the *happy* condition ($M = 4.40$, $SD = 1.16$), $F(1, 236) = 11.27$, $p = 0.001$, $\eta_p^2 = 0.046$, and the *neutral* condition ($M = 3.42$, $SD = 1.04$), $F(1, 236) = 88.68$, $p < 0.001$, $\eta_p^2 = 0.273$. Participants also rated the target to be warmer in the *happy* condition than they did in the *neutral* condition, $F(1, 236) = 35.97$, $p < 0.001$, $\eta_p^2 = 0.132$.

4.2.6. Likeability

The target's emotion expression also significantly influenced his/her likeability, $F(2, 236) = 28.53$, $p < 0.001$, $\eta_p^2 = 0.195$. In the *neutral* condition, participants found the target to be less likeable ($M = 4.12$, $SD = 1.13$) than they did in both the *happy* condition ($M = 5.12$, $SD = 1.12$), $F(1, 236) = 33.37$, $p < 0.001$, $\eta_p^2 = 0.124$, and the *very happy* condition ($M = 5.34$, $SD = 1.04$), $F(1, 236) = 49.99$, $p < 0.001$, $\eta_p^2 = 0.175$. Participants found the target to be similarly likeable in the *very happy* and *happy* conditions, $F(1, 236) = 1.59$, $p = 0.21$, $\eta_p^2 = 0.007$.

4.2.7. Authentic display

The target's emotion did not have a significant effect on the degree to which participants believed that the target was expressing his/her true feelings, $F(2, 236) = 0.70$, $p = 0.50$, $\eta_p^2 = 0.006$, ($M_{neutral} = 3.73$, $SD_{neutral} = 1.41$; $M_{happy} = 3.50$, $SD_{happy} = 1.16$; $M_{very\ happy} = 3.68$, $SD_{very\ happy} = 1.31$).

4.2.8. Mediation analyses

We used bootstrap mediation to test the mechanism through which displayed happiness affects perceived naiveté. We conducted a bootstrap analysis with 100,000 samples (Hayes & Preacher, 2014; SPSS Macro PROCESS, Model 4) using emotion condition as the independent variable, biased processes as the mediator, and naiveté as the dependent variable. For the

comparison between *happy* and *very happy* targets, the 95% confidence interval of the Indirect Effect did not include zero (Indirect effect = 0.259, SE = 0.073; 95% C.I. = [0.134, 0.433]), demonstrating that beliefs about biased search and inference processes mediate the relationship between happiness and naiveté. Specifically, we found that individuals who expressed extreme happiness were perceived to engage in more biased processes ($a = 0.52$, $p < 0.001$), and as perceived biased processes increased, perceived naiveté also increased ($b = 0.50$, $p < 0.001$). Once we included biased processes in our model, the effect of emotion condition on perceived naiveté significantly decreased from $c = 0.83$, $p < 0.001$ to $c' = 0.58$, $p = 0.003$, suggesting partial mediation.

We also conducted a multiple mediation analysis with all other potential mechanisms in the model, and we found that the effect of emotion on naiveté was still mediated by biased processes (Indirect Effect = 0.205, SE = 0.067; 95% C.I. = [0.100, 0.374]). We found no evidence of mediation through likeability (Indirect Effect = −0.068, SE = 0.057; 95% C.I. = [−0.213, 0.020]) or authenticity (Indirect Effect = −0.011, SE = 0.023; 95% C.I. = [−0.092, 0.013]).

4.3. Discussion

In this study, we replicate our finding that individuals who display high levels of happiness are perceived to be more naïve than individuals who display moderate levels of happiness. We document the robustness of our results by extending our investigation to different types of stimuli: photo stimuli of facial expressions for two unique female targets and two unique male targets.

In Study 2, we again show that high magnitude expressions of happiness signal naiveté, and we demonstrate that beliefs about how people process information underlie this relationship. We also show that these effects are non-linear: individuals do not assume that moderately happy people are any more or less naïve than neutral people, or that they process information differently. These results provide further evidence that expressing happiness at *high magnitude*, rather than expressing happiness broadly, triggers inferences of naiveté and the underlying biased processes mechanism. We also find no effect of emotion expression on perceived authenticity of the emotional displays, suggesting that high magnitude happiness was not perceived to be inauthentic.

In Study 2, we also examine whether high levels of happiness lead to broad interpersonal penalties, or uniquely influence judgments of naiveté. Consistent with a "halo effect," we find that happy people are liked more and are perceived to be warmer than neutral people. However, very happy people are liked just as much as moderately happy people, and are perceived to be even warmer than moderately happy people, providing evidence that perceptions of very happy people are not universally negative. In addition, we found no differences between emotion conditions on judgments of competence, suggesting that naiveté is a distinct construct and that inferences about naiveté do not arise from a general warmth-competence tradeoff (e.g., Cuddy, Fiske, & Glick, 2004; Fiske et al., 2002). Moreover, judgments of naiveté do not extend to judgments that very happy people lack traditional intelligence; we found no effect of emotion on the *intelligent* item of the competence scale, $F(2, 236) = 0.25$, $p = 0.78$.

5. Study 3

In Study 3, we gain additional insight into the biased processes mechanism, and we include a new control condition. In this control condition, participants make inferences about the target without any information about the target's emotional expression.

In addition, we consider and rule out two alternative mechanisms that might account for the relationship between expressed happiness and naiveté: the perception that very happy people do not set challenging goals for themselves and the perception that very happy people are overly optimistic. Prior research suggests that happy people may be more satisfied with the status quo and thus less motivated to achieve the highest levels of income and education (Oishi et al., 2007). To test whether perceptions of very happy people reflect this belief, we investigate whether the following mechanism could account for our findings: very happy individuals do not set lofty goals for themselves and thus never experience any meaningful challenges in their lives. In addition, extant research has found that ignoring negative cues in the environment is related to optimism and excessive positivity (Norem & Chang, 2002). Thus, in this study we test whether people share this intuition when judging very happy people, and whether perceived optimism could be another potential mechanism driving inferences of naiveté. As in Study 2, we also explore a range of inferences and demonstrate that high magnitude happiness uniquely influences judgments related to naiveté.

5.1. Method

Two hundred seventeen individuals (39% female; mean age = 34.3) participated in an online survey through Amazon Mechanical Turk in exchange for a 60-cent payment. Participants read the same scenario from Study 2 describing an acquaintance from work and viewed a photo of the person (expressing an emotion).

We randomly assigned participants to one of twelve experimental conditions from a 3 (Emotion: *happy*, *very happy*, *control*) × 2 (Gender: male, female) × 2 (Stimulus sampling) between-subjects design. The *happy* and *very happy* conditions included the exact same photos and descriptions as those we used in Study 2. In the control condition, participants learned that they had a colleague named Jennifer [Brian] who they occasionally talk to in the office, and whom they have seen several times over the past month. However, in this condition, no further information was provided about the emotional expression of the colleague during those conversations, and participants saw no photo.

After viewing the survey, participants rated the colleague using the same naiveté and biased processes scales we used in Study 2 (α's > 0.92), and completed the same likeability measure ($r = -0.58$, $p < 0.001$) and emotion manipulation check.

In addition, participants completed additional items to explore alternative mechanisms and inferences that observers might make from observing someone express high levels of happiness.

5.1.1. Challenges the self

To understand the extent to which participants believed that their colleague sought to challenge him/herself, we asked the following four questions: "The colleague does not set high goals for himself," "The colleague is satisfied with the status quo," "The colleague always stays in his comfort zone," and "The colleague has low standards for what makes him happy." The four items loaded together on a separate factor than Biased Processes (varimax rotation) and thus, we combined these items into a single Challenges the Self measure ($\alpha = 0.64$).

5.1.2. Optimistic processes

We asked participants to rate the extent to which they thought that the colleague had an optimistic outlook on life with the following three measures: "The colleague views all situations as 'glass half full' instead of 'glass half empty'," "The colleague is always optimistic that bad things will turn out okay," and "The colleague appreciates the little things in life." The three items loaded

together, and on a separate factor from our other mechanism measures, and we averaged them to form an Optimistic Processes measure ($\alpha = 0.78$).

5.1.3. Additional inferences

Participants also rated their colleague on several variables to explore additional inferences they might make in this context. Two items asked participants whether they agreed with other negative judgments about the colleague: "I think my colleague deserves to be less happy than he/she already is" and "My colleague does not take work seriously" (both on 7-point Likert scales from "Strongly disagree" to "Strongly agree"). We also had participants rate their colleague on four new traits (two positive traits – honest and fair – and two negative traits – inconsiderate and greedy) to further assess whether the inferences they make about very happy people are specific to naiveté, and to make sure their ratings of the naïve scale alone were not subject to a demand effect. Finally, six measures were used to assess whether participants believe that very happy individuals avoid all information, including positive information, or simply negative information, as our theory would suggest. These six items were modeled on our *Biased Search and Inference Processes* scale, replacing the "negative" wording with "positive" wherever possible, and were averaged together to form a measure of positive information avoidance ($\alpha = 0.91$). See Appendix B for exact items.

5.2. Results

First, we conducted a 3 (Emotion: *very happy, happy, control*) × 2 (Gender: male, female) × 2 (Stimulus sampling) between-subjects ANOVA. We found no interaction effects of gender or stimuli on any of the dependent measures, so we conducted all subsequent analyses collapsed across these factors.

