The Effects of Up-Regulated Happiness on Others’ Prosocial Behavior:

The Role of Cultural Thinking Style

by

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Abstract
Past research has suggested that up-regulating displays of happiness leads to positive social outcomes. In my dissertation research, I suggest that whether the up-regulation of displays of happiness leads to positive outcomes depends on observers’ culture. I developed and tested a model of how one aspect of observers’ culture, analytic-holistic thinking, influences the relation between expressers’ displays of happiness and observers’ prosocial behavior. In two studies, I examined how observers’ analytical-holistic thinking moderates the effect of expressers’ inauthentic displays of happiness (regulated through surface acting) and expressers’ authentic displays of happiness (regulated through deep acting) on observers’ prosocial behavior and trust inferences. In a laboratory experiment (Study 1), observers’ analytical-holistic thinking moderated the effect of project leaders’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ trust in the expresser, but not on observers’ prosocial behavior (time taken to edit a cover letter). In a field fundraising experiment (Study 2), observers’ analytical-holistic thinking moderated the effect of fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ trust in fundraisers, intentions to volunteer for the charity organization, and monetary donations to the charity organization. Further, observers’
trust in fundraisers mediated the moderating effect of observers’ analytical-holistic thinking on the relation between fundraisers’ inauthentic displays of happiness and observers’ intention to volunteer. Contributions to the literature on the social effects of emotions and to the literature on fundraising and helping as well as practical implications are discussed.
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Effects of Up-Regulated Happiness on Others’ Prosocial Behavior: The Role of Cultural Thinking Style

Displaying happiness plays a fundamental role in social interactions (Fredrickson, 1998, 2001; Frijda & Mesquita, 1994), and it has positive and favorable effects on the attitudes and behaviors of those observing emotions (Keltner & Haidt, 1999; Van Kleef, 2009). For example, displays of happiness are related to perceived likability and trustworthiness (e.g., Harker & Keltner, 2001; Krumhuber et al., 2007) and satisfaction with customer service (e.g., Grandey, Fisk, Mattila, Jansen, & Sideman, 2005). Given the favorable effects of displaying happiness in social interactions, people often up-regulate their displays of happiness – that is, they amplify displays of happiness that they may or may not feel (Pataki & Clark, 2004).

Up-regulating happiness, however, may not always lead to positive social outcomes. For example, when McDonald’s expanded to Russia, employees were trained to up-regulate happiness to conform to North American expectations of high intensity positive emotions. Instead of being satisfied with the service, however, customers concluded that employees were mocking them with constant smiling (Ashforth & Humphrey, 1993). As this example illustrates, taking for granted that a positive effect of up-regulated happiness in one culture will transfer to another culture may have serious consequences for the success of social interactions.

In my dissertation research, I developed and tested a model of how observers’ culture shapes the effects of expressers’ up-regulated displays of happiness on observers’ prosocial behavior.1 My model is depicted in Figure 1. I suggest that there is a relation between expressers’ up-regulated displays of happiness and observers’ prosocial behavior that is moderated by observers’ culture. Given that observers’ reactions to expressers’ emotions are at the core of the social effects of emotions (Keltner & Haidt, 1999; Keltner & Kring, 1998; Van Kleef, 2009) and
that observers’ reactions may depend on their culture, it is theoretically important to examine the role of observers’ culture. To delineate the effects of the observers’ culture, I use the construct of analytical-holistic thinking, a cultural thinking style that explains the fundamental cultural differences in perception and cognition when processing information, including information on emotions. In addition, I suggest that observers’ trust in expressers mediates the moderating effect of observers’ analytical-holistic thinking on the relation between expressers’ up-regulated displays of happiness and observers’ prosocial behavior.

There are several contributions of this research. First, I address an important omission from the past research on the social effects of up-regulated happiness that has not considered the role of observers’ culture. In particular, my dissertation research expands and builds on the literature on the social effects of emotions by showing that the same displays of emotion may invoke different inferences and behaviors in observers with different levels of analytical-holistic thinking. Second, by identifying the underlying process, I elucidate that cultural effects lie in part in observers’ trust inferences, which diverges from and complements past research examining cultural differences in emotion perception and recognition. Past research has suggested that people from different cultures may perceive emotions differently (e.g., Matsumoto & Ekman, 1989), and my dissertation research adds to this literature by suggesting that culture shapes not only perceptions but also inferences. Finally, I establish that the social effects of emotions occur in the domain of prosocial behavior. Although past research has established that up-regulated happiness has an effect on others’ behaviors in contexts such as customer service (e.g., Grandey et al., 2005), past research has not considered the emotional displays of help seekers may influence the prosocial behavior of potential helpers. At the same time, the literature on prosocial
behavior has rarely considered the social effects of emotions. Hence, this paper integrates and advances the literatures on prosocial behavior and on the social effects of emotion.

In the next sections, I first review past research on prosocial behavior and happiness. I suggest that expressers’ up-regulation of happiness through deep and surface acting (which produce authentic and inauthentic displays of emotions, respectively), have different consequences for observers’ prosocial behavior. Second, I develop a theoretical model of how observers’ analytical-holistic thinking moderates the effects of expressers’ inauthentic and authentic displays of happiness on observers’ prosocial behavior. I present two studies testing the model, a laboratory experiment in the context of a project leader asking for help with editing cover letters while regulating displays of happiness; and a field experiment in the context of a fundraiser for a charity organization where a fundraiser solicits monetary donations while regulating displays of happiness. Finally, theoretical contributions, future research, and practical implications are discussed.

The Effects of Up-Regulated Displays of Happiness on Prosocial Behavior

Past Research on Prosocial Behavior and Happiness

Prosocial behaviors such as helping, sharing, donating, volunteering, and cooperating are important evolutionary behaviors that benefit individuals and society (Barrett, Dunbar, & Lycett, 2002; Buss, 2003; Dawkins, 1989). Prosocial behavior has in general been defined as a category of acts that benefit other people and enhance their welfare (Penner, Dovidio, Piliavin, & Schroeder, 2005). In my dissertation, I focus on prosocial behaviors that are requested by an individual on behalf of other(s) in need of help. For instance, a charity fundraiser may request help from potential helpers on behalf of sick children or other people in need. I focus on these types of prosocial behavior because people may frequently up-regulate their displays of
happiness in these cases, and because these prosocial behaviors are social in nature in that they involve an interaction between an individual requesting help and a potential helper.

Past research on the relation between happiness and prosocial behavior has mostly examined the effects of happiness experienced by the individual engaging in prosocial behavior. These effects are intrapersonal because they refer to the effects of emotions on the individual who is experiencing emotions. These intrapersonal effects are different than the social effects of emotions that refer to the effect of one individual’s emotions on the reactions of an individual who is observing those emotions. Past research on intrapersonal effects has typically found that happiness (or related constructs of positive affect and mood) is associated with prosocial behavior (Cunningham, Steinberg, & Grev, 1980; George, 1990, 1991; Isen, Clark, & Schwartz, 1976; Isen & Levin, 1972). For example, Isen et al. (1976) found that participants in positive mood were more likely to help an experimenter by making a telephone call and passing on a message. In the organizational context, George (1991) found in a sample of sales people that state positive mood was positively related to extra-role and in-role prosocial behavior.

This line of research has not considered two important factors that are inherent to situations when help is requested by one individual (on behalf of others) from a potential helper. First, the emotions of an individual requesting help may influence the prosocial behavior of the potential helper. Such social effects of emotions have been mostly omitted in the literature on prosocial behavior. An exception is work by George and Bettenhausen (1990) that showed that the leader’s positive mood was positively related to a group’s performance of prosocial behavior directed at customers. Second, when requesting help, people may want to leave positive impressions (cf. DePaulo, Dull, Greeneberg, & Swaim, 1989) and up-regulating happiness may be one of the most common means for doing that (e.g., Godfrey, Jones, & Lord, 1986; Rosenfeld,
1966). However, this past research has examined spontaneously felt (or induced) emotions and did not consider that people requesting help may regulate their emotions. Thus, an important but understudied question in the literature on prosocial behavior is whether and why up-regulated displays of happiness of individuals requesting help influence observers’ prosocial behavior.

The literature on the social effects of emotions may provide valuable insights into how up-regulated displays of happiness of help seekers may influence the prosocial behavior of potential helpers. The literature on the social effects of emotions posits that emotions convey information about an individual’s thoughts, feelings, and intentions (Keltner & Haidt, 1999; Van Kleef, 2009). Specifically, happiness communicates an individual’s wish for affiliation and socialization and benevolent intentions (Van Kleef, 2009; Van Kleef, De Dreu, & Manstead, 2010). Thus, when an individual up-regulates displays of happiness to elicit prosocial acts, an observer may make positive character inferences about expressers and, in turn, act more prosocially. Happiness, however, can be up-regulated in more than one way, and different strategies for emotion regulation may have different consequences for prosocial behavior because displayed emotions may differ in authenticity.

**Different Forms for Up-Regulation of Happiness: Deep Acting and Surface Acting**

At a broad level, there are two forms of strategies for regulating emotions that differ in their timing during the unfolding of an emotion: antecedent-focused regulation, or *deep acting,* and response-focused regulation, or *surface acting* (Grandey, 2000; Gross, 1998; Hochschild, 1983). Deep acting occurs before an emotion is fully under way and, as such, it changes both the internal experience and the public display of emotion. Surface acting, in contrast, occurs once an emotion is fully under way and, as such, it changes the public display but not the internal experience of emotion (Gross, 1998; Gross & John, 2003). Given that deep acting changes both
the internal experience and the public display of emotion, it produces authentic displays of emotions that match subjective experiences. By contrast, surface acting produces inauthentic displays that do not closely correspond to subjective experiences (Côté, 2005; Grandey, 2000). In turn, authentically and inauthentically up-regulated displays of happiness may influence the prosocial behavior of the observers differently. Below, I first describe how expressers’ inauthentic displays of happiness influence observers’ prosocial behavior, and then I describe how expressers’ authentic displays of happiness influence observers’ prosocial behavior.

**The effect of inauthentic displays of happiness on observers’ prosocial behavior.**

Past theory suggests that emotional inauthenticity can produce negative reactions in observers because the inconsistency between what is felt and what is displayed leads observers to make negative character inferences about expressers, such as inferences that if expressers are willing to fake emotions, they may also be willing to fake or conceal other important issues (cf. Côté, 2005). Thus, the reliability and integrity of individuals who express inauthentic emotions is undermined in the eyes of observers. As such, I suggest that one specific character inference, trust, may be undermined when expressers display inauthentic happiness. I specifically focus on trust inferences because trust may be one of the most important inferences in the context of prosocial behavior (Bendapudi, Singh, & Bendapudi, 1996). Trust is an expectancy that one can rely on a word, promise, verbal, or written statement of another individual (Rotter, 1967) and is an essential component of social exchanges (Barber, 1983; Deutsch, 1960). Lack of trust in social interactions is related to less cooperation in negotiations (Ferrin, Bligh, & Kohles, 2007), less information exchange (De Dreu, Giebels, & Van de Vliert, 1998), and more retribution (Ross & LaCroix, 1996). Reduced trust thus may lead to an array of negative behavioral reactions.
I suggest that observers’ reduced trust in expressers may also lead to less prosocial behavior from observers because lack of trust may call into the question the genuineness of the help request, especially in situations when the potential helper is not familiar with the help seeker. In the case when the help seeker is acting on a behalf of an organization (e.g., soliciting donations for a charity organization), trust in the helper seeker may be a proxy for how much one can trust the organization, especially when the potential helper is not familiar with the organization.

In line with the reasoning that inauthentic displays of happiness may have unfavorable social effects, past research has shown that inauthentic displays of happiness are related to low perceived friendliness and satisfaction with customer service (Grandey et al., 2005), low likability (Frank, Ekman, & Friesen, 1993), low perceptions of job suitability (Krumhuber, Manstead, Cosker, Marshall, & Rosin, 2009), and low trustworthiness and low levels of cooperation (Krumhuber et al., 2007). Based on these findings and theorizing described above, I put forward the following hypotheses:

Hypothesis 1a: Expressers’ inauthentic displays of happiness (vs. neutral emotional displays) reduce observers’ prosocial behavior.

Hypothesis 1b: Expressers’ inauthentic displays of happiness (vs. neutral emotional displays) reduce observers’ trust in expressers.

Hypothesis 1c: This negative effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior is mediated by observers’ trust in expressers such that expressers’ inauthentic displays of happiness reduce observers’ trust in the expresser, and low observers’ trust in the expresser, in turn, leads to less prosocial behavior.
The effect of authentic displays of happiness on observers’ prosocial behavior. By contrast, I propose that expressers’ authentic displays of happiness have positive effects on observers’ prosocial behavior. Past research shows that displays of happiness communicate a desire for affiliation and benevolent intentions (Van Kleef et al., 2010). As such, authentic displays of happiness lead to positive character inferences. For example, past research shows that people who display happiness are rated as having favorable personality traits (Knutson, 1996), are seen as likable and friendly (Frank et al., 1993), people are more willing to interact with them (Harker & Keltner, 2001), and are rated highly on trust (Krumhuber et al., 2007; Norman, Avolio, & Luthans, 2010). As mentioned above, I focus on trust inferences because trust may be one of the most important inferences in the context of prosocial behavior (Bendapudi et al., 1996). If the observer does not deem the help seeker as trustworthy and, thus, does not perceive the help request as genuine and credible, help may not be provided. Thus, trust may be important for establishing that the request for help is credible and that help should be granted. Past research has indeed shown that people are more likely to help and cooperate with people they trust (e.g., Carnevale, Pruitt, & Carrington, 1982; Ferrin et al., 2007). Based on these findings and theorizing described above, I put forward the following hypotheses:

**Hypothesis 2a:** Expressers’ authentic displays of happiness (vs. neutral emotional displays) increase observers’ prosocial behavior.

**Hypothesis 2b:** Expressers’ authentic displays of happiness (vs. neutral emotional displays) increase observers’ trust in expressers.

**Hypothesis 2c:** This positive effect of expressers’ authentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior is mediated by observers’ trust in expressers such that expressers’ authentic displays of happiness increase
observers’ trust in the expresser, and high observers’ trust in the expresser, in turn, leads to more prosocial behavior.

The Moderating Effect of Cultural Thinking Style

Past research on the social effects of up-regulated happiness has generally not examined the role of culture. This presents a gap in our understanding of the social effects of emotions, because according to the social constructivist theoretical perspective there is an inherent link between emotions and culture as emotions are socially learned and culturally shaped (Averill, 1980). Thus, different cultures have different norms for emotion regulation and ascribe different values to emotions in general (Gudykunst & Ting-Toomey, 1988), which consequently may lead to different perceptions and inferences drawn from displayed emotions.

Recent research offers some preliminary evidence that culture may play an important role in how individuals react to emotions in others and self. Kopelman and Rosette (2008) found that East Asian negotiators were more likely to reject a deal from a negotiator who displayed negative compared to positive emotions, presumably because positive emotions communicate respect and protect face, important cultural values for East Asians. On the other hand, they found that non East Asian negotiators (e.g., Israelis) had the same reaction to both positive and negative emotional displays. Adam, Shirako, and Maddux (2010) found that expressing anger elicited larger concessions from European-American negotiators, but smaller concessions from Asian and Asian-American negotiators. Similarly, in a study of intrapersonal effects of emotions, Grandey, Fisk, and Steiner (2005) found that the negative effect of employees’ surface acted (i.e., inauthentic) displays of emotions on their job satisfaction was weaker among French employees than among American employees, presumably because French employees have more control over their emotional expressions than American employees. These studies offer initial
evidence that culture may play an important role in the effects of emotional displays on both individuals who express and who observe emotions.

My research extends this past research by examining the discrete emotion of happiness (as opposed to broad conceptions of positive and negative emotions) regulated through deep and surface acting. As such, the present research examines both inauthentic and authentic displays of happiness. Further, in contrast to these past studies that compared participants with different ethnic backgrounds (e.g., East Asians vs. European-Americans), my research goes beyond using ethnicity as a proxy for culture and examines an aspect of culture that directly relates to perception of emotions in others: analytical-holistic thinking. Finally, my research also identifies a new mechanism by which culture shapes people’s reactions to emotions in others, trust inferences.

**Cultural Thinking Style: Analytical-Holistic Thinking**

At the core of the social effects of emotions is the notion that individuals garner important information about the thoughts, feelings, and intentions of others by examining the emotions that they display (Keltner & Haidt, 1999; Van Kleef, 2009). Given that inferences play an important factor in the social effects of emotions, I drew on one specific aspect of culture that relates to perceptions and inferences, analytical-holistic thinking (Peng & Nisbett, 1999).

Analytical-holistic thinking is a thinking style that reflects cultural differences in cognition and perception (Choi, Koo, & Choi, 2007). Analytical thinking involves endorsing dispositionalism (the attribution of others’ behaviors to their stable traits), detaching an object from its context, being relatively intolerant of inconsistencies and contradictions in one’s environment, and believing that most objects do not change much over the time (Choi et al., 2007; Nisbett, Peng, Choi, & Norenzayan, 2001). By contrast, holistic thinking involves taking
into account situational factors when making attributions, an orientation to the context as a whole, being relatively tolerant of contradictions and inconsistencies in one’s environment, and believing that everything changes constantly (Choi et al., 2007; Nisbett et al., 2001).

Past research has shown that individuals from East Asian countries tend to be holistic thinkers, whereas individuals from Western countries tend to be analytical thinkers (e.g., Choi et al., 2007; Spencer-Rodgers, Peng, Wang, & Hou, 2004). In this past research, the effect size of ethnicity (East Asian vs. Westerner) on analytical-holistic thinking has ranged from small (e.g., Cohen’s $d = 0.48$, Spencer-Rodgers et al., 2004) to medium (e.g., Cohen’s $d = 0.73$, Choi et al., 2007) indicating that some variance in analytical-holistic thinking is within cultures as well. Past research supports this notion that variance in analytical-holistic thinking may be both between- and within-culture by showing that this construct can illuminate behavior both across and within cultures (e.g., Choi et al., 2007). Moreover, researchers have argued that whereas between-culture differences in cognition and perception have been studied extensively, within-culture differences have been neglected (Choi et al., 2007; Spencer-Rodgers, Williams, & Peng, 2010). This notion that cultural constructs do not vary only between cultures but also within cultures is not new. For example, past research concerning individualism and collectivism suggests that the same cultural constructs can be observed and primed in different countries and that the context in which one thinks influence both what comes to mind and how it is made sense of (see Oyserman, Sorensen, Reber, and Chen, 2009, for a description of their culture-as-situated-cognition model). I examine how observers’ individual differences in analytical-holistic thinking moderate the effect of expressers’ displays of up-regulated happiness on observers’ prosocial behavior and trust inferences.
Inauthentic Displays of Happiness and Analytical-Holistic Thinking

I suggest that observers’ analytical-holistic thinking moderates the effect of expressers’ inauthentic displays of happiness on observers’ prosocial behavior, such that the negative effect is stronger for analytical thinkers than for holistic thinkers. I describe my theoretical account for this proposition below by first describing how analytical thinkers may react to inauthentic displays of happiness, and then how holistic thinkers may react to inauthentic displays of happiness.