5.2.1. Emotion manipulation check

Our manipulation check confirmed differences in perceived happiness between the three emotion conditions, $F(2, 214) = 60.63$, $p < 0.001$, $\eta_p^2 = 0.362$. Participants viewed the colleague as significantly happier in the *very happy* condition ($M = 91.95$, $SD = 10.57$) than they did in both the *happy* condition ($M = 74.42$, $SD = 17.61$) and the *control* condition ($M = 65.03$, $SD = 15.43$), p's < 0.001. Participants also rated the colleague in the *happy* condition as happier than the colleague in the *control* condition ($p < 0.001$).

5.2.2. Naiveté

Consistent with our prediction, a one-way ANOVA revealed a significant effect of Emotion on perceived naiveté, $F(2, 214) = 6.42$, $p = 0.002$, $\eta_p^2 = 0.057$. Although participants rated the colleague as similarly naïve in the *happy* condition ($M = 2.25$, $SD = 1.29$) and the *control* condition ($M = 2.02$, $SD = 1.21$), $F(1, 214) = 1.06$, $p = 0.30$, $\eta_p^2 = 0.005$, they rated the colleague as significantly more naïve in the *very happy* condition ($M = 2.80$, $SD = 1.46$) than the *happy* condition, $F(1, 214) = 6.31$, $p = 0.01$, $\eta_p^2 = 0.029$, and the *control* condition, $F(1, 214) = 11.91$, $p = 0.001$, $\eta_p^2 = 0.053$. We depict these results in Fig. 3.

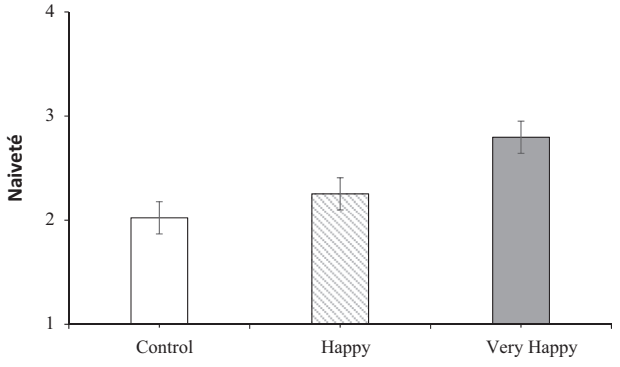


Fig. 3. Naiveté results in Study 3. The naiveté scale ranged from 1 to 7. The *very happy* condition is significantly higher than the *happy* and *no-information* conditions (p's < 0.001). Error bars represent ± 1 standard error.

5.2.3. Biased search and inference processes

A one-way ANOVA revealed a significant effect of Emotion on biased processes, $F(2, 214) = 5.22$, $p = 0.006$, $\eta_p^2 = 0.047$. Participants believed that the colleague engaged in more biased search and inference processes in the *very happy* condition ($M = 3.99$, $SD = 1.29$) than they did in the *happy* condition ($M = 3.44$, $SD = 1.24$), $F(1, 214) = 7.99$, $p = 0.005$, $\eta_p^2 = 0.036$, and the *control* condition ($M = 3.44$, $SD = 1.00$), $F(1, 214) = 7.50$, $p = 0.007$, $\eta_p^2 = 0.034$. We found no difference in perceptions of biased processes between the *happy* and the *control* conditions, $F(1, 214) < 0.01$, $p = 0.99$.

5.2.4. Challenges the self

We found no significant differences in ratings of how much the colleague was perceived to challenge him/herself, $F(2, 214) = 0.83$, $p = 0.44$, $\eta_p^2 = 0.008$, ($M_{control} = 4.03$, $SD_{control} = 0.79$; $M_{happy} = 4.15$, $SD_{happy} = 1.00$; $M_{very\ happy} = 4.23$, $SD_{very\ happy} = 0.92$).

5.2.5. Optimistic processes

Our manipulation did influence judgments of the colleague's optimistic processing, $F(2, 214) = 15.52$, $p < 0.001$, $\eta_p^2 = 0.412$. Participants rated the colleague to be more optimistic in the *very happy* condition ($M = 5.43$, $SD = 0.88$) than in both the *happy* condition ($M = 4.86$, $SD = 1.00$), $F(1, 214) = 15.84$, $p < 0.001$, $\eta_p^2 = 0.069$, and the *control* condition ($M = 4.62$, $SD = 0.87$), $F(1, 214) = 28.52$, $p < 0.001$, $\eta_p^2 = 0.118$. Participants did not rate the colleague to be more optimistic in the *happy* condition than the *control* condition, $F(1, 214) = 2.27$, $p = 0.13$, $\eta_p^2 = 0.010$.

5.2.6. Likeability

In this study, the colleague's emotion expression did not significantly influence his/her likeability, $F(2, 214) = 1.47$, $p = 0.23$, $\eta_p^2 = 0.195$, ($M_{control} = 5.34$, $SD_{control} = 1.24$; $M_{happy} = 5.45$, $SD_{happy} = 1.30$; $M_{very\ happy} = 5.68$, $SD_{very\ happy} = 1.17$).

5.2.7. Additional inferences

There were no significant differences between conditions on any of the exploratory inferences we examined in this study. Participants did not believe that very happy colleagues deserved to be less happy ($F(2, 214) = 0.94$, $p = 0.39$) or took work less seriously ($F(2, 214) = 0.58$, $p = 0.56$). There were also no differences in ratings of how honest, fair, inconsiderate, and greedy the colleagues were (Fs < 1.7, ps > 0.20), suggesting that the trait inferences participants made were specific to naiveté. Finally, participants did not believe that colleagues were more or less likely to avoid positive information in the world across conditions ($F(2, 214) = 0.45$, $p = 0.64$), indicating that they do not believe that very happy individuals indiscriminately ignore information around them; rather, participants believe that very happy individuals only avoid and superficially process *negative* information. We provide the corresponding means and standard deviations for these measures in Table 2.

Table 2
The effects of extreme happiness on alternative trait inferences and mechanisms in Study 3.

		Control (no emotion information)	Moderately happy target	Very happy target
Deservingness	*M*	1.67	1.95	1.71
	SD	1.22	1.45	1.33
	Test	$F(2, 214) = 0.93$, $p = 0.39$		
Does not take work seriously	*M*	2.17	2.12	2.36
	SD	1.45	1.48	1.42
	Test	$F(2, 214) = 0.58$, $p = 0.56$		
Inconsiderate	*M*	2.11	2.25	2.07
	SD	1.24	1.45	1.28
	Test	$F(2, 214) = 0.39$, $p = 0.68$		
Greedy	*M*	2.21	2.11	1.92
	SD	1.37	1.49	1.12
	Test	$F(2, 214) = 0.87$, $p = 0.42$		
Honest	*M*	4.82	4.68	4.99
	SD	1.24	1.44	1.33
	Test	$F(2, 214) = 0.96$, $p = 0.38$		
Fair	*M*	4.77	4.68	5.05
	SD	1.24	1.44	1.24
	Test	$F(2, 214) = 1.61$, $p = 0.20$		
Positive information avoidance	*M*	3.19	3.04	3.01
	SD	1.11	1.23	1.23
	Test	$F(2, 214) = 0.45$, $p = 0.64$		

5.2.8. Mediation analyses

We conducted a bootstrap analysis with 100,000 samples (Hayes & Preacher, 2014; SPSS Macro PROCESS, Model 4) using emotion condition as the independent variable, biased processes as the mediator, and naiveté as the dependent variable. Replicating our effects from the previous study, the 95% confidence interval of the Indirect Effect did not include zero (Indirect effect = 0.376, SE = 0.138; 95% C.I. = [0.111, 0.662]), indicating that our measure of biased processes mediates the effect of emotion on naiveté. Specifically, we found that colleagues who expressed extreme happiness were perceived to engage in more biased processes ($a = 0.55$, $p < 0.01$), and as perceived biased processes increased, perceived naiveté also increased ($b = 0.69$, $p < 0.001$). Once we included biased processes in our model, the effect of emotion condition on perceived naiveté significantly decreased from $c = 0.54$, $p = 0.02$ to $c' = 0.17$, $p = 0.35$, suggesting full mediation.

Moreover, we conducted a multiple mediation analysis, including all other potential mechanisms and inferences in the model, and found further evidence that the effect of emotion on naiveté was mediated by perceptions of biased search and inference processes (Indirect Effect = 0.236, SE = 0.101; 95% C.I. = [0.061, 0.470]), and was not mediated by beliefs about how much the colleague challenged him/herself (Indirect Effect = −0.0002, SE = 0.017; 95% C.I. = [−0.033, 0.041]), beliefs about how much the colleague engaged in optimistic processing (Indirect Effect = 0.025, SE = 0.059; 95% C.I. = [−0.087, 0.152]), how likeable the colleague was (Indirect Effect = −0.057, SE = 0.051; 95% C.I. = [−0.192, 0.019]), beliefs that the colleague deserved to be less happy, (Indirect Effect = −0.018, SE = 0.030; 95% C.I. = [−0.130, 0.011]), beliefs about how seriously the colleague took his work (Indirect Effect = 0.067, SE = 0.074; 95% C.I. = [−0.049, 0.249]), or beliefs about whether the colleague sought out positive information (Indirect Effect = 0.002, SE = 0.021; 95% C.I. = [−0.033, 0.063]).

5.3. Discussion

These findings replicate and extend our findings from Studies 1 and 2. We show that individuals who express extreme happiness are perceived to be more naïve than individuals who express moderate happiness. In addition, we find that this relationship is driven by beliefs about the depth to which people process information.