Analytical thinkers and inauthentic displays of happiness. As noted, analytical thinkers tend to attribute others’ behaviors to their stable traits, detach an object from its context, be relatively intolerant of inconsistencies and contradictions, and believe that most objects do not change much over the time (Choi et al., 2007; Nisbett et al., 2001). In the discussion below, I describe how these four characteristics influence observers high on analytical thinking to react negatively to expressers’ inauthentic displays of happiness.

First, analytical thinkers tend to attribute others’ behavior to stable, personal traits rather than to situational factors (Choi, Dalal, Kim-Prieto, & Park, 2003; Nisbett et al., 2001). Morris and Peng (1994) suggested that dispositionalism of analytical thinkers is due to implicit theories about social behavior. In individualistic cultures (e.g., American culture) where analytical thinking is emphasized and the self is seen as an individual, autonomous unit, individuals are guided by the person-centered theory that social behavior is stable and deeply rooted in one’s internal dispositions. Thus, analytical thinkers may attribute emotional inauthenticity to expressers’ internal attributes. Specifically, as suggested above when discussing the main effect of inauthentic displays of happiness on trust and prosocial behavior, emotional inauthenticity may lead to negative character evaluations such as lack of dependability and reliability, which
undermines trust. In turn, reduced trust may lead to less prosocial behavior because reduced trust may signal that the request for help may not be genuine and credible.

Second, analytical thinkers tend to detach objects from their contexts. This tendency again suggests that analytical thinkers may be less likely to incorporate contextual factors when interpreting inauthentic emotions in others and more likely to make internal, personal trait attributions. As such, analytical thinkers may attribute emotional inauthenticity to expressers’ internal attributes and have reduced trust. In turn, reduced trust may lead to less prosocial behavior.

Third, analytical thinkers have low tolerance for contradictions. When presented with contradictions, analytical thinkers tend to choose one side as the truth and reject the other (Peng & Nisbett, 1999). Consequently, they may be less likely to accept and tolerate an inherent contradiction between felt and displayed emotions in inauthentic displays of happiness. They may infer that if their counterparts fake emotions, they may be able and willing to fake or conceal other important issues and potentially harm observers. When faced with an individual who displays inauthentic happiness, the inconsistency between felt and displayed emotions may communicate to analytical thinkers that expressers’ character is not genuine and that expressers may be manipulative and want to take advantage of others. Thus, analytical thinkers may perceive that expressers are not being genuine reducing their trust in the expresser, which leads to diminished prosocial behavior.

Finally, analytical thinkers tend to believe that most objects do not change much over the time. This characteristic may lead them to reason that if the expresser is able and willing to fake emotions now and potentially harm the observer, the same will be true in future. In other words,
the character of expressers will not change over the time. Consequently, analytical thinkers may have reduced trust in the expresser, and, in turn, exhibit less prosocial behavior.

**Holistic thinkers and inauthentic displays of happiness.** As noted, holistic thinkers take into account situational factors when making attributions, focus on the context as a whole, are relatively tolerant of contradictions and inconsistencies, and believe that everything changes constantly (Choi et al., 2007; Nisbett et al., 2001). In the discussion below, I describe how these four characteristics may make observers high on holistic thinking less influenced by expressers’ inauthentic displays of happiness.

Holistic thinkers tend to attribute others’ behaviors to situational factors rather than to stable, personal traits (Nisbett et al., 2001). In collectivistic cultures (e.g., Asian cultures) where holistic thinking is emphasized and one is seen as a unit of collective, individuals are guided by the situation-centred theory that suggests that social behavior is shaped by relationships and situations (Morris & Peng, 1994). Therefore, holistic thinkers may be less likely to make inferences about the expresser character such as trust inferences. As such, expressers’ inauthentic displays of happiness may have weak effects on prosocial behavior of observers high on holistic thinking.

Second, holistic thinkers tend to focus on the context as a whole rather than on individual objects. This tendency suggests that holistic thinkers may be more likely to incorporate situational factors when interpreting others’ displays of inauthentic emotions and less likely to attribute others’ displays of inauthentic emotions to stable, personal traits. For example, holistic thinkers may attribute expressers’ displays of inauthentic happiness as a situational demand rather than a sign of reduced trust. Therefore, holistic thinkers may not make any trust
inferences, and expressers’ inauthentic displays of happiness may have relatively weak consequences for prosocial behavior of holistic thinkers.

Third, holistic thinkers have high tolerance for contradictions and inconsistencies. As such, when they perceive an inconsistency between others’ felt and displayed emotions, they should be more likely to accept that both can exist, and that their simultaneous existence does not necessarily signal that expressers are manipulative and want to take advantage of others. Past research has shown that East Asians take contradictions and inconsistency for granted (e.g., Choi & Nisbett, 2000) to a greater extent. As such, expressers’ inauthentic displays of happiness may have weak influences on trust and prosocial behavior of holistic thinkers.

Finally, holistic thinkers believe that things change constantly. As such, they may interpret emotional inauthenticity in the expresser as a temporary state and not as an indication of an underlying character of the expresser. In particular, even when they may perceive expressers who display inauthentic happiness as manipulative, they may expect that to be temporary. Consequently, they may not make more stable inferences of reduced trust. In turn, expressers’ inauthentic displays of happiness may have weak influences on prosocial behavior of holistic thinkers.

The arguments presented above suggest that analytical thinkers will react more negatively to expressers’ inauthentic displays of happiness in terms of reduced trust and less prosocial behavior, relative to neutral emotional displays. By contrast, holistic thinkers will be less influenced by expressers’ inauthentic displays of happiness in terms of trust and prosocial behavior, relative to neutral emotional displays.

*Hypothesis 3a: Observers’ analytical-holistic thinking moderates the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial*
behavior, such that the effect is more strongly negative for analytical thinkers than for holistic thinkers.

Hypothesis 3b: Observers’ analytical-holistic thinking moderates the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ trust in expressers, such that the effect is more strongly negative for analytical thinkers than for holistic thinkers.

Hypothesis 3c: Observers’ trust in expressers mediates the moderated effect of observers’ analytical-holistic thinking on the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior.

Authentic Displays of Happiness and Analytical-Holistic Thinking

I suggest that observers’ analytical-holistic thinking moderates the effect of expressers’ authentic displays of happiness on observers’ prosocial behavior, such that the effect is more strongly positive for analytical thinkers than for holistic thinkers. I describe my theoretical account for this proposition below by first describing how analytical thinkers may react to authentic displays of happiness, and then how holistic thinkers may react to authentic displays of happiness.

Analytical thinkers and authentic displays of happiness. In this discussion, I describe how characteristics of analytical thinking influence observers high on analytical thinking to react positively to expressers’ authentic displays of happiness. First, given analytical thinkers’ tendency to attribute others’ behaviors to stable, personal traits rather than to situational factors (Choi et al., 2003; Nisbett et al., 2001) and that in authentic displays of emotions externally displayed and internally felt emotions are in sync, they may make positive trait inferences based on the discrete emotion of happiness. Happiness communicates a desire for affiliation and
benevolent intentions (Van Kleef et al., 2010) and, as such, analytical thinkers may make positive inferences about the expresser such as high trust inferences. As mentioned earlier, past research shows that displays of happiness are positively related with trust (Krumhuber et al., 2007; Norman et al., 2010). In turn, higher trust inferences should lead to more prosocial behavior. Past research has shown that trust is related to more helping and cooperation (e.g., Carnevale et al., 1982; Ferrin et al., 2007).

Second, analytical thinkers tend to detach objects from their contexts. This suggests that analytical thinkers may be less likely to incorporate contextual factors when interpreting emotions in others and more likely to make personal trait attributions. Specifically, they may make high trust inferences based on expressers’ authentic displays of happiness. In turn, higher trust inferences should lead to more prosocial behavior.

Third, analytical thinkers tend to have relatively low tolerance for contradictions. Given that in the authentic displays of happiness there should not be inconsistencies in displayed and felt emotions (Côté, 2005; Grandey, 2000), analytical thinkers would not be concentrating on the emotional authenticity, but the actual discrete emotion of happiness. As described above, happiness may lead to positive inferences about the expressers such as high trust. In turn, higher trust inferences should lead to more prosocial behavior. Thus, in essence, this characteristic of low tolerance for contradictions may not directly moderate the effect of expressers’ authentic displays of happiness on observers’ prosocial behavior and trust inferences given that there are no inconsistencies in authentic displays of happiness. Rather, by not having any inconsistencies to react to, analytical thinkers may be more likely to base their inferences about the expresser on the discrete emotion of happiness.
Finally, the tendency of analytical thinkers to believe that most objects do not change much over the time may lead them to infer that if expressers are currently genuine and well-meaning expressers may stay that way in future interactions as well. In turn, these inferences that expressers can be trusted and that the levels of trust will probably stay the same in future may lead analytical thinkers to engage in more prosocial behavior.

**Holistic thinkers and authentic displays of happiness.** In this discussion, I describe how characteristics of holistic thinking may make observers high on holistic thinking less influenced by expressers’ authentic displays of happiness. First, holistic thinkers may be less likely to infer positive traits from expressers’ authentic displays of happiness due to their tendency to take into account situational factors when making attributes. Supporting this notion, Matsumoto and Kudoh (1993) found that Japanese individuals, who are more likely to be holistic thinkers, were less likely to infer positive characteristics (e.g., intelligence, friendliness, approachability) from others’ smiling than Americans, who are more likely to be analytical thinkers. Holistic observers weigh contextual influences on behavior heavily when they make attributions (Choi et al., 2003). Therefore, they may be more likely to attribute others’ authentic displays of happiness to the social context (e.g., adhering to social norms) rather than to stable traits. As such, expressers’ authentic displays of happiness would have a relatively weak influence on trust inferences and prosocial behaviors of holistic thinkers.

Second, holistic thinkers tend to focus on the context as a whole rather than on individual objects. This tendency suggests that holistic thinkers may be more likely to incorporate contextual factors when interpreting emotions in others and less likely to make personal trait attributions based on happiness. Therefore, holistic thinkers may not make any trust inferences,
and expressers’ authentic displays of happiness may have weak effects on prosocial behaviors of observers high on holistic thinking.

Third, holistic thinkers tend to have relatively high tolerance for contradictions. This characteristic would probably not influence trust inferences and prosocial behavior of holistic thinkers given that in the authentic displays of happiness there should not be inconsistencies in displayed and felt emotions (Côté, 2005; Grandey, 2000). Thus, there are no inconsistencies in the emotional display that holistic thinkers could tolerate.

Finally, the tendency of holistic thinkers to believe that things change constantly may lead them to infer that even if expressers are currently genuine and well-meaning expressers may not stay that way in future interactions as well. As such, they may interpret expressers’ displays of authentic happiness as a temporary state and not as an indication of an underlying character of the expresser such as trust inferences. In turn, expressers’ authentic displays of happiness may have weak effects on prosocial behaviors of observers high on holistic thinking.

The arguments presented above suggest that analytical thinkers will react more positively to expressers’ authentic displays of happiness in terms of higher trust and more prosocial behavior relative to neutral emotional displays. By contrast, holistic thinkers will be less influenced by expresser’s authentic displays of happiness in terms of trust and prosocial behavior relative to neutral emotional displays.

*Hypothesis 4a: Observers’ analytical-holistic thinking moderates the effect of expressers’ authentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior, such that the effect is more strongly positive for analytical thinkers than for holistic thinkers.*
Hypothesis 4b: Observers’ analytical-holistic thinking moderates the effect of expressers’ authentic displays of happiness (vs. neutral emotional displays) on observers’ trust in expressers, such that the effect is more strongly positive for analytical thinkers than for holistic thinkers.

Hypothesis 4c: Observers’ trust in expressers mediates the moderated effect of observers’ analytical-holistic thinking on the effect of expressers’ authentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior.

Overall Research Strategy

I conducted two studies to test my hypotheses. Study 1 tested the hypotheses in a laboratory experiment to isolate the effects of observers’ analytical-holistic thinking on the effect of expressers’ inauthentic displays of happiness (relative to neutral emotional displays) and expressers’ authentic displays of happiness (relative to neutral emotional displays) on observers’ prosocial behavior and trust inferences. Study 1 was situated in the context of a career centre project leader asking for help with editing cover letters of high school students. The emotional displays were manipulated in videos and the index of prosocial behavior consisted of the time taken to edit a cover letter. Study 1 thus examined whether project leaders’ inauthentic and authentic displays of happiness (vs. neutral emotional displays) have an effect on observers’ prosocial behavior and trust that are moderated by observers’ analytical-holistic thinking.

Study 2 extends the investigation to a different type of a prosocial behavior: monetary donations. Past research suggests that thinking about donating time activates a relational mind-set in which giving is associated with well-being, happiness, and forming relationships (Aaker & Akutsu, 2009; Liu & Aaker, 2008). By contrast, thinking about donating money leads to an instrumental mind-set in which the link between giving and happiness and forming relationships
is less salient (Aaker & Akutsu, 2009; Liu & Aaker, 2008). Therefore, it is possible that when thinking about giving money, observers may pay less attention to expressers’ emotions, and consequently may be less likely to react to emotional displays. Study 2 thus tested whether the hypotheses hold for monetary donations as an index of prosocial behavior. The emotional displays were manipulated in face-to-face donation solicitation interactions. In particular, in a field fundraising experiment, Study 2 examined whether fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) have an effect on observers’ monetary donations and trust that are moderated by observers’ analytical-holistic thinking.

**Study 1 Method**

**Participants and Design**

Participants were 240 undergraduate students (63% women) at a large Canadian university. There were 158 participants who identified their ethnic background as East Asian, 21 as Southeast Asian, 33 as Caucasian, 10 as Middle Eastern, one as African American, one as West Indian, one as Hispanic, and 14 as mixed ethnic background (one was unidentified). The average age of participants was 20.02 years ($SD = 1.63$). Participants received course credit for participation. They were randomly assigned to one of the three experimental conditions: inauthentic displays of happiness, authentic displays of happiness, or neutral emotional displays.

**Procedure**

The study had two parts. In Part 1, participants completed an online survey assessing their analytical-holistic thinking and demographics. After completing the online survey, participants signed-up for a laboratory session.

In Part 2, when participants came to a laboratory, they were informed that the research team is working with the university career center to examine the feedback that university
students provide on cover letters of high school students, and that their first task would be to watch a video in which a project leader explains this new project. This procedure was adapted from Grant and Gino (2010).

Participants next watched one of the three videos corresponding to the three experimental conditions: inauthentic displays of happiness, authentic displays of happiness, and neutral emotional displays. The message in the video was the same in all three videos (see Appendix A for a full script). Only the emotional display differed. In the video, the project leader said that a new university-wide project has been launched to make post-secondary education more accessible to students from lower-income neighborhoods. As a part of this project the university career center has partnered with a number of high schools to help high school students develop writing and job search skills. As such they were offering high school students feedback on cover letters for part-time and summer jobs. The project leader further said that, because the current demand for these services was exceeding their capacities, they were examining different ways of providing feedback, including feedback provided by university students. The project leader concluded his speech by asking students if they could help by giving feedback to high school students on their cover letters.

When the video finished, the experimenter asked participants if they could provide feedback on a cover letter of a high school student right now. If participants agreed, the experimenter set them up with a cover letter on their computer and instructed them to provide any edits, comments, or suggestions as they see suitable that would improve the cover letter. The cover letter given to participants was always the same and was adapted from past research by Grant and Gino (2010). The experimenter recorded the time participants took to edit a cover letter, which was the main dependent variable in this study. After they finished editing the cover
letter, they completed a survey assessing their perceptions of the project leader’s emotional display and their trust in the project leader. If participants did not agree to help, they proceeded directly to a survey. At the end of the experiment participants were debriefed and thanked for their time.

**Video Recordings**

There were three versions of the video-recording, one for each condition. The script was the same across the conditions, but the emotional displays differed. I hired two actors, a Caucasian man and an Asian man, for the role of project leader in videos because actors receive formal training for expressing and modifying emotional expressions. In addition, past research that used video-recordings to manipulate emotional expressions had also used professional actors (e.g., Grandey et al., 2005). Each actor produced three videos, one for each condition.

Before video-taping, I extensively trained the actors to produce inauthentic displays of happiness via surface acting and to produce authentic displays of happiness via deep acting using the training techniques employed by Hennig-Thurau, Groth, Paul, and Gremler (2006) and Grandey et al. (2005). The actors first read some introductory literature on deep and surface acting. To produce inauthentic happiness I instructed the actors to remain emotionally neutral inside but express happiness in their face. They followed these instructions by manipulating their facial muscles without modifying their thoughts or subjective experiences of emotions. To produce authentic happiness, I instructed them to recall an event that had truly made them feel happy. These instructions were designed to make the actors feel happy about this event and, thus, authentically express happiness while delivering the script. For the neutral condition, I instructed the actors to relax facial muscles so as to avoid showing emotion. The importance of keeping all other aspects of their behavior constant across the conditions was stressed.
Measures

All measures in my dissertation research used a Likert-type response scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), unless otherwise noted. Descriptive statistics, Cronbach’s alphas, and zero-order correlations for Study 1 variables are presented in Table 1.

**Manipulation checks.** I tested the displays of happiness in terms of perceived authenticity and happiness in two ways to ensure that they were manipulated as intended. First, prior to the main study, two independent raters coded emotional authenticity and happiness intensity in the videos. Second, during the main study, participants rated perceived authenticity and happiness in the videos.

**Independent raters’ codings.** Two independent raters coded emotional authenticity and happiness intensity in the videos. To code for emotional authenticity, the raters were trained to code for two facial muscle movements that past research has found to correspond to authentic displays of happiness: the zygomaticus major muscle (which pulls the lip corners up) and the orbicularis oculi, pars lateralis muscle (which causes lifting of the cheeks, narrowing of the eye opening, and wrinkles around the eye socket). When the smile is inauthentic, the orbicularis oculi action should be missing (Ekman, 1993; Krumhuber & Manstead, 2009). Thus, there should be differences in the orbicularis oculi action between the authentic and inauthentic happiness condition video, but there should be no differences in the action of the zygomaticus major muscle.

I first divided each video into 5-second segments. Two raters then independently watched each segment and assigned a score of 1 if the action of the muscle was present and 0 if it was not present. When coding videos of the Caucasian actor, ICCs for the action of the zygomaticus major muscle were 1.00 for authentic happiness and .77 for inauthentic happiness; and for the
orbicularis oculi action ICCs were .59 for authentic happiness and .60 for inauthentic happiness. As expected, there were no differences in the action of the zygomaticus major muscle between the inauthentic happiness condition \((M = .95, SD = 0.15)\) and the authentic happiness condition \((M = 1, SD = 0)\), \(t(35) = 1.34, ns\). Also as expected, the orbicularis oculi action was marginally lower in the inauthentic happiness condition \((M = .43, SD = 0.44)\) than in the authentic happiness condition \((M = .68, SD = 0.39)\), \(t(35) = 1.83, p < .10\).

When coding videos of the Asian actor, ICCs for the action of the zygomaticus major muscle were .79 for authentic happiness and .79 for inauthentic happiness; and for the orbicularis oculi action ICCs were .88 for authentic happiness and .82 for inauthentic happiness. As expected, there were no differences in the action of the zygomaticus major muscle between the inauthentic happiness condition \((M = .98, SD = .15)\) and the authentic happiness condition \((M = .95, SD = .10)\), \(t(41) = .71, ns\). Also as expected, the orbicularis oculi action was marginally lower in the inauthentic happiness condition \((M = .40, SD = .31)\) than in the authentic happiness condition \((M = .57, SD = .46)\), \(t(41) = 1.36, p = .10\).

The same two raters also coded happiness intensity by assigning a score using a 4-point scale ranging from 0 (no happiness) to 3 (strong happiness) for each of the 5-second segments. When coding happiness intensity in the Caucasian actor videos, the ICCs were .85 for authentic happiness, .78 for inauthentic happiness, and 1 for the neutral video. To test whether happiness intensity was higher in the inauthentic happiness condition and the authentic happiness condition relative to the neutral condition, I conducted one-way analyses of variance (ANOVA). The overall effect of condition on happiness intensity was significant, \(F(2, 55) = 174.90, p < .001(\eta^2 = .86)\). I followed up on this significant F test with planned comparisons. As expected, happiness intensity was higher in the inauthentic happiness condition \((M = 2.05, SD = 0.58)\) than in the
neutral condition ($M = .02, SD = 0.11$), $t(55) = -16.56, p < .001$. Happiness intensity was also higher in the authentic happiness condition ($M = 2.29, SD = 0.44$) than in the neutral condition, $t(55) = -16.56, p < .001$. Also as expected, there were no differences in happiness intensity between the inauthentic happiness condition and the authentic happiness condition, $t(55) = 1.76, ns.$

When coding happiness intensity in the Asian actor videos, the ICCs were .94 for authentic happiness, .64 for inauthentic happiness, and 1 for the neutral video. The overall effect of condition on happiness intensity was significant, $F (2, 59) = 55.69, p < .001 (\eta^2 = .65)$. As expected, happiness intensity was higher in the inauthentic happiness condition ($M = 2.04, SD = 0.54$) than in the neutral condition ($M = 0, SD = 0$), $t(59) = 9.82, p < .001$. Happiness intensity was also higher in the authentic happiness condition ($M = 1.83, SD = 1.03$) than in the neutral condition, $t(59) = -8.49, p < .001$. Also as expected, there were no differences in happiness intensity between the inauthentic happiness condition and the authentic happiness condition, $t(55) = 1.76, ns.$

In summary, these codings indicate that the emotional displays were successfully manipulated by showing that the inauthentic happiness video was less authentic than either the authentic happiness video or the neutral video. Happiness intensity was higher in both the inauthentic happiness video and the authentic happiness video than in the neutral video, but there were no differences in happiness intensity between the inauthentic happiness video and the authentic happiness video.

**Participants’ ratings.** To verify that the displays of happiness were successfully manipulated, participants rated how much the project leader displayed happiness using three items (“happy,” “satisfied,” and “joyful”) and neutrality using three items (“unemotional,”
“dispassionate,” and “neutral”) from Van Kleef, De Dreu, and Manstead (2004). To verify that authenticity of displays was successfully manipulated, I adapted six items from Grandey et al. (2005) and Frank et al. (1993; e.g., “The project leader genuinely expressed emotions”).

**Trust.** Participants’ trust in the project leader was measured with three items from Van Kleef, De Dreu, and Manstead (2006): “The project leader appears trustworthy,” “The project leader appears unreliable” (reverse-coded), and “The project leader is honest.”

**Prosocial behavior.** Prosocial behavior was assessed as time taken to edit a cover letter ($M = 702.99$ seconds, $SD = 397.03$). If participants declined to edit a cover letter ($n = 13$), the time recorded was 0 seconds.

**Analytical-holistic thinking.** Participants’ analytical-holistic thinking was assessed with two measures. The first measure administered was a 24-item Analysis-Holism Scale (AHS) developed by Choi et al. (2007). This scale has four dimensions: causality, attitude toward contradictions, perception of change, and locus of attention (see items in Table 2). Higher scores on the AHS reflect higher holistic thinking and lower analytical thinking.

Prior research has shown that the AHS has adequate psychometric properties, including support for a four-factor model of the AHS, adequate convergent validity (e.g., significant correlations with scales that tap into similar thinking styles, such as the attributional complexity scale) and adequate discriminant validity (e.g., lack of correlations with other cultural constructs such as collectivism; see Choi et al., 2007, for the development and validation of this scale). In addition, past research has found that East Asians scored higher on the AHS than Westerners (e.g., Choi et al., 2007). In line with past research, I found in the sample from Study 1 that ethnicity, coded as 1 for participants who identified themselves as Caucasian and as 0 for
participants who identified themselves as East Asian, was marginally negatively related with the AHS score \( r = -0.17, p < 0.10 \).

The second scale administered was a 32-item Dialectical Self Scale (DSS) developed by Spencer-Rodgers, Srivastava, Boucher, English, Paletz, and Peng (2010). This scale measures dialectical reasoning, a system of thought characterized by acceptance of contradictions and expectations of change (Spencer-Rodgers et al., 2010), and has three dimensions: contradiction, cognitive change, and behavioral change (see items in Table 3). Higher scores on the DSS reflect higher dialectical reasoning and, thus, higher holistic thinking and lower analytical thinking. Dialectical reasoning is viewed as a facet of the overarching construct of analytical-holistic thinking with a specific focus on tolerance for contradictions and changes in one’s environment (Spencer-Rodgers et al., 2010). Thus, higher scores on the DSS would reflect higher holistic thinking. This scale was included because past research showed somewhat low reliabilities for the AHS scale (Choi et al., 2007), which is not surprising given the multidimensionality of the construct. Given the more narrow focus of the DSS scale, it was expected that the overall DSS scale may have a higher reliability than the overall AHS scale. Further, DSS would offer a test of the moderating effects of analytical-holistic thinking with a specific focus on the tolerance for contradictions and change aspect of analytical-holistic thinking.

Prior research has shown that the DSS scale has adequate psychometric properties (Spencer-Rodgers, Boucher, Mori, Wang, & Peng, 2009; Spencer-Rodgers, Srivastava, et al., 2010). Cronbach’s alphas among various cultural groups ranged from the high .60s to the high .80s, and test-retest reliability ranged from .70 to .91. The measure also exhibited adequate discriminant validity (e.g., low correlations with other cultural measures such as interdependent self-construal; Spencer-Rodgers, Srivastava et al., 2010) and adequate convergent validity (e.g.,
it was negatively correlated with need for cognitive closure; Kruglanski, Webster, & Klem, 2003). Past research has shown that East Asians score higher on the DSS than Westerners (e.g., English & Chen, 2007; Spencer-Rodgers et al., 2009). As expected, I found in the sample from Study 1 that ethnicity, coded as 1 for participants who identified themselves as Caucasian and as 0 for participants who identified themselves as East Asian, was negatively related with the DSS score (\( r = -.20, p < .05 \)).

**Experienced happiness.** In my theory development, I focused on inferences (i.e., trust) as a mediator of the social effects of inauthentic and authentic displays of happiness. However, past research suggests that in addition to inferences (i.e., inferential path), emotional contagion—“catching” other people’s emotions through their facial expressions, vocalization, postures, and body movements (Hatfield, Cacioppo, & Rapson, 1994; Van Kleef, 2009) may underlie some social effects of emotions. Given that my model is focused on the moderating effects of analytical-holistic thinking, a construct that explains cognitive and inferential differences, I expected that the inferential path would be stronger than the affective path. Moreover, past research suggests that one of the moderating variables that should make the inferential path more prominent than the affective path in the social effects of emotions is motivation for information processing (Van Kleef, 2009; Van Kleef et al., 2010). High analytical thinking may involve high motivation for information processing, because analytical thinkers process emotional information to make sense of the expressers’ character. Thus, high analytical thinkers should be influenced by the expressers’ displays of happiness through their inferences. At the same time, high holistic thinking may involve lower motivation to process information about emotions, because holistic thinkers are less likely to make any stable trait inferences based on emotional information. As such, there is a possibility that high holistic thinkers may be influenced by subconscious
processes of emotional contagion (i.e., catching the expressers’ happiness). To address that possibility, I included three items to measure participants’ experienced happiness (“happy,” “joyful,” and “satisfied”).

Demographics. Participants reported their gender, age, and ethnic background.

Study 1 Results

Preliminary Analyses

Exploratory factor analyses. Although previous research has examined the psychometric properties of the two scales assessing analytical-holistic thinking (AHS and DSS), I conducted exploratory factor analyses to examine whether past research findings replicate in the current sample. I examined the underlying structure of the AHS and the DSS using the maximum likelihood (ML) option in comprehensive exploratory factor analysis (CEFA; Browne, Cudeck, Tateneni, & Mels, 1998), employing oblique rotations (Direct Quartimin with Kaiser standardization) to allow for the possibility of correlated factors. I used the root mean square error of approximation (RMSEA, Browne & Cudeck, 1992) as an index of statistical fit.

In examining the AHS, I found that the four-factor solution provided a reasonable fit ($RMSEA = 0.088, 90\%$ confidence interval, $CI = 0.079$ to $0.097$). The factor loadings from the rotated pattern matrix are presented in Table 2 and are in line with past research (Choi et al., 2007) except for one item that presumably taps into the attitude toward contradictions factor (“Choosing a middle ground in an argument should be avoided”). Instead, this item loaded on the perception of change factor. The causality factor was correlated with the perception of change factor ($r = .17$, CI = 0.064 to 0.267) and the locus of attention factor ($r = .37$, CI = 0.273 to 0.465), but not with the attitude toward contradictions factor ($r = -.07$, CI = -0.157 to 0.019). The attitude toward contradictions factor was correlated with the perception of change factor ($r = .22$, $
The perception of change factor was correlated with the locus of attention factor ($r = .16, CI = 0.080 to 0.266$).

In examining the DSS, I found that the three-factor solution provided a reasonable fit ($RMSEA = 0.077, 90\%$ confidence interval, CI = 0.071 to 0.084). The factor loadings from the rotated pattern matrix are presented in Table 3. Despite an adequate fit, there were several items that did not load on the proposed factor, but they seemed to load better on a different factor (see Table 3 for details on items). That may explain why Cronbach’s alphas were low for individual dimensions, but adequate for the overall scale. Only the correlation between the contradiction factor and the cognitive change factor was significant ($r = .13, CI = 0.037 to 0.224$).

**Differences in reactions to the two actors.** Before testing hypotheses, I conducted independent-samples $t$-tests to examine whether there were differences in observers’ (participants) prosocial behavior (time taken to edit a cover letter) and observers’ trust in project leaders in the video between the Caucasian and Asian actor. The results showed that observers did not react differently to the Caucasian actor compared to the Asian actor in terms of time taken to edit a cover letter ($M_{Caucasian} = 715.95$ seconds, $SD_{Caucasian} = 390.85$; $M_{Asian} = 690.03$ seconds, $SD_{Asian} = 404.33$), $t(238) = .61, ns (d = 0.07)$; and trust ($M_{Caucasian} = 5.06, SD_{Caucasian} = 1.09$; $M_{Asian} = 4.87, SD_{Asian} = 1.14$), $t(238) = -1.33, ns (d = 0.17)$.$^3$ Given that there were no differences, the data from both actors were combined in the main analyses.

**Manipulation Checks**

To verify that I successfully manipulated emotional displays in videos, I examined the levels of participants’ perceived happiness, neutrality, and authenticity in the three conditions using one-way ANOVAs. There was a significant overall effect of condition on perceived
happiness, $F(2, 237) = 94.67, p < .001 (\eta^2 = .44)$. Planned comparisons indicated that, as expected, happiness perceptions were higher in the inauthentic happiness condition ($M = 5.23, SD = 0.96$) than in the neutral condition ($M = 3.42, SD = 1.23; p < .001$), but there was no difference compared to the authentic happiness condition ($M = 5.55, SD = 0.93, ns$). Happiness perceptions were also higher in the authentic happiness condition than in the neutral condition ($p < .001$).

There was also a significant overall effect of condition on perceived neutrality, $F (2, 237) = 89.21, p < .001(\eta^2 = .43)$. As expected, perceptions of emotional neutrality were lower in the inauthentic happiness condition ($M = 2.23, SD = 1.16$) than in the neutral condition ($M = 4.38, SD = 1.38; p < .001$), but there was no difference compared to the authentic happiness condition ($M = 2.20, SD = 0.95, ns$). Perceptions of emotional neutrality were also lower in the authentic happiness condition than in the neutral condition ($p < .001$).

Finally, there was a significant overall effect of condition on perceived emotional authenticity, $F (2, 237) = 11.47, p < .001(\eta^2 = .09)$. As expected, authenticity perceptions were lower in the inauthentic happiness condition ($M = 3.08, SD = 1.29$) than in the neutral condition ($M = 3.88, SD = 0.99, p < .001$) and the authentic happiness condition ($M = 3.85, SD = 1.23, p < .001$). There were no differences in perceptions of authenticity between the authentic happiness condition and the neutral condition.

These results showed that the manipulation of emotional displays worked as expected. Participants perceived the project leader in the inauthentic happiness condition as less authentic than in either the authentic happiness condition or the neutral condition. Also, as expected, participants perceived both the inauthentic and authentic happiness condition as equally happy.
These results converge with the results of the two independent raters (reported above in the Measures section).

**Main Effects of Inauthentic and Authentic Displays of Happiness on Prosocial Behavior**

To test whether expressers’ inauthentic displays of happiness (vs. neutral emotional displays) reduce observers’ prosocial behavior (Hypothesis 1a), and whether expressers’ authentic displays of happiness (vs. neutral emotional displays) increase observers’ prosocial behavior (Hypothesis 2a), I conducted one-way ANOVAs. The overall effect of condition (emotional display) on prosocial behavior was not significant, $F(2, 237) = .61, ns (\eta^2 = .05)$, suggesting that neither inauthentic happiness ($M = 712.41$ seconds, $SD = 407.11$) nor authentic happiness ($M = 666.59$ seconds, $SD = 385.06$) had an effect on time taken to edit a cover letter, relative to neutral emotional displays ($M = 733.90$ seconds, $SD = 401.65$). Planned condition comparisons also showed that there were no differences in time taken to edit a cover letter between the inauthentic happiness condition and the neutral condition, $t(237) = .34, ns$. Thus, Hypothesis 1a was not supported. There were also no differences in time taken to edit a cover letter between the authentic happiness condition and the neutral condition, $t(237) = 1.07, ns$. Thus, Hypothesis 2a was not supported.

**Main Effects of Inauthentic and Authentic Displays of Happiness on Trust**

To test whether expressers’ inauthentic displays of happiness (vs. neutral emotional displays) reduce observers’ trust in expressers (Hypothesis 1b), and whether expressers’ authentic displays of happiness (vs. neutral emotional displays) increases observers’ trust in expressers (Hypothesis 2b), I also conducted one-way ANOVAs. The overall effect of condition (emotional display) on trust was significant, $F(2, 237) = 19.51, p < .001 (\eta^2 = .14)$. Planned condition comparisons showed that observers trusted the project leader in the inauthentic
happiness condition ($M = 4.37$, $SD = 1.36$) less than in the neutral condition ($M = 5.24$, $SD = 0.90$), $t(237) = 5.19, p < .001$. Thus, Hypothesis 1b was supported. There were no differences in observers’ trust in the project leader between the authentic happiness condition ($M = 5.28$, $SD = 0.78$), and the neutral condition, $t(237) = -0.28, ns$. Thus, Hypothesis 2b was not supported.

I also proposed that observers’ trust in expressers would mediate the relation between (a) expressers’ inauthentic displays of happiness (vs. neutral emotional displays) and observers’ prosocial behavior (Hypothesis 1c), and (b) expressers’ authentic displays of happiness (vs. neutral emotional displays) and observers’ prosocial behavior (Hypothesis 2c). Given that the overall association between the independent variable (emotional display) and the dependent variable (prosocial behavior) was not significant, Hypotheses 1c and 2c were not supported (cf. Baron & Kenny, 1986).

**Moderation Effects of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic and Authentic Displays of Happiness on Observers’ Prosocial Behavior**

I proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior, such that the effect would be more strongly negative for analytical thinkers than for holistic thinkers (Hypothesis 3a). I also proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ authentic displays of happiness (vs. neutral emotional displays) on observers’ prosocial behavior, such that the effect would be more strongly positive for analytical thinkers than for holistic thinkers (Hypothesis 4a).