We also rule out several alternative mechanisms that could underlie individuals' beliefs that very happy people are naïve. First, we do not find any differences between very happy individuals and moderately happy individuals in the extent to which they are believed to set high goals or challenge themselves. Thus, in this study, we find no support for the alternative account that people believe that very high levels of happiness keep individuals from achieving their full potential because they are satisfied with the status quo (Oishi et al., 2007). Second, although very happy individuals are perceived to be more optimistic than happy individuals, this inference does not mediate the effect of emotion on naiveté. This suggests that individuals do not penalize people for being overly optimistic or excessively positive about life (Norem & Chang, 2002), but rather that they are making specific inferences about the way very happy people process information in their environment.

Finally, we demonstrate that the inferences people make about very happy targets do not extend to additional traits or beliefs that the targets avoid information generally. In addition, we do not find that people believe that very happy targets deserve to be less happy or that they take their work less seriously than moderately happy targets.

We also find that perceptions of moderately happy individuals do not differ from perceptions of individuals who provide no information about their emotions. Moderately happy people are seen as no more naïve and no more likely to have biased search and inference processes than people whose emotional states are unknown. Extremely happy people uniquely elicit these perceptions. That is, high magnitude happiness activates perceptions of naiveté and biased information processing.

6. Study 4

In Study 4, we extend our investigation of the underlying mechanism. In Studies 2 and 3, we were only able to examine the proposed mechanism using a correlational approach (mediation analysis). To explore the causal role of search and inference processes, we manipulate this mechanism directly and test whether it moderates the effect of emotional expression on naiveté (cf. Bullock, Green, & Ha, 2010; Spencer, Zanna, & Fong, 2005).

Specifically, we manipulate whether or not the target was known to seek out negative information.

6.1. Method

Two hundred sixteen individuals (39% female; mean age = 32.4) participated in an online survey through Amazon Mechanical Turk in exchange for a 20-cent payment. Participants were informed that the researchers were interested in understanding how people form first impressions based on limited information. We asked participants to imagine that they work at a mid-size corporation and are trying to learn about another employee. We presented participants with a short survey taken by that employee, as well as information about that employee from another co-worker. Then, we asked participants to rate that employee on several traits.

We randomly assigned participants to one of four conditions from a 2 (Emotion: *happy, very happy*) × 2 (Seeks-information: *control*, *high*) between-subjects design. We manipulated emotion expression as we did in Study 2, with two scales representing the respondent's general emotion. In the *happy* condition, the employee made selections in between the midpoint and the extreme happiness end of the two happiness scales ("9" for the emoticon description of how she typically feels and "8" for how she feels about her life in general). In the *very happy* condition, the employee made selections at the extremes of the two happiness scales ("11" for the emoticon description of how she typically feels and "10" for how she feels about her life in general). In all conditions, the employee reported being 33-years-old, the typical mean age of our online respondents. We also held constant the employee's gender (male) and hometown (Chicago, IL).

In addition to the demographic questions and the emotion questions, we also provided participants with information from a third party to manipulate the employee's tendency to engage in biased search and inference processes. All participants saw a co-worker's response to the question "Please provide some feedback about your co-worker." This feedback survey had one text box and allowed for an open-ended response. In both conditions, the co-worker's response to this question stated a fact about the employee's life: "Brian is my office-mate, so I hear about what is going on in his life. Recently, some houses in Brian's neighborhood burned down. Brian's house was fine, but some of his neighbors lost everything." In the *control* condition, the co-worker did not say anything else, and thus did not provide any information about Brian's search or inference processes. In the *high seeks-information* condition, the co-worker also indicated that the individual sought out information: "Brian decided to walk past the houses on his way home so that he could understand the damage that was done."

This statement directly manipulates our proposed mechanism: the target individual is described as deliberately and volitionally walking past his neighbors' houses that burned down, thus seeking out and gaining a deeper understanding of negative information that he could have otherwise avoided. This action reflects a curiosity about and willingness to expose oneself to negative information in the world.

After reading the background information, participants rated the target's naiveté using the same scale we used in our previous studies ($\alpha = 0.93$). In addition, as manipulation checks, participants rated how much the target engaged in biased processes using the same scale we used in Studies 2 and 3 ($\alpha = 0.91$) and how happy (versus sad) the individual felt.

6.2. Results

6.2.1. Emotion manipulation check

Our manipulation check confirmed that our emotion manipulation was effective; we found a significant main effect for Emotion, $F(1, 212) = 103.26$, $p < 0.001$, $\eta_p^2 = 0.328$. Participants viewed the target as significantly happier in the *very happy* condition ($M = 90.21$, $SD = 15.69$) than they did in the *happy* condition ($M = 72.50$, $SD = 8.96$). We found no significant effect of Seeks-information, $F(1, 212) = 0.60$, $p = 0.44$, or a Seeks-information × Emotion interaction, $F(1, 212) = 0.05$, $p = 0.83$.

6.2.2. Biased search and inference processes

We next considered perceptions of how the target processes information. In addition to a main effect of Seeks-information, $F(1, 212) = 153.38$, $p < 0.001$, $\eta_p^2 = 0.420$, and a main effect of Emotion, $F(1, 212) = 6.16$, $p = 0.01$, $\eta_p^2 = 0.028$, a two-way ANOVA revealed the predicted Seeks-information x Emotion interaction on biased processing, $F(1, 212) = 4.77$, $p = 0.03$, $\eta_p^2 = 0.022$. As we found in Studies 2 and 3, participants in the *control* condition inferred that the target engaged in more biased processing in the *very happy* condition ($M = 4.56$, $SD = 0.95$) than in the *happy* condition, ($M = 3.95$, $SD = 0.92$), $F(1, 212) = 10.99$, $p < 0.001$, $\eta_p^2 = 0.049$. However, in the *high seeks-information* condition, when participants read that the target sought negative information, we found no difference between *happy* and *very happy* targets on this measure (very happy: $M = 2.67$, $SD = 0.97$; happy: $M = 2.63$, $SD = 0.97$), $F(1, 212) = 0.04$, $p = 0.83$.

6.2.3. Naiveté

In addition to a main effect of Seeks-information, $F(1, 212) = 64.10$, $p < 0.001$, $\eta_p^2 = 0.232$, a two-way ANOVA revealed the predicted Seeks-information × Emotion interaction on naiveté, $F(1, 212) = 4.92$, $p = 0.03$, $\eta_p^2 = 0.023$. As we found in Studies 1–3, participants in the *control* condition rated the target as significantly more naïve in the *very happy* condition ($M = 3.72$, $SD = 1.49$) than in the *happy* condition, ($M = 3.05$, $SD = 1.33$), $F(1, 212) = 7.91$, $p < 0.01$, $\eta_p^2 = 0.036$. However, the Seeks-information manipulation moderated this effect. When participants read that the target searched for negative information, we found no difference between *happy* and *very happy* targets (very happy: $M = 2.01$, $SD = 0.87$; happy: $M = 2.09$, $SD = 1.13$), $F(1, 212) = 0.11$, $p = 0.74$. We depict these results in Fig. 4.

6.2.4. Mediation analyses

We conducted moderated mediation analysis using the bootstrap procedure with 100,000 samples (Hayes & Preacher, 2014; Preacher, Rucker, & Hayes, 2007; SPSS Macro PROCESS, Model 7) to test the process by which emotion affects perceptions of naiveté. Specifically, we predicted that when we provided no information

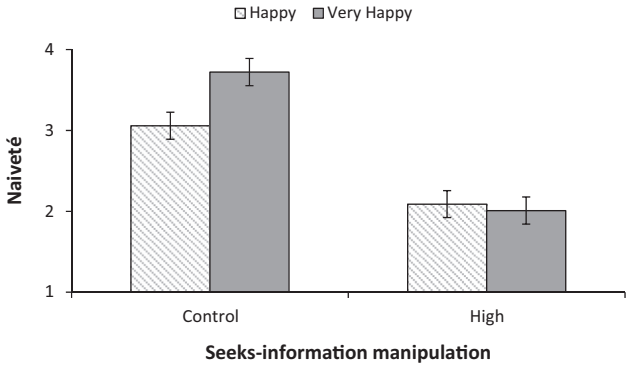


Fig. 4. Naiveté results in Study 4. The naiveté scale ranged from 1 to 7. In the Control condition, the *very happy* condition is significantly higher than the *happy* condition ($p < 0.01$). In the Seeks-information condition, there is no difference between these two conditions ($p = 0.74$). Error bars represent ± 1 standard error.

about seeking out negative information, participants would judge a very happy target to be more likely to engage in biased search and inference processes than a moderately happy target, which in turn would boost perceptions that the target is naïve. However, we predicted that when we provided information that the target sought out negative information, participants would not judge very happy targets differently than moderately happy targets. Our moderated mediation model included emotion condition as the independent variable, seeks-information as the moderator variable, biased processes as the mediator variable, and naiveté as the dependent measure. In our model, consistent with our findings in Studies 2 and 3, we found a significant indirect effect of biased processes in the *control* condition (Indirect effect = 0.473, SE = 0.148, CI = [0.193, 775]). That is, in the *control* condition, individuals who expressed extreme happiness were perceived to engage in more biased processes ($a = 0.31$, $p = 0.001$), and were thus perceived to be more naïve ($b = 0.58$, $p < 0.001$). Once we included biased processes in our model, the effect of emotion condition on naiveté significantly decreased from $c = 0.23$, $p = 0.02$ to $c' = 0.05$, $p = 0.51$, suggesting full mediation. However, we did not find a significant indirect effect of biased processes in the *high seeks-information* condition (Indirect effect = 0.030, SE = 0.147, CI = [−0.255, 0.322]).