To test these hypotheses, I conducted hierarchical moderated regression analyses. Following the steps outlined by Aiken and West (1991) for testing interactions, I first mean-centered the moderating variable, analytical-holistic thinking. Given that the independent
variable had three levels (authentic happiness, inauthentic happiness, and neutral), and that the hypotheses focused on the effects of inauthentic displays of happiness and authentic displays of happiness relative to a neutral emotional display. I created two dummy variables with a neutral condition as the referent condition (Cohen, Cohen, West, & Aiken, 2003). The two dummy variables were inauthentic happiness vs. neutral, and authentic happiness vs. neutral. I then created two interaction terms from the cross-product of mean-centered analytical-holistic thinking and the two dummy variables. I tested the moderation effect of analytical-holistic thinking using both measures, the AHS and the DSS.

**Testing the interaction with the AHS measure of analytical-holistic thinking.** Using the AHS as a measure of analytical-holistic thinking to test the moderation effect of observers’ analytical-holistic thinking on the effect of expressers’ emotional display on the observers’ prosocial behavior, neither the interaction between inauthentic happiness (vs. neutral) and the AHS, $b = -52.72, t(234) = -.36, ns$, nor the interaction between authentic happiness (vs. neutral) and the AHS, $b = -219.14, t(234) = -1.45, ns$, was significant. Thus, using the AHS as a measure of analytical-holistic thinking, Hypotheses 3a and 4a were not supported.

**Testing the interaction with the DSS measure of analytical-holistic thinking.** Using the DSS as a measure of analytical-holistic thinking to test the moderation effect of observers’ analytical-holistic thinking on the effect of expressers’ emotional displays on the observers’ prosocial behavior, neither the interaction between inauthentic happiness (vs. neutral) and the DSS, $b = -27.51, t(233) = -.20, ns$, nor the interaction between authentic happiness (vs. neutral) and the DSS, $b = -57.66, t(234) = -37, ns$, was significant. Thus, using the DSS as a measure of analytical-holistic thinking, Hypotheses 3a and 4a were also not supported.
Testing the overall mediated moderation model. I further proposed that observers’
trust in expressers would mediate the moderated effect of observers’ analytical-holistic thinking
on (a) the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays)
on the observers’ prosocial behavior (Hypothesis 3c), (b) the effect of expressers’ authentic
displays of happiness (vs. neutral emotional displays) on the observers’ prosocial behavior
(Hypothesis 4c). Given that there was no significant interactive effects between either
inauthentic displays of happiness or authentic displays of happiness and analytical-holistic
thinking in predicting prosocial behavior, which is the first step required for testing an overall
mediated moderation (Edwards & Lambert, 2007; Muller, Judd, & Yzebyt, 2005), Hypotheses 3c
and 4c were not supported. 

Exploratory analyses testing separate dimensions of analytical-holistic thinking
assessed by the AHS and the DSS. In an exploratory fashion, I tested whether each dimension
assessed by the AHS (causality, attitude toward contradictions, perception of change, and locus
of attention) and the DSS (contradiction, cognitive change, and behavioral change) moderates the
relation between expressers’ emotional displays and observers’ prosocial behavior.

Testing whether each dimension assessed by the AHS moderates the relation between
expressers’ emotional display and observers’ prosocial behavior yielded no significant
interactions. Testing whether each dimension assessed by the DSS moderates the relation
between expressers’ emotional display and observers’ prosocial behavior also yielded no
significant interactions.

In summary, these results and the results with the overall analytical-holistic scale
(measured both with the AHS and the DSS) showed no evidence of the interactive effects
between observers’ analytical-holistic thinking and either expressers’ inauthentic displays of happiness or authentic displays of happiness on observers’ prosocial behavior.

**Moderation Effects of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic and Authentic Displays of Happiness on Observers’ Trust in Expressers**

I proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ trust in expressers, such that the effect would be more strongly negative for analytical thinkers than for holistic thinkers (Hypothesis 3b). I also proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ authentic happiness (vs. neutral emotional displays) on observers’ trust in expressers, such that the effect would be more strongly positive for analytical thinkers than for holistic thinkers (Hypothesis 4b). To test these hypotheses, I conducted hierarchical moderated regression analyses. Again, I tested the moderation effect of analytical-holistic thinking using both measures, the AHS and the DSS.

**Testing the interaction with the AHS measure of analytical-holistic thinking.** Using the AHS as a measure of analytical-holistic thinking to test the moderation effect of observers’ analytical-holistic thinking on the effect of expressers’ emotional displays on the observers’ trust in expressers, there were significant interactions between inauthentic happiness (vs. neutral) and the AHS, $b = -.94, t(243) = -2.46, p < .05$, and between authentic happiness (vs. neutral) and the AHS, $b = -.94, t(243) = -2.41, p < .05$ (see Table 4 for full regression models). To interpret these interactions, I solved for regression equations at higher (one standard deviation above the mean) and lower (one standard deviation below the mean) levels of the AHS (see Figure 2). The AHS was a continuous scale where higher scores indicated more holistic thinking, and lower scores indicated more analytical thinking. Thus, in my description of results below *high holistic*
thinking represents scores at one standard deviation above the mean of the AHS and high analytical thinking represents scores at one standard deviation below the mean of the AHS.

**Simple slope analyses.** To probe these significant interactions, I conducted simple slope tests. In interpreting the interaction between inauthentic happiness (vs. neutral) and the AHS, a simple slope analysis revealed that, as expected, observers high on analytical thinking trusted the project leader who displayed inauthentic happiness marginally less than the neutral project leader, $t(151) = -1.86$, $p < .10$. Observers high on holistic thinking also trusted the project leader who displayed inauthentic happiness less than the neutral project leader, $t(151) = -4.93$, $p < .05$. The simple slope result for observers high on holistic thinking was unexpected, because it was theorized that the effect of expressers’ inauthentic displays of happiness on trust would be weaker for holistic thinkers than analytical thinkers. As such, the simple slope for holistic thinkers was expected to be nonsignificant or lesser in magnitude than the slope for analytical thinkers. However, the simple slope for holistic thinkers appeared more pronounced than the slope for analytical thinkers. Thus, these results support partially Hypothesis 3b.

In interpreting the interaction between authentic happiness (vs. neutral) and the AHS, a simple slope analysis revealed that, as expected, observers high on analytical thinking trusted the project leader who displayed authentic happiness more than the neutral project leader $t(157) = 2.25$, $p < .05$. By contrast, observers high on holistic thinking trusted the project leader who displayed authentic happiness less than the neutral project leader, $t(157) = -2.12$, $p < .05$. The simple slope result for observers high on holistic thinking was unexpected, because it was theorized that the effect of expressers’ inauthentic displays of happiness on trust would be weaker for holistic thinkers than analytical thinkers. As such, the simple slope for holistic thinkers was expected to be nonsignificant or lesser in magnitude than the slope for analytical thinkers.
thinkers (although it was expected to be in the same direction). Yet, the simple slope for observers high on holistic thinking was significant and negative, which is in contrast to the simple slope for observers high on analytical thinking, which was positive. Thus, these results support partially Hypothesis 4b.

The results with the AHS measure of analytical-holistic thinking for observers high on analytical thinking were in line with the predictions, as these individuals trusted the project leader who displayed inauthentic happiness less relative to neutral emotional displays, and trusted the project leader who displayed authentic happiness more relative to neutral emotional displays. The results for observers high on holistic thinking were not in line with the predictions that the effect of emotional display on trust would be weak for observers high on holistic thinking. I found that observers high on holistic thinking trusted the project leader who displayed inauthentic happiness and who displayed authentic happiness less relative to neutral emotional displays. These results suggest that observers high on holistic thinking trusted the neutral project leader more than either the project leader who displayed inauthentic happiness or authentic happiness.

*Further testing of the interaction: mean differences within conditions.* To follow-up on unexpected findings for observers high on holistic thinking and to further investigate interaction effects, I tested mean differences in observers’ trust in the project leader between high analytical and high holistic observers within each condition. These analyses showed that high analytical observers compared to high holistic observers trusted the project leader less in the neutral condition, \( t(234) = 2.92, \ p < .05 \). There were no differences in trust between high analytical and high holistic observers in the inauthentic happiness condition, \( t(234) = .27, \ ns \), or in the authentic happiness condition, \( t(234) = .28, \ ns \). These analyses suggest that the differences in
the trust of high analytical and high holistic observers stem, in part, from differences in their reactions to neutral emotional displays.

**Testing the interaction with the DSS measure of analytical-holistic thinking.** Using the DSS as a measure of analytical-holistic thinking to test the moderation effect of observers’ analytical-holistic thinking on the effect of expressers’ emotional display on the observers’ trust in expressers, there was a significant interaction between inauthentic happiness (vs. neutral) and the DSS, \( b = .90, t(243) = 2.49, p < .05 \). By contrast, the interaction between authentic happiness (vs. neutral) and the DSS was not significant, \( b = .30 t(243) = .75, ns \) (see Table 5 and Figure 3). This lack of interaction between authentic happiness and the DSS in predicting trust suggests that Hypothesis 4b was not supported using the DSS. The DSS was a continuous scale where higher scores indicated more holistic thinking and lower scores indicated more analytical thinking. Thus, in my description of results below *high holistic thinking* represents scores at one standard deviation above the mean of the DSS, and *high analytical thinking* represents scores at one standard deviation below the mean of the DSS.

**Simple slope analyses.** To probe the significant interaction between inauthentic happiness (vs. neutral) and the DSS in predicting trust, I conducted simple slope analyses. As expected, observers high on analytical thinking trusted the project leader who displayed inauthentic happiness less than the neutral project leader, \( t(150) = -4.82, p < .05 \). By contrast, the trust of observers high on holistic thinking was not influenced by project leaders’ inauthentic displays of happiness relative to neutral emotional displays, \( t(150) = -1.68, ns \). These results support Hypothesis 3b.

**Further testing of the interaction: mean differences within conditions.** To further probe the interaction between inauthentic happiness (vs. neutral) and the DSS in predicting trust, I also
tested mean differences in trust between high analytical and high holistic observers within each condition. These analyses showed that high analytical observers compared to high holistic observers trusted the project leader less in the inauthentic happiness condition, $t(150) = 1.90, p < .10$, but there were no differences in the neutral condition, $t(150) = -1.35, ns$. These findings are consistent with Hypothesis 3b by showing that whereas both high analytical and high holistic observers had same trust levels in the neutral condition, observers high on analytical thinking had lower trust in expressers than observers high on holistic thinking in the inauthentic happiness condition.

In contrast to the results of analyses with the AHS, analyses using the DSS as a measure of analytical-holistic thinking showed that the results for both observers high on analytical thinking and high on holistic thinking were in line with the predictions about the effects of inauthentic displays of happiness. In particular, observers high on analytical thinking trusted the project leader who displayed inauthentic happiness less relative to neutral emotional displays, and project leader’s inauthentic displays of happiness did not influence trust of the observers high on holistic thinking. However, the DSS did not moderate the effect of project leaders’ authentic displays of happiness on observers’ trust in project leaders. These results suggest that one aspect of analytical-holistic thinking, tolerance for contradictions (an aspect on which the DSS is focused on) may play an important role in the reaction to inauthentic display of happiness, but not in the reactions to authentic displays of happiness.

**Exploratory analyses testing separate dimensions of analytical-holistic thinking assessed by the AHS.** In an exploratory fashion, I tested whether each dimension of analytical-holistic thinking assessed by the AHS (causality, attitude toward contradictions, perception of change, and locus of attention) moderates the relation between project leaders’ inauthentic and
authentic displays of happiness and observers’ trust in project leaders. The results showed that only one dimension of the AHS yielded significant results: the attitude toward contradictions dimension. In particular, there was a significant interaction between inauthentic happiness (vs. neutral) and the contradiction dimension, $b = -0.58, t(243) = -2.61, p < .05$. The interaction between authentic happiness (vs. neutral) and the contradiction dimension was not significant, $b = -0.39, t(243) = -1.62, ns.$

The significant interaction between inauthentic happiness (vs. neutral) and the contradiction dimension of analytical-holistic thinking confirms the role of tolerance for inconsistency in observers’ reactions to inauthentic displays of happiness. By contrast, the lack of interaction between authentic happiness (vs. neutral) and the contradiction dimension suggests that the tolerance for inconsistencies may not play a role in observers’ reactions to authentic displays of happiness. These findings are consistent with the results from the overall DSS scale, which is a scale that focuses specifically on tolerance for contradiction and change.

**Simple slope analyses.** To probe the significant interaction between inauthentic happiness (vs. neutral) and the contradiction dimension of the AHS in predicting trust, I conducted simple slope analyses. Simple slope analyses showed that, contrary to expectations, trust of observers lower on the contradiction dimension (i.e., high analytical thinking) was not influenced by project leaders’ inauthentic displays of happiness (vs. neutral), $t(151) = -1.53, ns.$ By contrast, and unexpectedly, observers higher on the contradiction dimension (i.e., high holistic thinking) trusted the project leader who displayed inauthentic happiness less than the neutral project leader, $t(151) = -4.88, p < .05.$

**Further testing of the interaction: mean differences within conditions.** To follow-up on these unexpected findings and to further investigate interaction effects, I tested mean differences
in trust between observers lower and higher on the contradiction dimension within each condition. These analyses showed that observers lower rather than higher on the contradiction dimension trusted the project leader less in the neutral condition, $t(151) = 2.03, p < .05$, but there were no differences in the inauthentic happiness condition, $t(234) = -1.20, ns$. Thus, it seems that the significant effects for observers higher on the contradiction dimension were driven by their reactions to the neutral condition. This finding is consistent with the findings for the overall AHS scale, which suggest that observers high on holistic thinking trust the neutral project leader more than either the project leader who displays authentic happiness or inauthentic happiness. I elaborate on these unexpected findings for observers higher on holistic thinking in the discussion of Study 1.

**Exploratory analyses testing separate dimensions of analytical-holistic thinking assessed by the DSS.** In an exploratory fashion, I also tested whether each dimension of analytical-holistic thinking assessed by the DSS (contradiction, cognitive change, and behavioral change) moderates the relation between project leaders’ emotional displays and observers’ trust in project leaders. There were no significant interactions for any of the three dimensions separately. This result could be due to relatively low internal reliabilities of separate DSS dimensions.

In summary, exploratory analyses examining whether some dimensions of the overall analytical-holistic construct may have stronger moderation effects on the relation between expressers’ inauthentic and authentic displays of happiness and observers’ trust in expressers suggested that one aspect of analytical thinking, low tolerance for contradictions, may play an important role in reducing the trust inferences to inauthentic displays of happiness of observers high on analytical thinking. The results with the overall DSS scale, which focuses on tolerance
for contradictions and change, lend support for this view. However, tolerance for contradictions does not seem to play a role in reactions to authentic displays of happiness.

**Supplemental Analyses**

**Emotional contagion.** To address the possibility that emotional contagion influences the social effects of inauthentic and authentic displays of happiness I conducted a one-way ANOVA testing whether experienced happiness of participants was higher in the happiness conditions than in the neutral condition. The overall effect of condition on experienced happiness was significant, $F(2,237) = 3.72, p < .05 \ (\eta^2 = .03)$. Participants experienced more happiness in the authentic happiness condition ($M = 3.83, SD = 1.16$) than in the neutral condition ($M = 3.35, SD = 1.25$), $t(237) = -2.51, p < .05$, and in the inauthentic happiness condition ($M = 3.43, SD = 1.37$), $t(237) = 2.14, p < .05$. There were no differences in experienced happiness between the inauthentic happiness condition and the neutral condition, $t(237) = -.39, ns$. Thus, these results suggest that emotional contagion happened in the authentic happiness condition, which is in line with past research showing that authentic emotions are more likely to influence emotions in others (Pugh, 2001; Tsai & Huang, 2002). However, experienced happiness was not related to prosocial behavior ($r = .09, ns$).

I further tested whether observers’ analytical-holistic thinking moderates the relation between both inauthentic and authentic displays of happiness and observers’ experienced happiness to examine whether high holistic thinkers may be more influenced by emotional contagion than high analytical thinkers. Using the AHS as a measure of analytical-holistic thinking, neither the interaction between inauthentic happiness (vs. neutral) and the AHS, $b = -.13, t(234) = -.27, ns$, nor the interaction between authentic happiness (vs. neutral) and the AHS, $b = -.41, t(234) = -.41, ns$, was significant in predicting experienced happiness. Using the DSS as
a measure of analytical-holistic thinking, neither the interaction between inauthentic happiness (vs. neutral) and the DSS, \( b = .40, t(233) = .88, ns \), nor the interaction between authentic happiness (vs. neutral) and the DSS, \( b = .50, t(233) = .99, ns \), was significant in predicting experienced happiness.

High holistic thinkers, thus, were not more likely to experience emotional contagion than high analytical thinkers. Rather, these results suggest that all participants might have experienced emotional contagion in the authentic happiness condition (attested by higher experienced happiness scores in one-way ANOVA results). However, higher experienced happiness did not translate into an actual behavior. This finding is in line with other research (e.g., Van Kleef et al., 2004) that found evidence for emotional contagion, but not that emotional contagion influenced actual behaviors. This is presumably because the effects of emotional contagion were overridden by the effects of inferential processes.

**Perceptions of authenticity and happiness of high holistic thinkers and high analytical thinkers.** In the theoretical development, I suggested that observers with different levels of the analytical-holistic thinking (i.e., high analytical thinking and high holistic thinking) should react differently to inauthentic and authentic displays of happiness due to their differences in cultural thinking styles. This notion rests on the assumption that there were no differences in perceptions of authenticity and happiness across conditions for observers high on analytical thinking and observers high on holistic thinking. To ensure that the actual perceptions were the same for observers high on analytical thinking and observers high on holistic thinking, I tested interactions between inauthentic happiness (vs. neutral) and authentic happiness (vs. neutral) and analytical-holistic thinking (using both the AHS and DSS) in predicting perceived authenticity and happiness, using the manipulation check items. The lack of significant interactions would
indicate that both observers high on analytical thinking and observers high on holistic thinking had the same perceptions of authenticity and happiness across all conditions.