6.3. Discussion

This study provides further support for our proposed mechanism. We manipulate negative information-seeking directly and show that this moderates the effect of emotional expression on perceptions of naiveté. That is, when it is clear that an individual seeks negative information, it substantially curtails the negative effects of high-magnitude happiness: very happy people who seek information are not judged to be more naïve than moderately happy people.

7. Study 5

In the previous four studies, we demonstrated that very happy individuals are perceived to be more naïve than moderately happy individuals. In Study 5, we consider a behavioral implication of expressed happiness. If a very happy person is believed to be naïve, others may see an opportunity to take advantage of that person's gullibility, and thus be more likely to exploit very happy targets.

In this study, we adapt manipulations from the literature on conflicts of interest. In many cases, advisors allow their personal interests to bias the advice they offer to others (Cain, Loewenstein, & Moore, 2005, 2011; Sah & Loewenstein, 2012). For example, a financial advisor may recommend an investment that yields a large fee even if it is not the most suitable investment for the client. In experimental work, scholars have studied conflicts of interest in advice-giving paradigms, in which the advisor has more information than the advisee and will benefit from the advisee's inaccuracy. For example, an advisor may give accurate advice to an advisee about the amount of money in a jar when the advisor has no conflict of interest, but give biased (i.e., exaggerated) advice if their payment depends on how much the advisee overestimates the amount of money in the jar. Related work has found that advisees often rely heavily on the advice they receive, even when they are aware of their advisor's conflict of interest (Cain et al., 2005, 2011; Gino, Wood Brooks, & Schweitzer, 2012).

In Study 5, participants were randomly assigned to give advice to a happy or very happy partner regarding the amount of money in five different jars of coins. In this task, participants had a conflict of interest, such that they would receive a bonus if their partner guessed an amount higher than the actual amount of money in each jar. Giving bad (high) advice in order to exploit their partner and benefit financially represents our measure of opportunistic behavior. Participants' identities were anonymous and they were aware that they would not interact with their advisee in the future. Therefore, the decision to exploit the conflict of interest was independent of concerns about reputation or retribution.

We predicted that participants would give more biased advice to very happy partners than they would to happy partners. Advisors with a conflict of interest struggle to balance two concerns. On the one hand, advisors would like to offer very biased advice so that their partners will inflate their responses and they can make more money. On the other hand, advisors must appear credible enough for their partners to believe their advice and use it in their own predictions. We expected that when faced with a naïve partner, advisors would be less concerned about appearing credible because a naïve individual should be gullible enough to believe biased estimates, despite the advisor's potential conflict of interest. As a result, we predicted that the more individuals perceive their partner to be naïve, the more biased the advice they will give.

7.1. Method

One hundred fifteen individuals (44% female; mean age = 33.5) participated in an online experiment through Amazon Mechanical Turk in exchange for a 40-cent payment with the opportunity to receive a bonus payment which depended on their decisions in the study. All participants read that the researchers were interested in learning about the advice people give to each other. Everyone was assigned to the "Advisor" role and told that they had been paired with a partner from another study to whom they would give advice. Before participants gave advice, participants viewed their partner's responses to a short survey so that they could get to know him/her better.

The surveys were similar to the emotional inventory stimuli we used in Studies 1 and 4. The survey consisted of three basic demographic questions (gender, age, hometown), three "fun facts" (favorite color, favorite food, and hobbies), and three emotion-related questions. The first emotion question was open-ended, and asked the employee to describe his/her general emotional state in a sentence or two. The second two emotion questions were identical to the previous studies (a question with emoticons about how they feel and a scale representing how they feel about life in general, both on 11-point scales).

We randomly assigned participants to one of four conditions from a 2 (Emotion: *happy, very happy*) × 2 (Gender: male, female) between-subjects design. All information in the survey was the same for all participants, except for the partner's gender and the partner's responses to the three emotion questions, which differed depending on emotion condition. In the *happy* condition, the employee selected "9" for the emoticon description of how she typically feels and "8" for how she feels about her life in general, and described her emotions: "I am happy. I feel good." In the *very happy* condition, the employee selected "11" for the emoticon description of how she typically feels and "10" for how she feels about her life in general, and wrote in the textbox: "I am super happy! I feel great!"[3]

In this study, we compare the advice participants gave to these *happy* and *very happy* targets. After viewing their partner's survey, we asked participants to give advice to their partner for an estimation task. The task involved estimating the amount of money in five different jars of coins.

[3] We ran an additional study to explore whether perceptions of naiveté were specific to the precise language we used in this survey. In this study ($N = 294$), the *very happy* condition included a text box in which the employee had written, "I am extremely happy" rather than "I am super happy!" We find that this content also elicited perceptions of naiveté, relative to moderate happiness ($F(1, 291) = 8.41$, $p < 0.001$) and no information ($F(1, 291) = 13.88$, $p < 0.01$), suggesting that the word "super" is not driving our results.

Table 3
Results from jar estimate pilot study in Study 5. These statistics were also provided to participants in the main study.

	Median estimate	Lowest estimate	Highest estimate	25th percentile	75th percentile
Jar 1	$3.02	$1.00	$100.00	$2.00	$5.00
Jar 2	$17.69	$9.00	$200.00	$11.94	$30.00
Jar 3	$23.00	$7.50	$102.11	$15.00	$38.75
Jar 4	$28.56	$5.75	$300.00	$16.64	$49.50
Jar 5	$50.00	$6.47	$400.00	$29.50	$98.78

7.1.1. Pilot study

In a pilot study, we first asked a separate set of 100 participants to estimate the amount of money in each of five jars (see photos of the five jars in the Supplementary materials). We then calculated the median estimate, the interquartile range of the estimates, and the lowest and highest estimate for each jar of coins (see results in Table 3).

7.1.2. Main study

In the main study, we presented participants with the statistics depicted in Table 3. We provided this information so that participants would have a good sense of what was (un)reasonable advice. We included descriptions for the median ("the 'middle' estimate from the 100 people") and interquartile range ("the range that 50% of the 100 people guessed between") of each jar of coins. We told participants that as advisors, they had privileged access to this information, but that their partners would only see the jar of coins and their advice before having to make their own estimates for each jar.

We also gave participants a conflict of interest with respect to advising their partners (similar to Cain et al., 2005, 2011; Gino et al., 2012; Sah & Loewenstein, 2012). Specifically, we informed participants that they would receive a bonus depending on their partner's estimate, such that for every dollar that their partner's estimate exceeded the actual amount of money in the jar, participants would receive an additional 10 cents. We provided several examples to make sure participants understood (e.g., "if your partner's estimate is $4 higher than the actual amount of money, you will receive a 40 cent bonus").

We told participants that their partners would be paid based on their accuracy. We also told participants that "Your partner will also know that you have more information than they have regarding the amount of money in each jar, and that you may be paid based on different factors." The purpose of this information was to ensure that participants knew that their partners were aware that they could potentially receive inaccurate or biased advice.

Participants were given a three-question comprehension test to ensure that they understood all of the instructions and information correctly. If participants failed the comprehension test, we allowed them to review the instructions again and retake the test. If they failed twice, they were not allowed to complete the survey.

After passing the comprehension test, participants saw a jar of coins and the pilot information, provided their own estimate, and then provided advice to their partner regarding how much money was in the jar. Participants repeated this for each of the five jars. Our key outcome measure was the extent to which participants gave biased advice to their partners.

To confirm that participants were indeed strategic in their behavior, we asked them to explain what they were trying to do when providing advice estimates to their partner. Responses in both the happy and very happy conditions suggest that participants were attempting to earn their bonuses by giving advice that was as high as possible while still appearing credible, in order to persuade their partners to guess an amount that would exceed the amount of money in the jar. For example, participants wrote "I was trying to say the highest number that was believable" and "I was trying to come up with a number that can easily exceed the amount of money in the jar, but keep this number from looking obvious that was the intention."

7.1.3. Magnitude of bias

Consistent with prior work (e.g., Cain et al., 2005) we computed a Magnitude of Bias measure to assess the degree to which participants exaggerated the amount of money in the five jars of coins. The five jars in our study contained different amounts of money. Therefore, we used a standardized measure of bias, rather than raw estimates. Because the median provided a reference point for all participants, we used this as our "baseline" from which participants could adjust when choosing to give biased advice. Specifically, we computed the percentage by which the participant's advice deviated from the median estimate of each jar's contents. For each jar of coins, we divided the advice participants gave their partner by the median estimate they had been shown for that jar. A value of 1 for the Magnitude of Bias measure indicates that the advice a participant gave was exactly equal to the median; values above 1 indicate that the participant inflated their advice above the median. For example, a value of 1.3 indicates that a participant gave advice that was 30% greater than the median value. By using percentages, we are able to combine multiple advice rounds into a single measure of bias, and jars with larger amounts of money did not influence our results more than jars with smaller amounts. We took an average of the five percentages to compute an overall Magnitude of Bias measure.

After the advice task concluded, participants rated their partners on the same naiveté scale we used in the previous studies ($\alpha = 0.90$) and completed the same emotion manipulation check. In addition, participants rated the target's likeability using the same scale as in Study 3 ($r = -0.54$, $p < 0.001$).

7.2. Results

We first conducted a 2 (Emotion: *very happy, happy*) × 2 (Gender: male, female) between-subjects ANOVA. We found no interaction effects of gender on any of the dependent measures, so we conducted all subsequent analyses collapsed across gender.

7.2.1. Emotion manipulation check

Our manipulation check confirmed differences in perceived happiness between the two emotion conditions, $F(1, 113) = 34.28$, $p < 0.001$, $\eta_p^2 = 0.233$. Participants viewed the employee as significantly happier in the *very happy* condition ($M = 87.65$, $SD = 15.90$) than the *happy* condition ($M = 70.70$, $SD = 15.11$).

7.2.2. Naiveté

Consistent with our prior studies and supporting our thesis, level of happiness influenced perceptions of naiveté, $F(1, 113) = 9.56$, $p < 0.01$, $\eta_p^2 = 0.078$. Participants rated their partner as significantly more naïve in the *very happy* condition ($M = 3.62$, $SD = 1.27$) than the *happy* condition ($M = 2.90$, $SD = 1.21$).

7.2.3. Magnitude of bias

The target's level of happiness also influenced the magnitude of biased advice, $F(1, 113) = 8.01$, $p < 0.01$, $\eta_p^2 = 0.066$. When giving

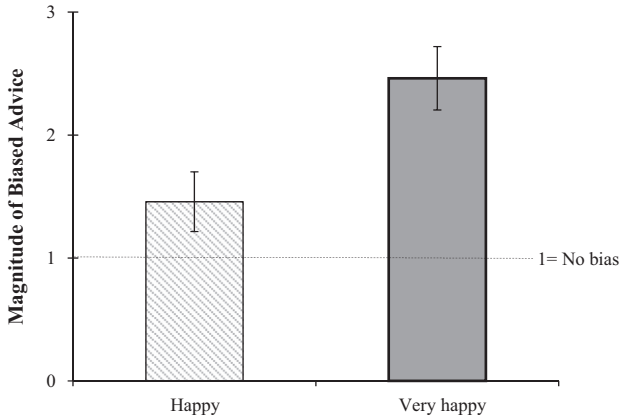


Fig. 5. Magnitude of biased advice in Study 5. Higher numbers indicate more biased advice. Main effect of emotion expression ($p < 0.01$). Error bars represent ± 1 standard error.

advice, participants in both groups overstated the amount of money in the jar. However, participants gave significantly more biased advice to their partners in the *very happy* condition ($M = 2.46$, $SD = 2.69$) than they did in the *happy* condition ($M = 1.46$, $SD = 0.62$). We depict these results in Fig. 5.

We also wanted to capture the magnitude of bias relative to participants' own estimate for the amount of money in the jar. To do this, we calculated the same magnitude of bias measure using participants' own estimate, rather than the median estimate from the pilot study, as the denominator. We found no differences in participants' own estimates across the two conditions (p's > 0.17), and our results do not change when we use participants' own estimate instead of the median estimate to calculate our measure of bias, $F(1, 113) = 6.90$, $p = 0.01$, $\eta_p^2 = 0.058$. Participants gave more biased advice in the *very happy* condition ($M = 1.95$, $SD = 2.04$) than they did in the *happy* condition ($M = 1.25$, $SD = 0.41$). Using participants' own estimates as the benchmark, rather than the median estimate, resulted in smaller bias values because participants' own estimates were, on average, higher than the median.[4]

7.2.4. Likeability

Our happiness manipulation did not influence perceived likeability, $F(1, 113) = 0.38$, $p = 0.54$, $\eta_p^2 = 0.003$. Happy partners ($M = 5.52$, $SD = 0.98$) were just as likeable as very happy partners ($M = 5.64$, $SD = 1.14$).

7.2.5. Mediation analyses

We conducted a bootstrap mediation analysis with 100,000 samples (Hayes & Preacher, 2014; SPSS Macro PROCESS, Model 4) to test whether perceived naiveté mediated the relationship between the target's happiness and biased advice. As predicted, the 95% confidence interval around the indirect effect did not include zero, indicating that naiveté mediated the relationship between an advisee's emotion and the magnitude of bias of an advisor's advice (Indirect Effect = 0.178, SE = 0.135; 95% C.I. = [0.024, 0.623]). Specifically, we found that individuals who expressed extreme happiness were perceived to be more naive ($a = 0.71$, $p < 0.01$), and as perceived naiveté increased, the more biased the advice the target received ($b = 0.25$, $p = 0.09$). Once we included perceived naiveté in our model, the effect of emotion magnitude on biased advice significantly decreased from $c = 1.00$, $p < 0.01$ to $c' = 0.83$, $p = 0.03$, suggesting partial mediation.

7.3. Discussion

As in the previous studies, we find that very happy individuals are perceived to be more naïve than happy individuals. In this study, we identify an important consequence of this inference. When a conflict of interest is present, people are more likely to give biased advice to very happy advisees than to moderately happy advisees. Perceptions of naiveté mediate the relationship between the advisee's emotion expression and biased advice.

As in Study 3, in this study we found no effect of our manipulation on likeability. This null result helps to explain why individuals exploit very happy targets. Although past research demonstrates that empathy towards a target reduces bias (Sah & Loewenstein, 2012), very happy people do not elicit more positive feelings (i.e., liking) than moderately happy targets. Instead, they simply elicit perceptions of naiveté. This provides further evidence that expressed happiness does not induce global negative judgments, and that opportunistic behavior does not reflect a desire to undermine disliked very happy targets.

8. Study 6

In Study 6, we extend our investigation of the relationship between expressed happiness and interpersonal exploitation in several ways. First, we explore a new context: a competitive negotiation. Distributive negotiations share many of the same features of conflict-of-interest settings. In these negotiations, the buyer and seller distribute a fixed surplus and people typically adopt a competitive orientation (Evans & Beltramini, 1987). Similar to prior research, which demonstrates that a counterpart's emotion influences negotiation outcomes (Filipowicz et al., 2011; Lelieveld et al., 2012; Van Kleef, De Dreu, & Manstead, 2006; Van Kleef et al., 2004), we demonstrate that the *magnitude* of a potential counterpart's emotional expressions influences whether people would like to negotiate with that counterpart. We predicted that individuals would be more likely to choose very happy people than moderately happy people as negotiation partners, because they believe that they can exploit very happy people's naiveté in competitive negotiations.

In addition to extending our investigation to the domain of negotiations, we use photographic stimuli in this study to demonstrate that our exploitation results are robust across survey-based and visual manipulations of happiness. We also rule out alternative mechanisms that might underlie the relationship between high magnitude happiness and interpersonal exploitation. Specifically, we show that the exploitation of very happy targets is driven by perceptions of naiveté, rather than anticipated guilt or beliefs about whether the target deserves to be exploited. Finally, we demonstrate that our results do not hinge on participants' own level of happiness.

8.1. Method

Four hundred seventy-six individuals (48% female; mean age = 38.6) participated in an online experiment through Amazon Mechanical Turk in exchange for a 50-cent payment and the opportunity to receive a bonus based on their decisions in the study.

8.1.1. Negotiation paradigm

All participants learned that they would negotiate for a used iPad with another Amazon Mechanical Turk worker and that they would be paid based on the deal that they reached. Participants

[4] We also analyzed our results using the raw advice given for each jar. In addition, to control for outliers, we conducted a set of analyses using a log transformation of the participants' advice for each jar of coins. Both of these analyses yielded similar results. We find a significant effect of Emotion on biased advice for every jar both for the raw advice (p's < 0.02) and for the log-transformed advice (p's < 0.01).

believed that they were randomly assigned to role, but in fact, all participants were assigned to the role of "Seller." Participants learned about the negotiation and that they would have the opportunity to choose their negotiation partner, the "Buyer."

As the "Seller", participants saw a picture of a used iPad and learned that the iPad was worth $110. Participants were incentivized to persuade the Buyer to pay more for the iPad than it was worth. Specifically, participants learned that they would earn one lottery ticket for every $1 that the Buyer agreed to pay above $110 (the iPad's true worth). Each lottery ticket entered participants into a raffle for a $50 bonus payment. Furthermore, participants could receive an additional $1 bonus for convincing the Buyer to pay at least $250 for the iPad. We included this extra incentive to increase participants' desire to exploit their partner in this negotiation.

Participants also learned about the Buyer's incentives. They knew that the Buyer would not know the actual worth of the iPad, but would be incentivized to pay as close to the actual worth of the iPad as possible. The Buyer had a budget of $300 and would earn 1 lottery ticket (for the $50 raffle) for every $1 they spent under $300. However, the Buyer also knew that they had to agree to pay at least the actual worth of the iPad or the deal would not go through and both the Seller and the Buyer would earn nothing. Participants also knew that they would be able to send a message to the Buyer about the iPad to convince them to buy the iPad at a specified price.

This paradigm parallels a real competitive negotiation. The Seller's goal is to persuade the Buyer to spend as much as possible, and the Buyer's goal is to pay as close to the actual worth of the good as possible, without knowing the actual worth of the good. Both parties, however, must identify a price that is within a reasonable zone of agreement (in this case, between the actual worth of the iPad and the Buyer's budget).

Participants were given a three-question comprehension test to ensure that they understood all of the instructions and information correctly. If participants failed the comprehension test, they were allowed to review the instructions again and retake the test. If they failed twice, they were not allowed to continue with the study.