In predicting perceived authenticity, neither the interaction between inauthentic happiness (vs. neutral) and the AHS was significant, $b = -.33, t(234) = -0.08, ns$, nor the interaction between authentic happiness (vs. neutral) and the AHS, $b = -.73, t(243) = -1.61, ns$. Similarly, the interaction between inauthentic happiness (vs. neutral) and the DSS was not significant, $b = .23, t(233) = .06, ns$. However, the interaction between authentic happiness (vs. neutral) and the DSS was significant, $b = -.99, t(233) = -2.15, p < .05$. Simple slope analyses revealed that, as expected, for observers high on analytical thinking there were no differences in authenticity perceptions between the authentic happiness condition and the neutral condition, $t(196) = 1.72, ns$. However, unexpectedly, observers high on holistic thinking perceived less authenticity in the authentic happiness condition than in the neutral condition, $t(196) = 24.32, p < .001$. If the interaction between authentic displays of happiness and the DSS in predicting trust was significant and, as predicted, the effect of expressers’ authentic happiness (vs. neutral emotional displays) was weak on trust of observers high on holistic thinking, then this could have been an alternative explanation. In particular, the weak effect of authentic happiness on trust for observers high on holistic thinking could have been explained by their low perception of authenticity in the authentic happiness condition. However, the interaction between authentic displays of happiness and DSS in predicting trust was not significant.

In predicting perceived happiness, neither the interaction between inauthentic happiness (vs. neutral) and the AHS was significant, $b = -.71, t(234) = -1.83, ns$, nor the interaction between authentic happiness (vs. neutral) and the AHS, $b = -.46, t(234) = -1.16, ns$. Similarly, neither the interaction between inauthentic happiness (vs. neutral) and the DSS was significant, $b$
= .03, t(233) = .07, ns, nor the interaction between authentic happiness (vs. neutral) and the DSS, $b = - .32, t(233) = - .78, ns$.

These results suggest that, in all cases except for one, observers high on analytical thinking and observers high on holistic thinking had the same perceptions of authenticity and happiness in each condition. As such, the results showing that observers’ analytical-holistic thinking moderates the effect of expressers’ authentic and inauthentic displays of happiness on observers’ trust in expressers were not due to different perceptions of emotions of observers high on analytical thinking and observers high on holistic thinking, but to their different underlying cultural thinking styles.

**Study 1 Discussion**

Study 1 examined the effects of expressers’ surface acted (and, thus, inauthentic) displays and deep acted (and, thus, authentic) displays of happiness, relative to neutral emotional displays, on observers’ prosocial behavior and trust, and whether these relations were moderated by observers’ analytical-holistic thinking. Contrary to predictions, expressers’ inauthentic displays of happiness (vs. neutral) and authentic displays of happiness (vs. neutral) did not influence observers’ prosocial behavior. Also contrary to predictions, observers’ analytical-holistic thinking did not moderate the relation between either expressers’ inauthentic happiness (vs. neutral) and observers’ prosocial behavior, or between expressers’ authentic happiness (vs. neutral) and observers’ prosocial behavior.

One possible explanation for the lack of effects on prosocial behavior may be the nature of the prosocial task employed in this study: editing cover letters of high school students. Although, this task was adapted from previous research (Grant & Gino, 2010), it may be that it did not work particularly well in the current sample due to how many participants did not speak
English as a first language (84% of participants did not speak English as a first language). These participants might have felt less comfortable or able to providing feedback on a task that involved editing in English language. Supporting this possibility, participants’ self-efficacy for editing cover letters was positively correlated with time take to edit a cover letter ($r = .16, p < .05$). This finding suggests that more participants felt able to edit a cover letter more time they spent doing it. However, English language fluency (assessed with one item that asked participants to rate their fluency in English) was not correlated with time taken to edit a cover letter ($r = .07, ns$). Although, self-efficacy and English fluency were positively correlated ($r = .50, p < .001$), this suggests that some participants who were fluent in English still did not feel able to edit a cover letter. Controlling for self-efficacy and English fluency in main hypotheses analyses did not improve predictions. Overall, these findings provide some evidence that perceived ability to edit cover letters might have impacted participants’ engagement in the prosocial behavior.

Whereas there were no effects of the expressers’ inauthentic and authentic displays of happiness on observers’ prosocial behavior, there were significant effects on observers’ trust in expressers. As predicted, observers trusted the project leader who displayed inauthentic happiness less, relative to a neutral emotional display. However, contrary to predictions, authentic happiness, compared to a neutral emotional display, did not have an effect on trust.

Further, observers’ analytical-holistic thinking moderated the effect of expressers’ emotional displays on observers’ trust in expressers. I used two different measures to assess analytical-holistic thinking, the AHS and the DSS. Higher scores on both of these measures indicated higher holistic thinking (and lower analytical thinking).
Using the AHS as a measure of analytical-holistic thinking, as predicted, observers high on analytical thinking (a) trusted the project leader who displayed inauthentic happiness less than the neutral project leader, and (b) trusted the project leader who displayed authentic happiness more than the neutral project leader. However, the findings were contrary to predictions for observers high on holistic thinking. I had predicted that the project leaders’ emotional display would be less likely to influence trust of observers high on holistic thinking. Yet analyses showed that observers high on holistic thinking trusted the project leader who displayed inauthentic happiness and the project leader who displayed authentic happiness less than a neutral project leader. Thus, whereas observers high on analytical thinking reacted more negatively to inauthentic displays of happiness and more positively to authentic displays of happiness relative to neutral emotions displays, observers high on holistic thinking reacted more positively to neutral emotional displays relative to both authentic and inauthentic displays of happiness.

I speculate that the reason for these unexpected findings for observers high on holistic thinking may be due to high holistic thinking being more predominant in East Asian cultures where neutral emotional displays are valued (Markus & Kitayama, 1991). As such, observers high on holistic thinking might have reacted more positively to neutral emotional displays. Thus, although observers higher on holistic thinking may be less influenced by inauthentic versus authentic emotional displays, they may find neutral emotions more appropriate than any other emotional displays and appropriateness may lead to higher trust inferences (Matsumoto, 1993). Moreover, given the importance of situations and contextual factors for high holistic thinkers, it could be that they found neutral emotional displays relatively more appropriate in situations that involve interactions with strangers, whereas they may find open displays of happiness more
appropriate in personal relationships. Another explanation may be that given that neutral emotional displays may communicate competence and power (Hareli, Shomrat, & Hess, 2009), high holistic thinkers may be more likely to perceive power dynamics of the situation and react more positively to the powerful individual.

Using the DSS as a measure of analytical-holistic thinking, as predicted, observers high on analytical thinking trusted a project leader who displayed inauthentic happiness less relative to a neutral project leader. Also as predicted, the trust of observers high on holistic thinking was not influenced by the project leader’s inauthentic display of happiness relative to a neutral emotional display. Thus, here, the findings for reactions to inauthentic displays of happiness were consistent with predictions for both observers high on analytical thinking and observers high on holistic thinking. However, analytical-holistic thinking measured with the DSS did not moderate the relation between authentic happiness and trust. Given that the DSS scale focuses on one a facet of the overall analytical-holistic construct (i.e., tolerance for contradictions and changes in ones’ environment), it seems lack of tolerance for inconsistencies in one’s environment in particular explains the negative reactions to inauthentic displays of happiness of observers high on analytical thinking. At the same time, tolerance for inconsistencies does not seem to play a role in reactions to authentic displays of happiness. This could be seen as consistent with theorizing, given that in authentic displays of happiness, externally displayed and internally felt emotions are in sync and, as such, there are no inconsistencies to influence reactions of observers.

Overall, the results from Study 1 provide some evidence that observers’ analytical-holistic thinking may moderate observers’ reactions to expressers’ displays of happiness, at least in terms of trust inferences. It also suggests that the lack of tolerance for contradictions, in
particular, may explain the negative reactions to inauthentic displays of happiness of observers who are analytical thinkers. The theoretical explanation for the moderating effect of lack of tolerance for contradictions postulates that high analytical thinkers would react negatively to inherent inconsistency between internally felt and externally displayed emotions in inauthentic displays of happiness. As such, lack of tolerance for contradictions deals with the core component of inauthentic displays of emotions. Thus, the moderating effects of lack of tolerance for contradictions may be more proximal compared to other aspects of analytical-holistic thinking. For example, it could be that high analytical thinkers first observe and react to that inconsistency and then based on that perceived inconsistency between felt and displayed emotions, they make personal trait attributions. Finally, given that most of the supported hypotheses involved inauthentic displays of emotions, analytical-holistic thinking may have a stronger influence on reactions to inauthentic displays of happiness than authentic displays of happiness.

**Study 2**

Study 2 builds on the results from Study 1 by focusing on inauthentic displays of happiness and one aspect of analytical-holistic thinking – tolerance for contradictions. I focused on this aspect of analytical-holistic thinking because Study 1 indicated that the low tolerance for contradictions and inconsistencies of observers high on analytical thinking explained their negative reactions to inauthentic displays of happiness.

Study 2 tested the proposed model for inauthentic happiness in a field experiment in the context of a fundraiser for a charity organization. The comparison condition in Study 2 was authentic displays of happiness. It was expected that if low tolerance for contradictions explains the negative reactions to inauthentic displays of happiness of observers high on analytical
thinking, then they should react less favorably to inauthentic compared to authentic displays of happiness, because in authentic displays of emotions, internally felt and externally displayed emotions are in sync. Observers high on holistic thinking should, however, respond similarly to authentic and inauthentic displays of happiness because they more easily tolerate contradictions.

Study 2 also tested a different type of prosocial behavior: monetary donations. In addition to monetary donations, another index of prosocial behavior was observers’ intentions to volunteer for the charity organization. Study 2 thus tested whether observers’ analytical-holistic thinking moderates the effect of fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ prosocial behavior (monetary donations and intentions to volunteer) and observers’ trust in fundraisers. Study 2 also tested whether observers’ trust in fundraisers mediates the moderating effect of observers’ analytical-holistic thinking on the effect of fundraisers’ inauthentic displays of happiness, relative to authentic displays of happiness, on observers’ prosocial behavior in a mediated moderation model. Given its focus on inauthentic happiness, Study 2 examined only hypotheses pertaining to inauthentic displays of happiness (Hypotheses 1a-c and 3a-c).

**Study 2 Method**

**Participants and Design**

Participants were 74 individuals (57 % women) solicited to donate to a fundraiser for the charity organization. Participants were included in the sample if they listened to the fundraiser (and thus were exposed to the experimental manipulation) and agreed to complete the survey, described below, that included the measures of analytical-holistic thinking, intention to volunteer, and demographics. Individuals who did not complete the survey were not included in
the sample because I did not have a measure of their analytical-holistic thinking, a focal variable in the analyses, for them.

The sample consisted of 48 students, 13 full-time employees, and 13 individuals who did not identify their occupation. Further, 25 participants identified their ethnic background as Caucasian, 10 as East Asian, six as Southeast Asian, six as West Indian, four as Middle Eastern, four as African American, nine as South Asian, and seven as mixed ethnic background (three unreported). The average age of participants was 24.53 years ($SD = 8.43$). Participants were randomly exposed to one of two experimental conditions: inauthentic happiness or authentic happiness displayed by the fundraiser. Given that the procedure involved solicitation, the response rate (the percentage of people who listened to the fundraiser out of all of the people approached) was low (6.58% in the authentic happiness condition and 8.51% in the inauthentic happiness condition), but it did not differ between the two conditions, $t(57) = -.79$, $ns$.

**Procedure**

This study was run in a context of a fundraising event for the charity organization (the United Way), which took place at two locations: a shopping center in a large Canadian city and a university library at a large Canadian university. Prior to running this study, I contacted the local branch of the charity organization to present the idea of combining a fundraising initiative with a research study, and obtained approval for the study. I also obtained a permission to conduct this fundraiser event on the premises of a shopping center and a university library.

The procedure was adapted from Trougakos, Jackson, and Beal (2011). In a busy section of a shopping center and a university library, a fundraising table was set up with a poster describing the cause for this fundraising initiative. A trained actor in the role of a fundraiser stood beside the table and solicited people. The fundraiser approached people as they were
passing by the fundraising table by making eye contact and saying “Excuse me, do you have a minute to hear about our fundraiser for the United Way” while regulating emotions so as to display either authentic or inauthentic happiness. If the person agreed and stopped, the fundraiser delivered a short script about the fundraising cause (see Appendix B for a full script) while continuing to display either authentic or inauthentic happiness. The conditions were delivered in a rotating fashion, such that the fundraiser displayed inauthentic happiness for a half-hour, authentic happiness for the next half-hour, and so on. The script that the fundraiser delivered was identical in both conditions.

At the end of the script, the fundraiser asked participants if they would like to donate. After either donating or not donating, the fundraiser asked participants if they could complete a brief survey reporting on their experience. If they agreed, an experimenter who was also present at the fundraising table administered a survey. This survey included measures of participants’ perceptions of the fundraiser’s emotional display and of participants’ analytical-holistic thinking, intention to volunteer, and demographics.

In addition to administering this survey, the experimenter recorded how many people the fundraiser approached, how many of these people agreed to listen to the fundraiser, and how much each participant donated. Seventy-four of the people who listened agreed to complete the survey. The percentage who agreed to complete the survey did not vary by condition, 58.67% in the inauthentic happiness condition and 67.54% in the authentic happiness condition, $t(46) = .76, ns$. After they completed survey, participants were debriefed. At the end of the study, the money collected was given to the United Way.
Training Actors

Two actors were hired, a Caucasian woman and a Caucasian man, for the role of fundraiser. Before the actual fundraising took place, I extensively trained the actors to produce inauthentic displays of happiness via surface acting and to produce authentic displays of happiness via deep acting, using the same training techniques as described in Study 1.

Measures

Descriptive statistics, Cronbach’s alphas, and zero-order correlations for Study 2 variables are presented in Table 6.

Manipulation checks. Participants rated how much the fundraiser displayed happiness using the same three items as in Study 1 and how much those displays were authentic using the same six items as in Study 1.

Trust. Participants’ trust in the fundraiser was measured with the same three items as in Study 1.

Prosocial behavior. Participants’ monetary donations to the charity organization ($M = $1.58, $SD = 1.87$) were an index of prosocial behavior. If participants listened to the fundraiser but did not donate, their donation was recorded as 0 dollars.

An additional index of prosocial behavior was participants’ intention to volunteer for the charity organization, which was measured with one item: “I would be very likely to volunteer for United Way.” Fifty-seven participants filled out this item because I added it after the first two days of data collection.

Analytical-holistic thinking. Participants’ analytical-holistic thinking was measured with the 13-item contradiction subscale from the DSS (see Study 1 Methods for a full description of the DSS). Because this study was a field experiment I wanted to enhance survey completion
by having a brief survey. Therefore, I did not administer all of the measures of analytical-holistic thinking as in Study 1. I chose to focus on this particular aspect of analytical-holistic thinking because Study 1 indicated that low tolerance for contradictions in particular explains the negative reactions to inauthentic displays of happiness of observers high on analytical thinking. In this sample, participants’ analytical-holistic thinking was not correlated with their ethnicity coded as 1 for Caucasians and 0 for East Asians \((r = -.15, ns)\). Given that this sample was highly multicultural, reflecting the population of the city where the study was conducted, and that there were only 25 Caucasians and 10 East Asians in the sample, it was not surprising that the relation was not significant.

**Experienced happiness.** Participants’ experienced happiness was measured with the same three items as in Study 1.

**Demographics.** Participants reported their gender, occupation, age, and ethnic background.

### Study 2 Results

#### Preliminary Analyses

Before testing hypotheses, I conducted independent-samples \(t\)-tests to examine whether there were differences in monetary donations, intention to volunteer, and trust inferences, between the male and female actor. The results showed that participants did not react differently to the male fundraiser compared to the female fundraiser in terms of monetary donations \((M_{male} = 1.66, SD_{male} = 1.81; M_{female} = 1.47, SD_{female} = 1.99), t(72) = .41, ns (d = 0.09)\); intention to volunteer \((M_{male} = 4.44, SD_{male} = 1.46; M_{female} = 5.10, SD_{female} = 1.99), t(55) = -.141, ns (d = 0.39)\); and trust inferences \((M_{male} = 5.81, SD_{male} = 0.89; M_{female} = 5.82, SD_{female} = 0.83), t(72) = \)
-.02, *ns* (*d* < 0.01). Given that there were no differences, the data from both fundraisers were combined in the main analyses and I did not control for the gender of the fundraiser.

I also examined whether male and female participants behaved differently, because some past research has reported that women are more likely than men to donate and volunteer (Sargeant & Woodliffe, 2007; Wilson, 2000). There were no differences between male and female participants in monetary donations (*M*<sub>male</sub> = 1.65, *SD*<sub>male</sub> = 1.93; *M*<sub>female</sub> = 1.53, *SD*<sub>female</sub> = 1.86), *t*(72) = .28, *ns* (*d* = 0.07), and intent to volunteer (*M*<sub>male</sub> = 4.38, *SD*<sub>male</sub> = 1.60; *M*<sub>female</sub> = 4.94, *SD*<sub>female</sub> = 1.75), *t*(55) = -1.23, *ns* (*d* = 0.33). Thus, I combined the data and did not control for participants’ gender in the analyses.

**Manipulation Checks**

To examine the levels of perceived happiness and authenticity in the two conditions, I conducted independent-samples *t*-tests. As expected, there was no difference in the level of perceived happiness between the inauthentic happiness condition (*M* = 5.51, *SD* = 1.16) and the authentic happiness condition (*M* = 5.74, *SD* = 0.87), *t*(72) = .96, *ns* (*d* = 0.22). As expected, perceived authenticity was lower in the inauthentic happiness condition (*M* = 5.11, *SD* = 1.13) than in the authentic happiness condition (*M* = 5.61, *SD* = 0.79), *t*(72) = 2.15, *p* <.05 (*d* = 0.50). Thus, while participants perceived the same level of happiness in both conditions, they perceived the inauthentic happiness condition as less authentic than the authentic happiness condition.

**Main Effect of Inauthentic (vs. Authentic) Displays of Happiness on Prosocial Behavior**

To test whether expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) reduce observers’ prosocial behavior (less monetary donations and lower intention to volunteer; Hypothesis 1a), I conducted independent-samples *t*-tests. There were no differences between the inauthentic happiness condition and the authentic happiness condition in either
monetary donations ($M_{\text{inauthentic happy}} = 1.46$, $SD_{\text{inauthentic happy}} = 1.89$; $M_{\text{authentic happy}} = 1.71$, $SD_{\text{authentic happy}} = 1.87$), $t(72) = .57$, $ns$ ($d = 0.13$); or intention to volunteer($M_{\text{inauthentic happy}} = 4.50$, $SD_{\text{inauthentic happy}} = 1.50$; $M_{\text{authentic happy}} = 4.89$, $SD_{\text{authentic happy}} = 1.89$), $t(55) = .86$, $ns$ ($d = 0.23$). Thus, Hypothesis 1a was not supported.

**Main Effect of Inauthentic (vs. Authentic) Displays of Happiness on Trust**

To test whether expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) reduce observers’ trust in expressers (Hypothesis 1b), I also conducted an independent-samples $t$-test. As expected, participants trusted the fundraiser in the inauthentic happiness condition ($M = 5.63$, $SD = 0.89$) marginally less than in the authentic happiness condition ($M = 6.02$, $SD = 0.79$), $t(72) = 1.96$, $p < .10$. Thus, Hypothesis 1b was supported.

I also expected that observers’ trust in expressers would mediate the relation between expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) and the observers’ prosocial behavior (Hypothesis 1c). Given that the overall association between expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) and an index of prosocial behavior (monetary donations and intention to volunteer) was not significant, Hypothesis 1b was not significant (cf. Baron & Kenny, 1986).

**Moderation Effect of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic (vs. Authentic) Displays of Happiness on Observers’ Prosocial Behavior**

I proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ prosocial behavior, such that the effect would be more strongly negative for analytical thinkers than for holistic thinkers (Hypothesis 3a). To test this hypothesis, as in Study 1, I conducted hierarchical moderated regression analyses. I mean-centered analytical-holistic thinking, and
created an interaction term from the cross-product of analytical-holistic thinking and the independent variable, a dichotomous variable comparing the inauthentic happiness condition (coded as 1) to the authentic happiness condition (coded as 0). Given that there were two indexes of prosocial behavior, monetary donations and intention to volunteer, I tested Hypothesis 3a first using monetary donations as a dependent variable and then using intention to volunteer as a dependent variable.

**Monetary donations as an index of prosocial behavior.** In predicting monetary donations, there was a significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking, $b = 1.37, t(70) = 2.54, p < .05$ (see Table 7 for a full regression model). To interpret this interaction, I solved for regression equations at higher (one standard deviation above the mean) and lower (one standard deviation below the mean) levels of the analytical-holistic thinking scale (see Figure 4). Higher scores on the analytical-holistic thinking scale indicated more holistic thinking and lower scores indicate more analytical thinking. As in Study 1, in my description of results below high holistic thinking represents scores at one standard deviation above the mean of the analytical-holistic scale, and high analytical thinking represents scores at one standard deviation below the mean of the analytical-holistic scale.

**Simple slope analyses.** To probe this significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking in predicting monetary donations, I conducted simple slope tests. As expected, observers high on analytical thinking donated less money when fundraisers displayed inauthentic happiness than when fundraisers displayed authentic happiness, $t(70) = -2.35, p < .05$. By contrast, the monetary donations of
observers high on holistic thinking were not affected by the authenticity of fundraisers’ happiness, $t(70) = 1.26, \ ns$. Thus, these results support Hypothesis 3a.

**Further testing of the interaction: mean differences within conditions.** As in Study 1, to further follow-up on this interaction, I tested mean differences in monetary donations between observers high on analytical thinking and observers high on holistic thinking within each condition. These analyses showed that observers high on analytical thinking compared to observers high on holistic thinking donated more money in the authentic happiness condition, $t(70) = -3.20, \ p < .05$, but there was no difference in the inauthentic happiness condition, $t(70) = .26, \ ns$.

This finding may seem unexpected given that theorizing suggests that observers high on analytical thinking react in particular negative to inauthentic displays of happiness. As such, it may be expected that the differences in reactions should have been observed in the inauthentic happiness condition rather than in the authentic happiness condition. A marginally significant main effect of analytical-holistic thinking on monetary donations, so that observers high on holistic thinking tended to donate less than observers high on analytical thinking (see Table 7), could have influenced these differences in monetary donations in the authentic happiness condition. I speculate that this effect may be due to holistic thinking being related to cultural constructs such as collectivism (Spencer-Rodgers et al., 2010). Past research suggests that individuals in collectivistic societies donate less to charity organizations because they have expectations that governments should support such causes (e.g., Nelson, Brunel, Supphellen, & Manchanda, 2006). This reasoning may explain the trend for participants high on holistic thinking to donate less and, as such, there were differences in the authentic happiness condition between observers high on analytical thinking and observers high on holistic thinking but there
were no differences in the inauthentic happiness condition. However, observers high on holistic thinking donated the same amount of money in both conditions, whereas observes high on analytical thinking donated less in the inauthentic happiness condition relative to the authentic happiness condition supporting Hypothesis 3a.

**Intention to volunteer as an index of prosocial behavior.** In predicting intention to volunteer, there was a significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking, \( b = 1.27, t(53) = 2.41, p < .05 \) (see Table 8 and Figure 5).

**Simple slope analyses.** To probe this significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking in predicting intention to volunteer, I conducted simple slope tests. As expected, observers high on analytical thinking had lower intention to volunteer when fundraisers displayed inauthentic happiness than when fundraisers displayed authentic happiness, \( t(53) = -2.20, p < .05 \). By contrast, the intention to volunteer of observers high on holistic thinking was not affected by the authenticity of fundraisers’ happiness, \( t(53) = 1.23, ns \). These results also support Hypothesis 3a.

**Further testing of the interaction: mean differences within conditions.** To further follow-up on this interaction, I tested mean differences in intention to volunteer between observers high on analytical thinking and observers high on holistic thinking within each condition. These analyses showed that observers high on analytical thinking compared to observers high on holistic thinking had lower intention to volunteer in the inauthentic happiness condition, \( t(70) = 3.07, p < .05 \), but there were no differences in the authentic happiness condition, \( t(70) = -2.22, ns \). These results are consistent with the theorizing that observers high on analytical thinking react negatively to inauthentic displays of happiness in particular by showing
the difference between observers high on analytical thinking and high on holistic thinking in intention to volunteer in the inauthentic happiness condition.

**Moderation Effect of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic (vs. Authentic) Displays of Happiness on Observers’ Trust in Expressers**

I proposed that observers’ analytical-holistic thinking would moderate the effect of expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ trust in expressers, such that the effect would be more strongly negative for analytical thinkers than for holistic thinkers (Hypothesis 3b). To test this hypothesis, I conducted hierarchical moderated regression analyses. The results showed that there was a significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking, $b = .57$, $t(70) = 2.27$, $p < .05$ (see Table 9 and Figure 6) in predicting trust.

**Simple slope analyses.** To probe this significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking in predicting trust, I conducted simple slope tests. As expected, observers high on analytical thinking trusted the fundraiser who displayed inauthentic happiness less compared to authentic happiness, $t(70) = -3.06$, $p < .05$. By contrast, the trust of observers high on holistic thinking was not affected by fundraisers’ inauthentic compared to authentic happiness, $t(70) = .88$, $ns$. Thus, these results support Hypothesis 3b.

**Further testing of the interaction: mean differences within conditions.** To follow-up on this interaction, I tested mean differences in trust between observers high on analytical thinking and observers high on holistic thinking within each condition. These analyses showed that observers high on analytical thinking compared to observers high on holistic thinking trusted the
fundraiser more in the authentic happiness condition, \( t(70) = -2.09, \ p < .05 \), but there were no differences in the inauthentic happiness condition, \( t(70) = 1.08, \ ns. \)

**Testing the Mediated Moderation Model**

I proposed that observers’ trust in expressers would mediate the moderating effect of observers’ analytical-holistic thinking on the relation between expressers’ inauthentic displays of happiness and observers’ prosocial behavior (Hypothesis 3c). To test this mediated moderation model, I used the procedure from Muller et al. (2005). The first step involves showing that there is an interaction between the independent variable (inauthentic display of happiness) and moderator (analytical-holistic thinking) in predicting the dependent variable (prosocial behavior: intention to volunteer and monetary donations). The second step involves showing that there is an interaction between the independent variable and moderator in predicting mediator (trust). And the third step involves showing that the average effect of mediator on the dependent variable is significant while controlling for the effects of the independent variable and moderator as well as for the interactions between independent variable and moderator and between moderator and mediator.\(^7\)

Figure 7 depicts the mediated moderation model when predicting intention to volunteer and shows that, as described above, there was a significant interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking in predicting intention to volunteer and trust (step 1 and 2). The effect of trust on intention to volunteer, when controlling for the effects of inauthentic happiness and analytical-holistic thinking as well as for the interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking and the interaction between trust and analytical-holistic thinking was marginally significant (step 3). Finally, I also tested the significance of the overall indirect effect by
conducting a bootstrapping procedure (Preacher, Rucker, & Hayes, 2007). Mediation occurs when the size of an indirect effect differs significantly from 0 (MacKinnon, Fairchild, & Fritz, 2007). The estimate for the indirect effect of inauthentic happiness (vs. authentic) on intent to volunteer via trust was 0.12, and the 95% confidence interval excluded 0 (.0107 to .4411).

When predicting monetary donations, however, the overall mediated moderation model was not significant. In particular, the effect of trust on monetary donation, when controlling for the effects of inauthentic happiness and analytical-holistic thinking as well as for the interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking and the interaction between trust and analytical-holistic thinking was not significant, $b = -1.3$, $t(69) = -.50$, $ns$, and the 95% confidence interval for the indirect effect included 0. Thus, observers’ trust in fundraisers did not mediate the moderating effect of observers’ analytical-holistic thinking on the relation between fundraiser’s inauthentic displays of happiness (vs. authentic displays of happiness) and observers’ monetary donations.

**Supplemental Analyses**

**Emotional contagion.** As in Study 1, to address the possibility that emotional contagion accounted for the social effects of inauthentic displays of happiness I tested whether there were differences in experienced happiness of participants between the inauthentic happiness conditions and the authentic happiness condition. The results showed no differences in experienced happiness between the inauthentic happiness condition ($M = 3.33, SD = 0.99$) and the authentic happiness condition ($M = 3.39, SD = 0.69$), $t(71) = .30, ns$. Thus, these results showed no evidence for emotional contagion.

I further tested whether observers’ analytical-holistic thinking moderates the relation between inauthentic displays of happiness (vs. authentic displays of happiness) and observers’
experienced happiness to examine a possibility that high holistic thinkers may be more influenced by emotional contagion than high analytical thinkers. The interaction between observers’ analytical-holistic thinking and inauthentic happiness in predicting observers’ experienced happiness was not significant, $b = .16, t(69) = .60, ns$. Thus, as in Study 1 there were no differences in experience of happiness between high holistic thinkers and high analytical thinkers. Overall, Study 2 did not provide any evidence for emotional contagion.

**Perceptions of authenticity and happiness of high analytical thinkers and high holistic thinkers.** As in Study 1, to ensure that the results were not due to different perceptions of the authenticity and happiness between observers high on analytical thinking and observers high on holistic thinking, I tested for an interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking in predicting perceived authenticity and happiness, using the manipulation check items.

The interaction between inauthentic happiness (vs. authentic happiness) and analytical-holistic thinking was not significant in predicting either perceived authenticity, $b = .22, t(70) = -.75, ns$, or perceived happiness, $b = .43, t(70) = 1.39, ns$. These results suggest that different reactions of observers high on analytical thinking and observers high on holistic thinking were not due to differences in observers’ perceptions of authenticity and happiness in fundraisers’ emotional displays.

**Study 2 Discussion**

Study 2 focused on examining observers’ reactions to inauthentic displays of happiness and on one aspect of analytical-holistic thinking: tolerance for inconsistencies. As predicted and consistent with the findings of Study 1, expressers’ inauthentic displays of happiness reduced observers’ trust in the expresser. However, contrary to predictions and also consistent with the
findings of Study 1, there were no main effects of expressers’ inauthentic displays of happiness on observers’ prosocial behavior measured as either monetary donations or intention to volunteer.

As predicted, however, observers with lower tolerance for inconsistencies exhibited less prosocial behavior (i.e., donated less money and had lower intention to volunteer for the charity organization), and trusted the fundraiser who displayed inauthentic happiness less compared to authentic happiness. By contrast, observers with higher tolerance for inconsistencies were not influenced by the authenticity of fundraisers’ displays of happiness. Thus, whereas there was no direct effect of expressers’ inauthentic displays of happiness on observers’ prosocial behavior, there was an interactive effect with observers’ analytical-holistic thinking.

Although, these patterns of prosocial behavior in the two conditions for observers with lower and higher tolerance for inconsistencies supported the hypotheses, the effects for observers with higher tolerance for inconsistencies were not consistent across the two types of prosocial behavior. In particular, monetary donations of observers with higher tolerance for inconsistencies in both conditions were at the approximately same level as donations of observers with lower tolerance for inconsistencies in the inauthentic happiness condition. By contrast, intentions to volunteer of observers with higher tolerance for inconsistencies in both conditions were at the approximately same level as intentions to volunteer of observers with lower tolerance for inconsistencies in the authentic happiness condition. These differential effects for observers with higher tolerance may be explained by preference for public versus private prosocial behaviors. Past research suggests that individuals from collectivistic cultures are more likely to engage in public than in private prosocial behaviors presumably because of their desire to show commitment to group goals or goals of an entire community (Carlo, Knight, McGinley, & Hayes,
2011). Given that high holistic thinkers may also be high on collectivism and given the importance they assign to situational factors, it could be that they were more inclined to volunteer rather than give money. Specifically, volunteering could have been seen as a public prosocial behavior, whereas giving money could have been seen as a private prosocial behavior (e.g., nobody would know that an individual donated money since monetary donations were anonymous).

Further, the moderated effect of observers’ analytical-holistic thinking on the relation between fundraisers’ inauthentic displays of happiness and observers’ intention to volunteer was mediated by observers’ trust in the fundraiser. Thus, fundraisers’ inauthentic displays of happiness reduced observers’ trust in the fundraiser, which in turn led to lower intentions to volunteer, but only for observers high on analytical thinking and not for observers high on holistic thinking.

The results, however, did not support the overall mediated moderation model when predicting monetary donations. In particular, observers’ trust in the fundraiser was not related to their monetary donations. Although, this is contrary to what was expected, it could be that because the United Way is a well-known and reputable organization, trust in the fundraiser had no consequences for actual monetary donations. That is, even if participants did not trust the fundraiser, per say, they might have still trusted the organization. As such, I did not observe the effect of observers’ trust in fundraisers on observers’ monetary donations. In line with this reasoning, past research indicates that trust in the charity organization plays an important role in charity donations (Sargeant & Lee, 2004).

It should be noted that these results show the moderating effect of observers’ analytical-holistic thinking on the relation between fundraisers’ inauthentic happiness and two types of
prosocial behavior of the observers: monetary donations and intentions to volunteer. It was possible that when asked for monetary donations, people might have paid less attention to emotions and consequently might have been less likely to react, because thinking about money leads to an instrumental mind-set in which the link between giving and happiness and forming relationships is less salient (Aaker & Akutsu, 2009; Liu & Aaker, 2008). In contrast, these results show that in real face-to-face interactions, people paid attention to emotional displays, and these emotional displays had consequences for both intention to volunteer and money.

Finally, supplemental analyses showed that both observers high on analytical thinking and observers high on holistic thinking perceived inauthenticity and happiness equally, suggesting that different thinking styles rather than different ability to accurately recognize the authenticity of emotions drove the observed effects. Study 2 thus provides evidence that one aspect of analytical-holistic thinking, tolerance for inconsistencies, moderates the relation between expressers’ inauthentic displays of happiness and observers’ prosocial behavior and trust.

**General Discussion**

I developed and tested a model of how observers’ analytical-holistic thinking shapes the social effects of inauthentic (surface acted) and authentic (deep acted) happiness in the domain of prosocial behavior. A first investigation of the model in a laboratory experiment (Study 1) indicated that expressers’ inauthentic displays of happiness (relative to neutral emotional displays), had an effect on observers’ trust in expressers. By contrast, expressers’ authentic displays of happiness (relative to neutral emotional displays), had no effect on observers’ trust in expressers. In particular, observers trusted expressers who displayed inauthentic happiness less than neutral expressers, and this effect was significant for observers high on analytical thinking,
but not for observers high on holistic thinking. Study 1 further indicated that one particular aspect of analytical-holistic thinking explains the negative reactions of observers high on analytical thinking: low tolerance for inconsistencies. Observers lower on tolerance for inconsistencies in their environment may interpret the inconsistencies between felt and displayed emotions that are inherent to inauthentic displays of emotions as a reflection of expressers’ negative character such as lack of reliability and dependability that may reduce their trust inferences.

The effects of both expressers’ inauthentic displays of happiness and authentic displays of happiness on observers’ prosocial behavior in Study 1 were not significant. Observers’ analytical-holistic thinking also did not moderate the relation between expressers’ inauthentic displays of happiness and authentic displays of happiness and observers’ prosocial behavior. These nonsignificant findings for prosocial behavior were contrary to predictions. I speculate this may be due to the nature of the helping task, editing a cover letter. Given that a high number of participants did not speak or write English as a first language, they could have been less comfortable with the task.

Study 2 expanded on these findings by focusing on expressers’ inauthentic displays of happiness (relative to authentic displays of happiness) and one aspect of observers’ analytical-holistic thinking, tolerance for inconsistencies, in a field experiment in the context of a fundraiser for a charity organization. Study 2 replicated Study 1 effects for trust and also showed that observer’s analytical-holistic thinking moderated the relation between expressers’ inauthentic displays of happiness (relative to authentic displays of happiness) on two types of prosocial behavior of the observers, monetary donations and intentions to volunteer. Observers high on analytical thinking donated less money and had lower intentions to volunteer for the charity
organization when the fundraiser displayed inauthentic happiness relative to authentic happiness. The monetary donations and intentions to volunteer of observers high on holistic thinking were not influenced by the authenticity of the fundraiser’s displays of happiness. Further, observers’ trust in the fundraiser mediated the moderated effect of observer’s analytical-holistic thinking on the relation between expresser’s inauthentic, relative to authentic, displays of happiness on observers’ intentions to volunteer.