8.1.2. Partner choice

After passing the comprehension test, participants were able to choose their negotiation partner. We informed participants that they would choose between two possible Buyers who had provided us with photographs of themselves. Specifically, participants read:

> *In a previous study, we had participants submit photographs of themselves to us. All participants had to submit a headshot (a photograph of them from shoulders up), smiling.*
>
> *We edited all photographs to be black and white, and of equal clarity.*
>
> *After submitting their photographs, individuals learned that they were likely to be contacted again for future partner studies.*
>
> *On the next page, you will see photographs of 2 potential BUYERS.*
>
> *You will choose which one to negotiate with. Then, you will craft a message to send to the BUYER, who will receive the information via a new survey on MTurk.*

Therefore, participants believed that they would interact with a real fellow participant on Amazon Mechanical Turk. In reality, participants viewed photographs of confederates we had hired and trained to display moderate or extreme happiness. We randomly assigned participants to a condition from a 2 (Emotion: *happy, very happy*) × 5 (Stimulus sampling) between-subjects design.

Participants made a choice between two Buyers. Each choice set featured one male, displaying mild happiness, called "Person 404." We held this "filler individual" constant across all conditions, and only varied the second "target individual" that participants saw, called "Person 512." For the filler individual, we used a photograph of one of the male stimuli displaying moderate happiness from Studies 2 and 3. We chose this photograph because we knew that it validly depicted moderate happiness and did not elicit suspicion from participants. The target individual was one of five male confederates whom we had trained to display either moderate or extreme happiness for this study, three of whom were professional actors. We include our exact stimuli and the choice sets participants saw in Appendix D.

Partner choice is our main dependent variable. Participants were incentivized to exploit their partner and knew that the success of their exploitation depended on the degree to which their partner would rely on their message to determine the price of the iPad. We intentionally made the opportunity for exploitation salient by reminding participants that "their goal is to convince the BUYER that the iPad is worth as much as possible" so they could make the most money possible. Therefore, their choice of partner reflects their decision of whom to exploit.

8.1.3. Dependent variables

After participants selected their negotiation partner, they rated their partners. Participants who had selected "Person 512" (the target individual) were informed that they were successfully paired with Person 512 and would answer a few questions about this person before they negotiated. Participants who had selected "Person 404" (the filler individual) were informed that we were unable to pair them with Person 404 and therefore they would be paired with Person 512. They learned that they would answer a few questions about Person 512 before they negotiated. This procedure ensured that all participants rated the focal target individual.

Participants then viewed a photograph of the target individual, and rated them on the same naiveté scale we used in the previous studies ($\alpha = 0.93$). Then, as an additional dependent variable relevant to the negotiation context, participants rated how easy it would be to exploit the target using two items: "How likely is this person to believe the iPad is worth more than $110?" (1 = "not at all likely" to 7 = "extremely likely") and "How easy would it be to convince this person that the iPad is worth more than it actually is?" (1 = "not at all easy" to 7 = "extremely easy"). We averaged these two items to form an Ease of Exploitation measure ($r = .78$, $p < 0.001$).

As in Study 5, we expected exploitation to be driven by perceptions of naiveté. To test the robustness of our proposed mechanism, we also explored two alternative mechanisms in this study: anticipated guilt from exploitation and deservingness of exploitation.

It is possible that individuals would not feel as guilty about exploiting very happy targets relative to moderately happy targets because they believe that very happy targets are more emotionally resilient to negative outcomes. We explore this possibility by asking participants the following two questions: "How guilty would you feel about overstating the iPad's worth to the Buyer?" (1 = "not at all guilty" to 7 = "extremely guilty") and "How bad would you feel about overstating the iPad's worth to the Buyer?" (1 = "not at all bad" to 7 = "extremely bad"). We averaged these two items to form a measure of Anticipated Guilt ($r = .97$, $p < 0.001$).

Another possibility is that individuals believe that very happy targets are more deserving of exploitation because they feel higher levels of happiness than is typical for most people. We explore this possibility by asking participants to rate their agreement with the following two statements: "I think this person deserves to be less happy than he/she already is" and "This person needs a reality check" (1 = "strongly disagree" to 7 = "strongly agree"). We averaged these two items to form a measure of Deservingness ($r = .66$, $p < 0.001$).

As in Study 5, participants also completed an emotion manipulation check and rated the target's likability on a two-item scale ($r = -.65$, $p < 0.001$).

After participants completed our focal items, they completed the negotiation task. We informed participants that the Buyer they were paired with would receive a message indicating that the iPad was worth $287 and that they could write a free-response message to the Buyer to convince them of this price. We assigned participants to a fixed price, rather than allowing them to choose it, so that we could measure guilt and deservingness independent of the degree of exploitation.

Finally, participants provided demographic information, rated their own happiness level, and completed a suspicion check. We measured participants' own happiness to examine whether or not this was correlated with their exploitation of very happy targets. Participants responded to the same two items that we used to manipulate happiness level in prior studies: they used an 11-point emoticon-based scale to "describe how they typically feel" and they rated how they "feel about life in general" using an 11-point scale anchored at "Extremely sad" and "Extremely happy." These were averaged to form a measure of participants' own emotion ($r = 0.82$, $p < 0.001$). At the very end of the survey, participants were asked what they thought the purpose of the study was, to gauge suspicion about the authenticity of the potential negotiation partners.

8.2. Results

We used logistic regression to examine our main dependent variable (1 = selected the happy/very happy target individual, 0 = selected the filler individual), and we used one-way ANOVA to examine our attitudinal variables (using emotion condition as a factor). We found no significant interaction effects of stimulus on any of our main dependent measures, so we collapse across this factor in subsequent analyses.[5]

8.2.1. Emotion manipulation check

Our manipulation check confirmed differences in perceived happiness between the two emotion conditions, $F(1, 474) = 86.00$, $p < 0.001$, $\eta_p^2 = 0.15$. Participants viewed the target as significantly happier in the *very happy* condition ($M = 82.35$, $SD = 14.09$) than the *happy* condition ($M = 69.48$, $SD = 16.11$).

8.2.2. Naiveté

Consistent with our prior studies, emotion expression influenced perceptions of naiveté, $F(1, 474) = 9.42$, $p < 0.01$, $\eta_p^2 = 0.019$. Participants rated their partner as significantly more naïve in the *very happy* condition ($M = 3.48$, $SD = 1.45$) than the *happy* condition ($M = 3.10$, $SD = 1.22$).

8.2.3. Partner choice

Participants were more likely to choose the very happy target as the Buyer for this competitive negotiation. Specifically, 57.8% of participants chose the very happy target (over the filler individual), whereas only 42.7% of participants chose the moderately happy target (over the filler individual), $\chi^2 = 10.89$, $p = 0.001$.

8.2.4. Ease of exploitation

Participants also judged the very happy target as easier to exploit ($M = 4.68$, $SD = 1.36$) than the moderately happy target ($M = 4.40$, $SD = 1.38$), $F(1, 474) = 4.98$, $p = 0.03$, $\eta_p^2 = 0.010$.

[5] We did find a significant emotion condition × stimulus interaction for our manipulation check ($p = 0.001$), such that some stimuli had stronger effects than others (see Appendix D). All results are directionally consistent across all five stimuli and hold when we control for stimulus.

8.2.5. Likeability

Our happiness manipulation did not influence perceived likeability, $F(1, 474) = 2.16$, $p = 0.14$. Happy partners ($M = 5.37$, $SD = 1.14$) were perceived to be just as likeable as very happy partners ($M = 5.52$, $SD = 1.13$).

8.2.6. Alternative mechanisms

We did not find any evidence that the target's emotion expression influenced participants' guilt associated with exploiting the target, $F(1, 474) = 1.99$, $p = 0.16$, or beliefs about the target's deservingness of exploitation, $F(1, 474) = 0.95$, $p = 0.33$. We provide the corresponding means and standard deviations for these measures in Table 4.

8.2.7. Mediation analyses

We conducted a bootstrap mediation analysis with 100,000 samples (Hayes & Preacher, 2014; SPSS Macro PROCESS, Model 4) to test the mechanisms underlying the relationship between a target's expressed happiness and whether participants selected them as a partner for a competitive negotiation. As predicted, the 95% confidence interval around the indirect effect did not include zero, indicating that naiveté mediated the relationship between the target's emotion and partner choice (Indirect Effect = 0.159, SE = 0.062; 95% C.I. = [0.057, 0.301]). Specifically, we found that targets who expressed extreme happiness were perceived to be more naive ($a = 0.38$, $p < 0.01$), and as perceived naiveté of the target increased, participants were more likely to select the target as a negotiation partner ($b = 0.10$, $p < 0.001$). Once we included perceived naiveté in our model, the effect of emotion magnitude on partner choice decreased from $c = 0.15$, $p < 0.01$ to $c' = 0.12$, $p = 0.01$, suggesting partial mediation.

Interestingly, ease of exploitation also mediates the relationship between expressed happiness and partner choice (Indirect Effect = 0.204, SE = 0.100; 95% C.I. = [0.022, 0.409]).

An additional multiple mediation model with all other potential mechanisms included in the model provided further evidence that the effect of emotion on partner choice was mediated by perceived naiveté (Indirect Effect = 0.181, SE = 0.071; 95% C.I. = [0.063, 0.341]), and was not mediated by anticipated guilt from exploitation (Indirect Effect = −0.007, SE = 0.018; 95% C.I. = [−0.065, 0.015]), deservingness of exploitation (Indirect Effect = 0.013, SE = 0.020; 95% C.I. = [−0.010, 0.082]), or likeability (Indirect Effect = 0.063, SE = 0.049; 95% C.I. = [−0.017, 0.178]).