Overall these two studies provided some support for the role of observers’ analytical-holistic thinking in the social effects of up-regulated happiness, and especially for surface acting and inauthentic displays of happiness. They also suggest that the negative reactions of observers high on analytical thinking to inauthentic emotions are explained in particular by one aspect of analytical-holistic thinking, low tolerance for inconsistencies. Finally, these results also indicate that the effects of expressers’ inauthentic displays of happiness on observers’ prosocial behavior may not be direct. Instead, the up-regulation of displays of happiness and analytical-holistic thinking may influence observers’ prosocial behavior interactively.

**Theoretical Contributions**

My dissertation research contributes to the theory and research on the social effects of emotions in several ways. First, it expands the social-functional accounts of emotions by examining the role of observers’ culture on the social effects of up-regulated displays of happiness. Understanding how culture shapes the social effects of emotions represents an important missing piece from the current literature. Emotions and emotion regulation are socially learned and culturally shaped (Averill, 1980), and hence individuals from different cultures may value different emotions and make different attributions and inferences about emotions and regulation in others, which consequently may lead to different reactions to those emotions.
The results of these two studies showed that observers with different cultural thinking styles made different trust inferences from others’ efforts to display happiness. This finding is very important because it shows that the cultural differences may lie in differences in inferences made based on the emotion as opposed to differences in the recognition of emotions. A body of research by Matsumoto and colleagues (e.g., Matsumoto, 1989; Matsumoto & Ekman, 1989) has suggested that people from different cultures perceive emotions differently; for instance, the Japanese perceive emotions as less intense than Americans (Matsumoto & Ekman, 1989). Another body of research by Elfenbein and colleagues (Elfenbein & Ambady, 2002; Elfenbein, Beaupré, Lévesque, & Hess, 2007) has suggested that emotion recognition varies across cultures. As such, my research diverges from and complements this past work by suggesting that it may not just be the recognition of emotions that varies by cultures but also inferences.

A particular strength of the proposed model is that it is grounded in the cultural construct of analytical-holistic thinking. Most past research examining cultural effects on emotions has used countries as proxies for cultural dimensions (Matsumoto et al., 2002), and several researchers have called for moving away from such practices because they limit our ability to interpret differences when observed (e.g., Bond & Tedeschi, 2001; Matsumoto & Yoo, 2006). This contribution is especially important in today’s globalized world where cultural boundaries between countries are becoming increasingly fuzzy and, consequently, there may be more cultural differences within a single country (Tung, 2008).

I also expand the social-functional accounts of emotions to the domain of prosocial behavior. Past research has examined the social effects of emotions mostly in domains of negotiations, customer service, and leadership. My research suggests that the displays of happiness have an effect on prosocial behavior as well, and that those effects are moderated by
observers’ analytical-holistic thinking. These findings complement preliminary findings of George and Bettenhausen (1990) that showed that the leader’s mood is positively related with a group’s performance of prosocial behavior in several ways. First, my work shows that a regulated display of happiness rather than spontaneously felt overall mood influences observers’ prosocial behavior, but only for observers high on analytical thinkers and not for observers high on holistic thinking. Thus, my work uncovers an important boundary condition of the social effects of happiness. Second, my work establishes causality by manipulating displays of happiness and showing that displays of happiness precede acts of prosocial behavior. This is in contrast to George and Bettenhausen’s work where a cross-sectional design has prevented conclusions regarding causality (e.g., it could have been that the leader’s positive mood was influenced by a group’s performance of prosocial behavior). Finally, my work shows that displays of happiness influence the type of prosocial behavior that does not involve some degree of dependency between the individual that helped and the individual that received help.

Organizational prosocial behavior implies that there is a relationship between two parties and that reciprocity may be expected. In the case of giving money to a fundraiser (as in my Study 2) there is no such dependency between the parties suggesting that displays of happiness can be powerful in influencing prosocial behaviors even in the situations when one has nothing to gain from helping and there is no relationship involved.

This research also contributes to the fundraising theory and research. Fundraising and helping charities and nonprofit organizations has an enormous financial and social impact on our society. For example, in the USA total giving to the nonprofit sector in 2008 was $350 billion (Giving USA Foundation, 2008), and this money is used for delivering the services to those that need them that are not adequately provided by the government and business. Given the
importance of raising funds for charity and nonprofit, a central issue in the fundraising literature is to how to elicit more giving, helping, and donations. Existing theories (e.g., Bendapudi et al., 1996; Sargeant & Woodliffe, 2007) take into account that giving and helping is social in nature because it is necessary to ask for donations and, as such, they have included the characteristics of the fundraiser (i.e., an individual asking for donations) in their models. However, they have mostly included demographic characteristics such as age and gender and largely ignored any emotional factors. Given that emotional appeals are often used in fundraising, this research offers the insight that some emotional displays may be detrimental for the success of fundraisers (e.g., inauthentic happiness), especially when potential donors are analytical thinkers. More broadly, the model developed in this paper may guide future research and theorizing on factors influencing donating and other forms of fundraising.

Finally, this research also contributes to theory and research on analytical-holistic thinking. A number of studies have shown that analytical-holistic thinking has important implications for one’s conceptions of the self (e.g., English & Chen, 2007; Suh, 2002), emotional experiences (e.g., Bagozzi, Wong, & Yi, 1999), and psychological well-being (e.g., Spencer-Rodgers et al., 2004). However, as noted by researchers (Spencer-Rodgers et al., 2010), the effects of analytical-holistic thinking on people’s perceptions and inferences about others are relatively unexplored. By showing that individuals high on analytical thinking (but not those high on holistic thinking) infer low trust from inauthentic displays of emotion, my research shows that analytical-holistic thinking also has important implications for inferences about others.
Limitations and Future Studies

There are several limitations of my dissertation research that should be noted. First, the role of observers’ culture on the relation between expresser’s up-regulated happiness and observers’ prosocial behavior was examined with one aspect of culture: analytical-holistic thinking. I chose this particular cultural construct because it encompasses perceptual and cognitive cultural differences, which has direct implications for perceiving and appraising emotions in others. Using only one cultural construct to delineate cultural effects also increased the parsimony of the model. However, cultural constructs such as self-construal and individualism-collectivism could also play a role. Although these constructs do not pertain to perceptions and cognitions specifically, they prescribe what is normative and culturally appropriate and, hence, they may have consequences for what emotions are appropriate and reacted to favorably (Markus & Kitayama, 1991).

Moreover, the effects of analytical-holistic thinking were examined in a single country rather than between countries. As such, I examined analytical-holistic thinking as an individual difference. Cultural differences within country may be substantial because cultural boundaries between countries have become fuzzy due to globalization. Supporting this notion, the proportion of between-culture variance in analytical-holistic thinking in Study 1 was 4% for the measure of the AHS and 6% for the measure of the DSS. In Study 2, the proportion of between-culture variance was 0. Thus, within-culture variance in analytical-holistic thinking was larger than between-cultural variances in my two samples, which is not surprising given that both studies were conducted in one of the most culturally diverse cities in the world. The ethnic background of participants in both studies attests to this cultural diversity. Given such a large within-country ethnic and cultural diversity and given that mixing of different cultures and
ethnicities at a daily basis may lead to diffusion of ethnic influences, assessing analytical-holistic thinking at the individual level rather than using ethnicity as a proxy of underlying cultural values had an advantage of disentangling underlying cultural effects. At the same time, the assumption that analytical-holistic thinking is a cultural construct was supported by significant correlations between two measures of analytical-holistic thinking (the AHS and the DSS) and an ethnicity variable that compared East Asians and Caucasians (see Study 1). As expected, East Asians scored higher on holistic thinking than Caucasians.

I theorized and found that observers higher on holistic thinking would react less negatively to inauthentic displays of happiness because they tolerate inconsistencies in their environment (Peng & Nisbett, 1999). It is conceivable, however, that observers higher on holistic thinking may have negative responses to some inauthentic displays of emotion. Given that analytical-holistic thinking is related to collectivism (Spencer-Rodgers et al., 2010) and that collectivism is related to abiding by social norms and appropriateness (Markus & Kitayama, 1991), observers higher on holistic thinking may react negatively to inauthentic displays of emotions that are not normative or appropriate for the situation. In my two studies, showing inauthentic happiness in the context of a project leader soliciting help with editing cover letters and a fundraiser soliciting donations for a charity organization may have been seen as relatively appropriate in these contexts. As such, it remains unknown whether observers higher on holistic thinking would accept inauthentic displays that are inappropriate for the situation, such as displaying inauthentic emotions in close, personal relationships.

Further, my research only examined the role of observers’ culture, and not the role of expressers’ culture. Given that social effects are concerned with how emotions are appraised and consequently reacted to by observers, examining the role of observers’ analytical-holistic
thinking style is particularly important in understanding cultural influences on the social effects of emotions. However, expressers’ cultural background may also influence how observers appraise expressers’ emotions. Specifically, stereotypes about the emotional expressivity of the expressers’ ethnicity—the extent to which a member of that ethnicity is believed to openly and frequently express emotions—may influence perceivers’ appraisal of emotions. For example, past research found that Americans and Italians were repeatedly associated with emotionally expressive traits (e.g., impulsive, ostentatious, and passionate), whereas Chinese and Japanese were associated with emotionally inexpressive traits (e.g., meditative, reserved, and quiet) (Gilbert, 1951; Karlins, Coffman, & Walters, 1969; Katz & Braly, 1933). Although, I did not examine stereotypes about the emotional expressivity, in Study 1 there was an Asian and a Caucasian expresser, but observers’ reactions to the actors were the same. This provides some evidence that, at least within a single country, the ethnicity of the expresser may not influence observers’ reactions to inauthentic displays of happiness. However, future research on the moderating effect of culture on social effects of emotions should incorporate both the culture of observers and the culture of expressers.

**Practical Implications**

My research has some important practical implications. First, the proposed model has practical implications for cross-cultural training. Recent decades have witnessed a remarkable increase in the rate of cross-cultural business interactions (Triandis, Kurowski, & Gelfand, 1994; Tung, 2008), and thus, it can be expected that employees will be interacting and working with employees who have culturally different thinking style. Understanding that one’s emotions may be interpreted differently by individuals with culturally different thinking style may aid cross-cultural business interactions as well as team work of teams whose members are culturally
diverse. These results suggest that when one fakes or forces oneself to express unfelt happiness (i.e., through surface acting), one risks having aversive reactions from their interaction partners, especially if they are analytical thinkers. An interesting question from the practical viewpoint is how employees may know who is an analytical thinker and who is a holistic thinker. One heuristic may be the ethnic background. Past research has shown that individuals from East Asian countries tend to be holistic thinkers, whereas individuals from Western countries tend to be analytical thinkers (e.g., Choi et al., 2007; Nisbett et al., 2001). Yet, given high cultural differences within a single country, there may be great differences of cultural thinking style within the same country. However, even just raising awareness of different cultural thinking styles may be very important because it may make employees more attuned for these differences, and as such potentially lead to more synchronized work among employees from different cultures.

My dissertation research has also practical implications for nonprofit organizations and fundraising. Nonprofit and charitable organizations are facing a growing need for their services, shrinking government support, and also competitions with other nonprofit and charitable organizations (Bendapudi et al., 1996). Thus, understanding factors that influence helping and donation is of survival importance for these organizations. This paper offers an insight by showing that inauthentic displays of happiness may undermine fundraising efforts, especially when dealing with donors who are analytical thinkers. In addition, these organizations are also operating in the multicultural arena of today’s business world and hence understanding that donors may have culturally different thinking styles and consequently different reactions is crucial for planning fundraisers and enhancing their strategies.
References


Appendix A

Script of the Project Leader (Study 1)

Hi, my name is Chris. I’m the project leader on the new career centre project that is providing feedback on cover letters to high school students. I would like to take this opportunity to describe to you this project, but before I do that I’ll briefly describe the services that we offer at the career centre.

Here at the career centre, we offer a variety of services to students looking for employment. For example, we offer a workshop that guides you through the process of creating a resume and cover letter. In this workshop you learn how to highlight your relevant skills and effectively tailor your experiences to meet a potential employer’s needs.

Recently, a new university-wide project has been launched to make post-secondary education more accessible to students from lower-income neighbourhoods. As a part of this project the career centre has partnered with a number of high schools to help high school students develop writing skills and job search skills. Students in these neighbourhoods usually have limited access to the professional services of a career centre. Therefore, providing such services may enhance their chances of being admitted to post-secondary institutions and finding employment. To meet these needs, we are currently offering high school students feedback on cover letters for part-time and summer jobs.

However, the current demand for these services is exceeding our capacities at the career centre and we’re examining more innovative ways of providing feedback. We’re specifically examining feedback of university students on cover letters of high school students. Given that you are a university student who successfully enrolled into a university program, I would like to take this opportunity to ask you if you could provide comments on a cover letter of a high school student. Thank you for your attention and consideration of our request.
Appendix B

Script of the Fundraiser (Study 1)

On behalf of United Way, we’re currently raising money to address social problems in different neighborhoods in our city. United Way is addressing these social problems by providing after-school programs for youth at risk, breakfast programs for young hungry children, shelter to abused women, employment training and much more. This initiative would be impossible without help of our donors. As such we would like to ask you if you could help our United Way initiative and help our city become a better place by donating today?
In my dissertation research, I label the individual who observes emotional displays in others as observer, and the individual who displays emotions as expresser.

The analyses predicting prosocial behavior were the same when the participants who declined to edit a cover letter were taken out of analyses.

I also conducted 2-way ANOVAs to test for interaction between the actor and conditions in predicting time taken to edit a cover letter and trust. Neither main effects of actor nor any interactions were significant.

Given that observers’ analytical-holistic thinking did not moderate the relation between condition (emotional displays) and prosocial behavior, a critical requirement for the overall mediated moderation model, I did not proceed to test all steps of the overall mediated moderation model. However, given a curious lack of relation between observers’ trust in the project leader and observers’ prosocial behavior, I tested whether the relation between observers’ trust in the project leader and observers’ prosocial behavior is moderated by observers’ analytical-holistic thinking. Using the AHS as a measure of analytical-holistic thinking, the interaction between trust and the AHS was not significant, \(b = -62.255, t(236) = -1.29, ns\), in predicting prosocial behavior. Also, using the DSS as a measure of analytical-holistic thinking, the interaction between trust and the DSS was not significant, \(b = 25.19, t(235) = .54, ns\), in predicting prosocial behavior. Thus, observers’ analytical-holistic thinking did not influence the effect of observers’ trust in the project leader on observers’ prosocial behavior.

Participants’ self-efficacy for editing a cover letter was measured with three items from Grant and Gino (2010; e.g., “I felt capable to provide feedback on the high school student cover letter”; \(\alpha = .92\)).
In the pilot test of the procedure, I also had a neutral condition where the fundraiser did not display any emotions. However, participants perceived fundraisers who displayed no emotion as very unusual and counter to what they thought the values of the charity organization would be (i.e., excitement and enthusiasm for promoting a good cause). Given these insights from the pilot test and the potential that the reputation of the charitable organization could be undermined, I did not include a neutral condition in the main study.

Alternatively, when predicting the dependent variable the second and third step can be shown by having (a) an interaction between moderator and mediator and (b) an average effect of independent variable on mediator, while controlling for the effects of moderator and mediator and for the interaction between the independent variable and moderator. This alternative way did not play a role in the tested mediated moderation model, because the interaction between moderator (analytical-holistic thinking) and mediator (trust) was not significant in either predicting intention to volunteer, $b = -.57, t(51) = -1.46, ns$, or monetary donation, $b = -.44, t(68) = -1.20, ns$. As such, observers’ analytical-holistic thinking did not influence the effect of trust on prosocial behavior assessed as both intentions to volunteer and monetary donations.
<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inauthentic happiness condition</td>
<td>.51</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Authentic happiness condition</td>
<td>.53</td>
<td>.50</td>
<td>-.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived happiness</td>
<td>4.77</td>
<td>1.39</td>
<td>.64**</td>
<td>.70**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perceived neutrality</td>
<td>2.90</td>
<td>1.54</td>
<td>-.65*</td>
<td>-.68**</td>
<td>-.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Authenticity</td>
<td>3.60</td>
<td>1.24</td>
<td>-.33**</td>
<td>-.02</td>
<td>.02</td>
<td>-.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. AHS</td>
<td>4.87</td>
<td>.45</td>
<td>.11</td>
<td>.11</td>
<td>.03</td>
<td>-.01</td>
<td>.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. DSS</td>
<td>3.90</td>
<td>.45</td>
<td>-.09</td>
<td>-.06</td>
<td>-.02</td>
<td>-.04</td>
<td>.01</td>
<td>.14*</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. Trust</td>
<td>4.97</td>
<td>1.11</td>
<td>-.35**</td>
<td>.03</td>
<td>.08</td>
<td>-.02</td>
<td>.45**</td>
<td>.05</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Experienced happiness</td>
<td>3.55</td>
<td>1.29</td>
<td>-.07</td>
<td>.17**</td>
<td>.21**</td>
<td>-.15*</td>
<td>.34**</td>
<td>.02</td>
<td>-.05</td>
<td>.19**</td>
<td></td>
</tr>
<tr>
<td>10. Time taken to edit (seconds)</td>
<td>702.99</td>
<td>397.03</td>
<td>-.03</td>
<td>.09</td>
<td>-.02</td>
<td>-.001</td>
<td>.07</td>
<td>-.03</td>
<td>.01</td>
<td>.06</td>
<td>.09</td>
</tr>
</tbody>
</table>