8.2.8. Participants' own emotion

We ran a logistic regression on partner choice with emotion condition, participants' own emotion, and their interaction as independent variables. We found no main or interaction effects of participants' own happiness level (*p*s > 0.33), suggesting that the link between expressed happiness and exploitation is independent of participant's own feelings. We also ran a linear regression on perceived naiveté with emotion condition, participants' own emotion, and their interaction as independent variables. While we found a significant main effect of participants' own happiness level

Table 4
The effects of extreme happiness on alternative mechanisms associated with exploitation in Study 6.

		Moderately happy target	Very happy target
Anticipated guilt	*M*	3	3.67
	SD	1.94	2.06
	Test	$F(1, 474) = 1.99$, $p = 0.16$	
Deservingness	*M*	1.78	1.89
	SD	1.19	1.18
	Test	$F(1, 474) = 0.95$, $p = 0.33$	

(p = 0.04) such that happier people rated targets as less naive, we found no interaction effect of participants' own happiness level with the emotion manipulation (p = 0.35).

8.2.9. Suspicion check

Eight participants directly guessed our hypothesis for the study. Only two participants questioned whether the potential negotiation partners were real, suggesting that participants largely believed that they would actually be interacting with the targets. Our main results are unchanged when we exclude these people from our analyses.

8.3. Discussion

In Study 6, we provide further evidence of the link between expressions of happiness and interpersonal exploitation. We find that very happy targets are selected as partners for competitive negotiations because they are perceived to be more naïve and easier to exploit. In this study, we also examine a range of alternative explanations. We find no evidence that participants feel less guilty about exploiting very happy targets or think that very happy targets deserve to be exploited. Consistent with Studies 3 and 5, we also find no effect of our manipulation on likeability. Finally, we find no evidence that participants' own level of happiness influences their desire to exploit very happy targets.

We acknowledge that we purposefully incentivized participants to behave competitively in this negotiation and made the opportunity for exploitation salient. This context allowed us to directly test the relationship between expressed happiness, perceived naiveté, and the choice to exploit. However, it is possible that when the opportunity for exploitation is more ambiguous, our effects may dissipate. That is, in collaborative or neutral contexts, individuals may sympathize with, rather than undermine, naïve targets. Indeed, this is an interesting question for future research.

9. General discussion

Across six studies, we document the social costs of extreme happiness. We find that expressions of high magnitude happiness trigger perceptions of naiveté: very happy individuals are perceived to be more naïve than moderately happy individuals. We also explore the underlying mechanism. People believe that very happy individuals shelter themselves from negative information and engage in biased processing. Furthermore, we document a boundary condition of the happiness-naiveté relationship: evidence that a target seeks negative information moderates the effect of emotional expression on perceived naiveté. Finally, we demonstrate that perceptions of naiveté influence opportunistic behavior. Compared to participants paired with moderately happy advisees, participants paired with very happy advisees are more likely to give biased, self-serving advice. Participants are also more likely to choose very happy targets in competitive negotiations when the opportunity for exploitation is salient. These effects are mediated by perceived naiveté.

We establish these relationships across a range of stimuli, male and female targets, and by collecting both attitudinal and behavioral measures. In Studies 1, 4, and 5 we introduce a subtle and controlled manipulation by altering a target's responses to an emotional inventory. In Studies 2, 3, and 6 we use photographs to manipulate emotional expressions. Although each of these stimuli has its own limitations, taken together, our results suggest that high-magnitude happiness, communicated by both facial and digital expressions, reliably signals naiveté.

Importantly, our findings demonstrate that the magnitude of emotion matters for interpersonal perception. By asserting what a discrete emotion does, prior scholars have implicitly assumed that emotions influence social cognition in the same way across levels of intensity. Anger has not been distinguished from rage, sadness has not been distinguished from despair, and happiness has not been distinguished from bliss. In our work, we challenge this implicit assumption and demonstrate that people make different inferences about others depending on the degree to which they express emotions, and importantly, these inferences influence interpersonal behavior. To our knowledge, this research is the first to investigate how the magnitude of emotional expression influences interpersonal perceptions.

Our findings not only contribute to what we know about happiness expressions, but also to our understanding of how emotions influence social judgment and cognition more broadly. Consistent with existing work on "reverse appraisal" processes (De Melo et al., 2012; Hareli & Hess, 2010; Scherer & Grandjean, 2008), our research provides evidence that individuals hold implicit theories about the relationship between a target's emotion and the way a target experiences his environment. Specifically, observers intuit that very happy individuals are less likely to search for negative information about the world or process information deeply, which leads observers to believe that very happy individuals are naïve.

Our investigation also advances our understanding of naiveté. We introduce a 4-item scale to measure perceptions of naiveté, and we demonstrate that naiveté is distinct from a lack of general intelligence and competence. The perception that an individual is naïve has been shown to cause hiring discrimination (Berry & McArthur, 1985; Zebrowitz, Tenenbaum, & Goldstein, 1991), and naiveté itself is predictive of poor job performance, perhaps even more so than a lack of cognitive intelligence (Wagner & Sternberg, 1985). However, despite its importance in job outcomes and success, surprisingly little work has investigated naiveté.

We also document an important negative consequence of naiveté: interpersonal exploitation. We find that individuals with a conflict of interest are more likely to give biased advice to very happy individuals and are more likely to choose a very happy partner for a competitive negotiation, because they perceive them to be naïve. Conflicts of interest are common, and our results in Studies 5 and 6 suggest that very happy people, and naïve people generally, may be taken advantage of in these situations. More broadly, our findings link emotional expressions with opportunistic behavior, and substantially advance our understanding of when individuals are most likely to take advantage of others in the presence of a conflict of interest (e.g., Moore, Tetlock, Tanlu, & Bazerman, 2006; Sah & Loewenstein, 2012; Sah, Loewenstein, & Cain, 2013). Most conflict-of-interest research has focused on external features of the situation, such as incentives, policies, and practices that cause advisors to be more likely to give biased advice and receivers to be more receptive to biased advice. In our research, we build on this literature to offer insight into *who* is more likely to receive biased advice: individuals who express high levels of happiness.

We also contribute to the body of literature on emotions in negotiations (Filipowicz et al., 2011; Lelieveld et al., 2012; Van Kleef et al., 2004, 2006). While existing research has demonstrated that emotions affect current negotiation outcomes with an existing partner, our work shows that emotional expressions also influence *how people choose* between potential negotiation partners. Individuals may select negotiation partners based on their beliefs about who they can successfully exploit, and we demonstrate that the magnitude of a potential partners' emotional expression can drive these beliefs and choices.

Our findings also inform a number of practical implications. We focused our investigation on the costs of extreme happiness, because happiness is an emotion that individuals are encouraged to express and experience, and because many individuals pursue happiness at high levels. Indeed, prior research has documented numerous benefits of displaying happiness (e.g., Barger &

Grandey, 2006; Nisbett & Wilson, 1977; Parasuraman, Zeithaml, & Berry, 1985; Pugh, 2001). As a result, normative "display rules" suggest that people should express happiness in many situations (Ekman, 1973; Hochschild, 1983). For example, salespeople are explicitly taught to maintain cheerful, enthusiastic demeanors to encourage consumer purchases (Pugh, 2001; Rafaeli & Sutton, 1990; Totterdell & Holman, 2003), and leaders are told to express happiness because it makes them appear more charismatic (Damen et al., 2008b) and effective (George & Bettenhausen, 1990; Newcombe & Ashkanasy, 2002). Although this body of research focuses primarily on discrete expression of happiness, the implicit recommendation is that employees should express happiness routinely, across many organizational contexts, as if it is their constant disposition. Our findings qualify these recommendations: people should be aware that high levels of happiness may also signal naiveté. This may be especially relevant for people who need to project wisdom or worldly experience. Employees who display happiness at very high levels may seem unprepared to field customer complaints or unknowledgeable about the products or services they provide. Leaders who express extreme happiness may be seen as easily persuaded, unknowledgeable, exploitable, or broadly ineffective.

9.1. Future directions

Our findings demonstrate that the magnitude of expressed happiness influences social cognition. A surprising gap exists in our understanding of how emotions expressed and experienced at different levels influence judgment and behavior. Whereas previous research has used photographs, videos, and digital avatars of targets who display *moderate* emotion (Brescoll & Uhlmann, 2008; De Melo et al., 2012; Rothman, 2011; Tiedens, 2001), we demonstrate that the magnitude of a target's expressed emotion can significantly shift the inferences people make. In the present investigation, we explore the link between happiness and naiveté, but many open questions remain with respect to the mechanisms and behavioral consequences of other emotions expressed at different magnitudes. Quite possibly, the magnitude of an expressed emotion may moderate a number of well-known emotion-trait links. For example, prior work has found that anger signals status and competence (e.g., Brescoll & Uhlmann, 2008; Knutson, 1996; Tiedens, 2001), but expressions of high magnitude anger (e.g., rage) might signal a lack of control and low competence. As a result, individuals may treat angry and enraged counterparts quite differently. This author team has conducted several studies suggesting this is likely to be the case. Specifically, we have found that extreme anger signals lower competence than moderate anger, which lowers perceptions of status. Although anger is not the focus of the present research, our initial findings highlight the promise of examining the role of magnitude across a range of emotions.

We also have initial evidence that our effects go beyond dispositional emotion and hold even in situations where individuals express discrete extreme happiness. In an exploratory study ($N = 118$), we manipulated the magnitude of happiness (very happy, moderately happy, neutral) a target expressed in response to three separate temporary events (nice weather, a tasty sandwich, receiving a free pen). Consistent with our other manipulations of happiness, an ANOVA revealed a significant effect of magnitude on perceived naiveté, $F(2, 115) = 10.01$, $p < 0.001$. Participants rated the target as more naïve in the *very happy* condition ($M = 3.26$, $SD = 1.10$) than the *happy* condition ($M = 2.12$, $SD = 1.07$), $F(1, 115) = 13.20$, $p < 0.001$. These initial results demonstrate that even momentary emotional expressions at high magnitudes may have powerful effects.

Future work should explore how context and culture influence the inferences observers make of extreme emotional expressions. The perceived appropriateness of the emotion is likely to matter. For example, if a person just won the lottery or received a substantial promotion, extreme happiness may be especially appropriate and *not* displaying extreme happiness may be met with negative reactions. Another factor that is likely to matter is culture. There is wide cross-cultural variation in judgments of emotional experience and expression (Kitayama, Markus, & Kurokawa, 2000; Kleinman & Good, 1985; Tsai, 2007; Tsai, Knutson, & Fung, 2006; Wierzbicka, 1994). For example, in Asian cultures, emotional expressions are expected to be subdued and moderate (Tsai, Chentsova-Dutton, Freire-Bebeau, & Przymus, 2002; Tsai & Levenson, 1997); in these cultures, extreme happiness may be sanctioned even more severely than we observe in our data. Although we did not collect ethnicity data in our studies, all of our participants were living in the United States and were fluent in English, and therefore, likely to be familiar with American display rules and emotional norms. Thus, it is even more surprising that extreme happiness had social costs, given the strong American norm to feel and express happiness (Izard, 1971; Sommers, 1984a; Tsai, Levenson, & McCoy, 2006; Tsai et al., 2006).

Future work should also examine the contexts in which perceived naiveté leads to exploitation versus sympathy. Just as incompetence has been shown to elicit both harming and helping behavior in different circumstances (e.g., Cuddy et al., 2007), we expect naiveté to elicit a range of behaviors. In the present research, we focus on competitive contexts in which individuals are motivated to undermine or lie to a target. In these cases, naiveté is a trait that participants can easily exploit. However, in cooperative contexts, individuals may be likely to help naïve counterparts, recognizing that they are particularly vulnerable to exploitation. It would be interesting to examine the consequences of naiveté across a range of settings, including different types of negotiations and team exercises.

In addition, emotional contagion may mitigate some of the negative effects of extreme happiness in face-to-face interactions, or when the target is in a leadership role (Damen et al., 2008a, 2008b; Pugh, 2001; Van Kleef et al., 2009). We recognize that the paradigms we employed in the present research limited emotional contagion. We used controlled stimuli that isolated the cognitive processes associated with emotion perception which made it difficult for participants to actually mimic or "catch" a target's extreme happiness. Future work should examine the consequences of extreme happiness, and other extreme emotions, in face-to-face settings.

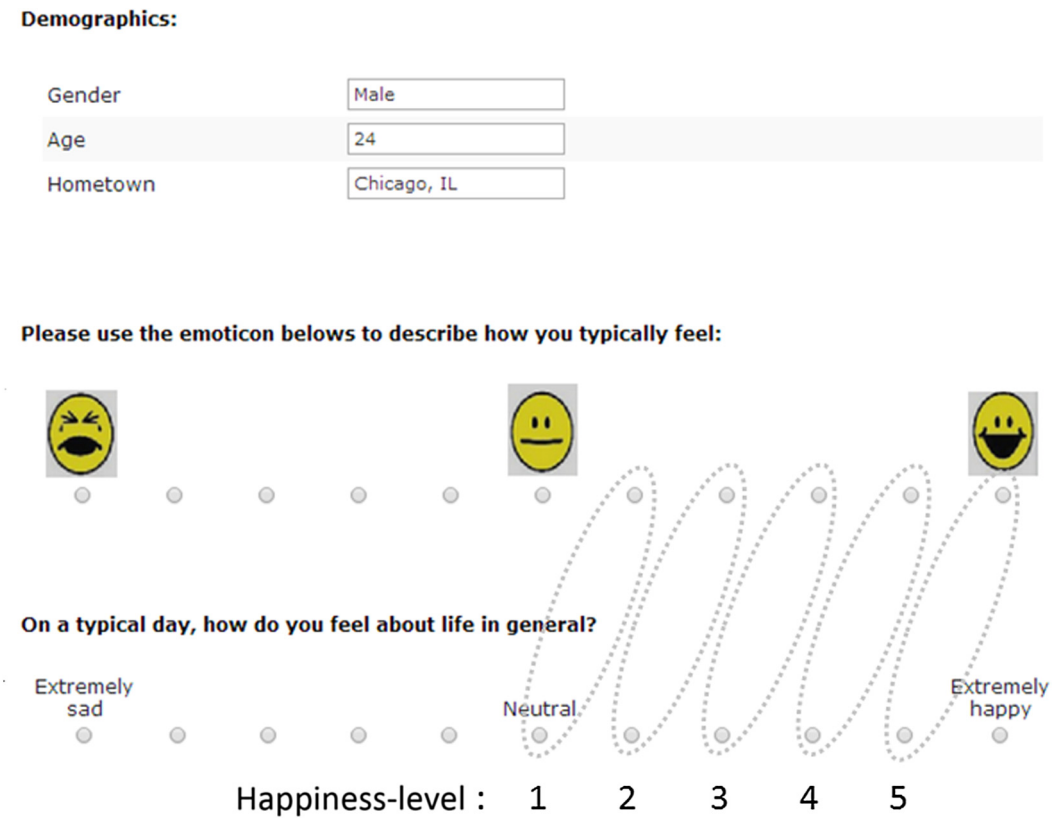
Finally, it is important for future research to examine if the inferences observers make are accurate. Although past research suggests that happy people are more gullible and more likely to engage in biased information processing than neutral or sad targets, we cannot be sure that the *magnitude* of experienced happiness influences these processes in the same way observers intuit.

10. Conclusion

Very happy individuals are perceived to be more naïve than moderately happy individuals. As a result, very happy individuals are more likely to be targets of exploitation than happy individuals. Our findings document that the magnitude of emotional expression matters and we call for future work to explore how the same emotion, experienced or expressed at different levels, influences cognition.

Appendix A

Stimuli used in Study 1. Shows the *Male* conditions. Circles indicate the target's responses for each of the five happiness-level conditions.



Appendix B

Naiveté Scale (used in all studies)

Please rate the extent to which the following traits describe the target (1 = "Not at all" to 7 = "Extremely"):

1. Naïve.
2. Gullible.
3. Ignorant.
4. Unaware.

Biased search and inference processes scale (used in Studies 2, 3, and 4)

Please rate the extent to which you agree with the following statements (1 = "Strongly disagree" to 7 = "Strongly agree"):

1. This individual does not spend time reading about the news in other countries.
2. This individual does not seek out information about the world that might be negative.
3. This individual finds ways to avoid unpleasant information.
4. This individual does not like information that undermines a positive world view.
5. This individual processes negative events in a superficial way.
6. This individual does not like to hear when something goes wrong in another person's life.
7. This individual does not notice when things in the world are going badly.

Positive information avoidance scale (used in Study 3)

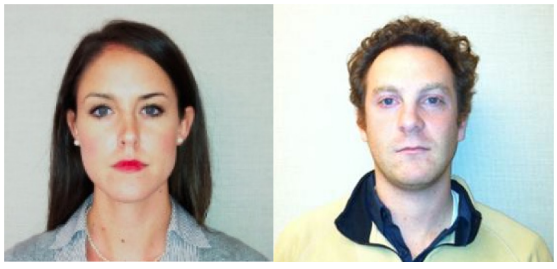
Please rate the extent to which you agree with the following statements (1 = "Strongly disagree" to 7 = "Strongly agree"):

1. The colleague does not seek out information about the world that might be positive.
2. The colleague finds ways to avoid pleasant information.
3. The colleague does not like information that undermines a negative world view.
4. The colleague processes positive events in a superficial way.
5. The colleague does not like to hear when something goes well in another person's life.
6. The colleague does not notice when things in the world are going well.

Appendix C

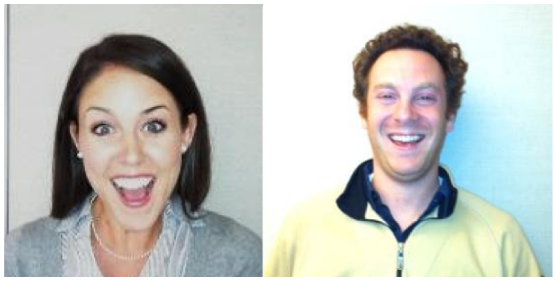
Example photos for male and female target (i.e., "Jennifer" and "Brian") in Studies 2 and 3

Neutral condition



Happy condition

Very Happy condition

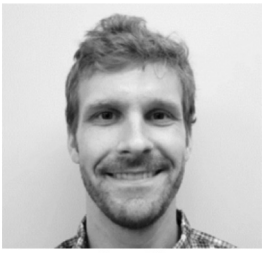


Appendix D

Screenshot of choice sets used in Study 6

Stimulus 4: Happy


Person 404


Person 512

Stimulus 4: Very happy


Person 404


Person 512

Stimulus 5: Happy


Person 404


Person 512

Stimulus 5: Very happy


Person 404


Person 512

Supplementary materials

Supplementary materials associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.obhdp.2016.05.006.

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