Note. Inauthentic happiness condition was coded: 0 = neutral display and 1 = inauthentic happiness. Authentic happiness condition was coded: 0 = neutral display and 1 = authentic happiness. AHS = Analysis-Holism Scale (higher score reflects higher holistic thinking). DSS = Dialectical Self Scale (higher score reflects higher holistic thinking). Cronbach’s alphas are presented in parentheses.* p < .05. ** p < .01.
<table>
<thead>
<tr>
<th>Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Causality (α = .85)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Everything in the universe is somehow related to each other.</td>
<td>.63</td>
<td>.10</td>
<td>.00</td>
<td>-.07</td>
</tr>
<tr>
<td>2. Nothing is unrelated.</td>
<td>.58</td>
<td>-.04</td>
<td>.09</td>
<td>-.02</td>
</tr>
<tr>
<td>3. Everything in the world is intertwined in a causal relationship.</td>
<td>.65</td>
<td>.06</td>
<td>.13</td>
<td>-.01</td>
</tr>
<tr>
<td>4. Even a small change in any element of the universe can lead to</td>
<td>.63</td>
<td>.05</td>
<td>.06</td>
<td>-.02</td>
</tr>
<tr>
<td>5. Any phenomenon has numerous numbers of causes, although some of</td>
<td>.87</td>
<td>-.16</td>
<td>.10</td>
<td>.02</td>
</tr>
<tr>
<td>6. Any phenomenon entails a numerous number of consequences, although</td>
<td>.85</td>
<td>-.07</td>
<td>.11</td>
<td>.04</td>
</tr>
<tr>
<td><strong>Factor 2: Attitude Toward Contradictions (α = .66)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. It is more desirable to take the middle ground than go to</td>
<td>.12</td>
<td>.46</td>
<td>.15</td>
<td>-.07</td>
</tr>
<tr>
<td>8. When disagreement exists among people, they should search for</td>
<td>-.03</td>
<td>.64</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>9. It is more important to find a point of compromise than to</td>
<td>-.07</td>
<td>.78</td>
<td>-.02</td>
<td>.07</td>
</tr>
<tr>
<td>10. It is desirable to be in harmony, rather than in discord,</td>
<td>.01</td>
<td>.59</td>
<td>-.23</td>
<td>.12</td>
</tr>
<tr>
<td><strong>Factor 3: Perception of Change (α = .77)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11. Choosing a middle ground in an argument should be avoided. a</td>
<td>-.11</td>
<td>-.07</td>
<td>.24</td>
<td>.12</td>
</tr>
<tr>
<td>12. We should avoid going to extremes.</td>
<td>-.03</td>
<td>.44</td>
<td>.21</td>
<td>.10</td>
</tr>
<tr>
<td><strong>Factor 4: Locus of Attention (α = .74)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Every phenomenon in the world moves in predictable directions.</td>
<td>.09</td>
<td>.06</td>
<td>.63</td>
<td>.15</td>
</tr>
<tr>
<td>14. A person who is currently living a successful life will</td>
<td>.11</td>
<td>.04</td>
<td>.85</td>
<td>.04</td>
</tr>
<tr>
<td>15. An individual who is currently honest will stay honest in the</td>
<td>.03</td>
<td>.13</td>
<td>.74</td>
<td>-.02</td>
</tr>
<tr>
<td>16. If an event is moving toward a certain direction, it will</td>
<td>.00</td>
<td>.10</td>
<td>.75</td>
<td>.07</td>
</tr>
<tr>
<td>17. Current situations can change at any time.</td>
<td>.10</td>
<td>.13</td>
<td>-.40</td>
<td>.05</td>
</tr>
<tr>
<td>18. Future events are predictable based on present situations. a</td>
<td>.11</td>
<td>.04</td>
<td>.28</td>
<td>.13</td>
</tr>
<tr>
<td><strong>Note.</strong> Standard errors are in parentheses. Factor-specific item</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exploratory Factor Analysis: Factor Loadings for the Analysis-Holism Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>**an item that did not load on the proposed factor is in italics. **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>α for the overall scale is .69.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3
Exploratory Factor Analysis: Factor Loadings for the Dialectical Self Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Contradiction (α = .54)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. When I hear two sides of an argument, I often agree with both.</td>
<td>.44 (.10)*</td>
<td>.08 (.07)</td>
<td>.22 (.13)*</td>
</tr>
<tr>
<td>2. I often find that things will contradict each other.</td>
<td>.27 (.09)*</td>
<td>.05 (.07)</td>
<td>-.10 (.11)</td>
</tr>
<tr>
<td>3. I sometimes believe two things that contradict each other.</td>
<td>.45 (.04)*</td>
<td>.00 (.07)</td>
<td>.22 (.13)*</td>
</tr>
<tr>
<td>4. My world is full of contradictions that cannot be resolved.</td>
<td>.53 (.14)*</td>
<td>.02 (.07)</td>
<td>-.30 (.16)</td>
</tr>
<tr>
<td>5. If there are two opposing sides to an argument, they cannot both be right.</td>
<td>.21 (.10)*</td>
<td>.32 (.07)</td>
<td>.13 (.10)</td>
</tr>
<tr>
<td>6. Believing two things that contradict each other is illogical.</td>
<td>.18 (.09)*</td>
<td>.41 (.06)*</td>
<td>-.09 (.09)</td>
</tr>
<tr>
<td>7. I find that if I look hard enough, I can figure out which side of a controversial issue is right.</td>
<td>.04 (.13)</td>
<td>.62 (.05)*</td>
<td>-.24 (.08)</td>
</tr>
<tr>
<td>8. For most important issues, there is one right answer.</td>
<td>.11 (.10)</td>
<td>.53 (.06)*</td>
<td>.15 (.09)</td>
</tr>
<tr>
<td>9. I find that my world is relatively stable and consistent.</td>
<td>-.03 (.07)</td>
<td>.43 (.06)*</td>
<td>.06 (.07)</td>
</tr>
<tr>
<td>10. When two sides disagree, the truth is always somewhere in the middle.</td>
<td>.40 (.07)*</td>
<td>.11 (.07)*</td>
<td>.08 (.11)</td>
</tr>
<tr>
<td>11. When I am solving a problem, I focus on finding the truth.</td>
<td>.07 (.06)</td>
<td>.53 (.06)*</td>
<td>.02 (.07)</td>
</tr>
<tr>
<td>12. When two of my friends disagree, I usually have a hard time deciding which of them is right.</td>
<td>.43 (.07)*</td>
<td>.11 (.07)</td>
<td>-.02 (.12)</td>
</tr>
<tr>
<td>13. There are always two sides to everything, depending on how you look at it.</td>
<td>.18 (.07)*</td>
<td>.02 (.07)</td>
<td>.01 (.05)</td>
</tr>
<tr>
<td><strong>Factor 2: Cognitive Change (α = .66)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I believe my personality will stay the same all of my life.</td>
<td>.18 (.01)</td>
<td>.40 (.07)*</td>
<td>.28 (.09)*</td>
</tr>
<tr>
<td>15. If I’ve made up my mind about something, I stick to it.</td>
<td>-.09 (.07)</td>
<td>.44 (.06)*</td>
<td>.07 (.07)</td>
</tr>
<tr>
<td>16. I have a definite set of beliefs, which guide my behavior at all times.</td>
<td>-.20 (.06)</td>
<td>.74 (.04)*</td>
<td>.04 (.07)</td>
</tr>
<tr>
<td>17. I have a strong sense of who I am and don’t change my views when others disagree with me.</td>
<td>-.26 (.06)</td>
<td>.64 (.03)*</td>
<td>.09 (.08)</td>
</tr>
<tr>
<td>18. I often find that my beliefs and attitudes will change under different contexts.</td>
<td>.52 (.09)</td>
<td>-.09 (.07)</td>
<td>-.16 (.14)</td>
</tr>
<tr>
<td>19. I find that my values and beliefs will change depending on who I am with.</td>
<td>.57 (.06)*</td>
<td>.02 (.07)</td>
<td>.09 (.14)</td>
</tr>
<tr>
<td>20. I prefer to compromise than to hold on to a set of beliefs.</td>
<td>.55 (.08)</td>
<td>-.18 (.07)</td>
<td>.17 (.14)</td>
</tr>
<tr>
<td>21. I can never know for certain that any one thing is true.</td>
<td>.21 (.10)*</td>
<td>.32 (.07)*</td>
<td>.13 (.10)</td>
</tr>
<tr>
<td>22. My core beliefs don’t change much over time.</td>
<td>-.02 (.08)</td>
<td>.48 (.06)*</td>
<td>.15 (.08)</td>
</tr>
<tr>
<td>23. If I think I am right, I am willing to fight to the end.</td>
<td>-.14 (.07)*</td>
<td>.48 (.06)*</td>
<td>-.02 (.07)</td>
</tr>
<tr>
<td>24. I have a hard time making up my mind about controversial issues.</td>
<td>.44 (.07)*</td>
<td>.09 (.07)</td>
<td>-.04 (.12)</td>
</tr>
<tr>
<td><strong>Factor 3: Behavioral Change (α = .50)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. I am the same around my family as I am around my friends.</td>
<td>.24 (.23)</td>
<td>.17 (.08)</td>
<td>.64 (.08)*</td>
</tr>
<tr>
<td>26. I believe my habits are hard to change.</td>
<td>.22 (.07)*</td>
<td>.33 (.07)*</td>
<td>.03 (.10)</td>
</tr>
<tr>
<td>27. I often change the way I am, depending on who I am with.</td>
<td>.26 (.20)</td>
<td>.10 (.07)</td>
<td>-.46 (.11)*</td>
</tr>
<tr>
<td>28. The way I behave usually has more to do with immediate circumstances than with my personal preferences.</td>
<td>.09 (.09)</td>
<td>33 (.07)*</td>
<td>-.15 (.09)</td>
</tr>
<tr>
<td>29. My outward behaviors reflect my true thoughts and feelings.</td>
<td>.12 (.13)</td>
<td>.27 (.08)*</td>
<td>-.36 (.08)*</td>
</tr>
<tr>
<td>30. I am constantly changing and am different from one time to the next.</td>
<td>.53 (.14)*</td>
<td>.02 (.07)</td>
<td>-.30 (.16)*</td>
</tr>
<tr>
<td>31. I usually behave according to my principles.</td>
<td>-.15 (.10)</td>
<td>.60 (.06)*</td>
<td>.25 (.08)*</td>
</tr>
<tr>
<td>32. I sometimes find that I am a different person by the evening than I was in the morning.</td>
<td>.40 (.17)*</td>
<td>.01 (.07)</td>
<td>-.36 (.14)*</td>
</tr>
</tbody>
</table>

Note. Standard errors are in parentheses. Factor-specific item loadings are indicated in boldface. *factor loading is significantly different from 0, *p < .05.a. reverse-coded items. Items that did not load on the proposed factors are in italics. α for the overall scale is .76.
Table 4

Regression Analysis Results: The Moderating Effect of Observers’ Levels of the AHS on the Effect of Expressers’ Inauthentic Happiness (vs. Neutral) and Authentic Happiness (vs. Neutral) on Observers’ Trust in Expressers (Study 1)

<table>
<thead>
<tr>
<th>DV: Trust</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>AHS</td>
<td>.12</td>
<td>.05</td>
<td>.16</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. neutral)</td>
<td>- .88**</td>
<td>-.37**</td>
<td>.16</td>
</tr>
<tr>
<td>Authentic happiness (vs. neutral)</td>
<td>-.03</td>
<td>.01</td>
<td>.16</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. neutral) x AHS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic happiness (vs. neutral) x AHS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.002</td>
<td>.14**</td>
<td>.03*</td>
</tr>
</tbody>
</table>

Note. AHS = Analysis-Holism Scale (higher score reflects higher holistic thinking). Inauthentic happiness (vs. neutral) = dummy code for condition (1 = inauthentic happiness condition, 0 = neutral condition). Authentic happiness (vs. neutral) = dummy code for condition (1 = authentic happiness condition, 0 = neutral condition). * p < .05. ** p < .01.
Table 5

Regression Analysis Results: The Moderating Effect of Observers’ Levels of the DSS on the Effect of Expressers’ Inauthentic Happiness (vs. Neutral) and Authentic Happiness (vs. Neutral) on Observers’ Trust in Expressers (Study 1)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>β</td>
<td>S.E.</td>
<td>B</td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>DV: Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSS</td>
<td>.11</td>
<td>.05</td>
<td>.07</td>
<td>.06</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. neutral)</td>
<td></td>
<td></td>
<td></td>
<td>-.87**</td>
<td>-.37**</td>
<td>.16</td>
</tr>
<tr>
<td>Authentic happiness (vs. neutral)</td>
<td></td>
<td></td>
<td></td>
<td>.05</td>
<td>.02</td>
<td>.16</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. neutral) x DSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic happiness (vs. neutral) x DSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.002</td>
<td></td>
<td>.14**</td>
<td></td>
<td>.02*</td>
<td></td>
</tr>
</tbody>
</table>

Note. DSS = Dialectical Self Scale (higher score reflects higher holistic thinking). Inauthentic happiness (vs. neutral) = dummy code for condition (1 = inauthentic happiness condition, 0 = neutral condition). Authentic happiness (vs. neutral) = dummy code for condition (1 = authentic happiness condition, 0 = neutral condition). * p < .05. ** p < .01.
Table 6

*Study 2 Means, Standard Deviations, Cronbach’s Alphas, and Zero-Order Correlations*

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inauthentic happiness condition</td>
<td>.53</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived happiness</td>
<td>5.62</td>
<td>1.03</td>
<td>-.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.88)</td>
</tr>
<tr>
<td>3. Authenticity</td>
<td>5.35</td>
<td>1.01</td>
<td>-.25*</td>
<td>.41*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.84)</td>
</tr>
<tr>
<td>4. Analytical-holistic thinking</td>
<td>4.13</td>
<td>.78</td>
<td>-.08</td>
<td>.11</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
<td>(.68)</td>
</tr>
<tr>
<td>5. Trust</td>
<td>5.82</td>
<td>.86</td>
<td>-.23†</td>
<td>.24*</td>
<td>.46**</td>
<td>-.05</td>
<td></td>
<td></td>
<td>(.71)</td>
</tr>
<tr>
<td>6. Experienced happiness</td>
<td>3.36</td>
<td>.84</td>
<td>-.04</td>
<td>.13</td>
<td>.06</td>
<td>-.10</td>
<td>-.08</td>
<td></td>
<td>(.84)</td>
</tr>
<tr>
<td>7. Intention to volunteer</td>
<td>4.68</td>
<td>1.69</td>
<td>-.12</td>
<td>.23†</td>
<td>.24†</td>
<td>.26*</td>
<td>.30*</td>
<td>.33*</td>
<td></td>
</tr>
<tr>
<td>8. Monetary donation</td>
<td>1.58</td>
<td>1.87</td>
<td>-.07</td>
<td>-.12</td>
<td>-.02</td>
<td>-.21†</td>
<td>.05</td>
<td>.18</td>
<td>-.07</td>
</tr>
</tbody>
</table>

*Note.* Inauthentic happiness condition was coded: 0 = authentic happiness condition and 1 = inauthentic happiness condition. Analytical-holistic thinking: higher score reflects higher holistic thinking. Cronbach’s alphas are presented in parentheses. Intention to volunteer had one item. *p < .05. **p < .01. †p < .10.
Table 7

Regression Analysis Results: The Moderating Effect of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic Happiness (vs. Authentic Happiness) on Observers’ Monetary Donations (Study 2)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>β</td>
<td>S.E.</td>
<td>B</td>
<td>β</td>
<td>S.E.</td>
<td>B</td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>DV: Monetary Donations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analytical-holistic thinking</td>
<td>-.51†</td>
<td>-.21†</td>
<td>.27</td>
<td>-.53†</td>
<td>-.22†</td>
<td>.28</td>
<td>-1.27*</td>
<td>-.53*</td>
<td>.40</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic)</td>
<td>-.32</td>
<td>-.09</td>
<td>.43</td>
<td>-.26</td>
<td>-.07</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic) x Analytical-holistic thinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.37*</td>
<td>.42*</td>
<td>.54</td>
</tr>
<tr>
<td>∆R²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.05†</td>
<td>.007</td>
<td>.08*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Analytical-holistic thinking: higher score reflects higher holistic thinking. Inauthentic happiness (vs. authentic) = dummy code for condition (1 = inauthentic happiness condition, 0 = authentic happiness condition). * p < .05. † p < .10.
Table 8

*Regression Analysis Results: The Moderating Effect of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic Happiness (vs. Authentic Happiness) on Observers’ Intention to Volunteer (Study 2)*

<table>
<thead>
<tr>
<th>DV: Intention to Volunteer</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>Analytical-holistic thinking</td>
<td>.54*</td>
<td>.26*</td>
<td>.27</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic)</td>
<td>-.28</td>
<td>-.08</td>
<td>.44</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic) x Analytical-holistic thinking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∆R²</td>
<td>.07*</td>
<td>.007</td>
<td>.09*</td>
</tr>
</tbody>
</table>

*Note. Analytical-holistic thinking: higher score reflects higher holistic thinking. Inauthentic happiness (vs. authentic) = dummy code for condition (1 = inauthentic happiness condition, 0 = authentic happiness condition). * p < .05. † p < .10.*
Table 9

Regression Analysis Results: The Moderating Effect of Observers’ Analytical-Holistic Thinking on the Effect of Expressers’ Inauthentic Happiness (vs. Authentic Happiness) on Observers’ Trust in Expressers (Study 2)

<table>
<thead>
<tr>
<th>DV: Trust</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>Analytical-holistic thinking</td>
<td>-.06</td>
<td>-.05</td>
<td>.13</td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inauthentic happiness (vs. authentic) x Analytical-holistic thinking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Analytical-holistic thinking: higher score reflects higher holistic thinking. Inauthentic happiness (vs. authentic) = dummy code for condition (1 = inauthentic happiness condition, 0 = authentic happiness condition). * p < .05. † p < .10.
Figure 1. Theoretical mediated moderation model of how observers’ analytical-holistic thinking shapes the effects of expressers’ up-regulated happiness on the observers’ prosocial behavior.

Panel A presents the model for happiness regulated through surface acting and, thus, producing inauthentic displays of happiness; Panel B presents the model for happiness regulated through deep acting and, thus, producing authentic displays of happiness.
Figure 2. The moderating effect of observers’ analytical-holistic thinking (assessed by the AHS) of the effect of project leaders’ emotional display (three levels: neutral, authentic happiness, and inauthentic happiness) on observers’ trust in project leaders (Study 1). High analytical thinking is one standard deviation below the mean of the AHS. High holistic thinking is one standard deviation above the mean of the AHS.
Figure 3. The moderating effect of observers’ analytical-holistic thinking (assessed by the DSS) on the effect of project leaders’ inauthentic displays of happiness (vs. neutral emotional displays) on observers’ trust in project leaders (Study 1). High analytical thinking is one standard deviation below the mean of the DSS. High holistic thinking is one standard deviation above the mean of the DSS.
Figure 4. The moderating effect of observers’ analytical-holistic thinking on the effect of fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ monetary donations (Study 2). High analytical thinking is one standard deviation below the mean of analytical-holistic thinking. High holistic thinking is one standard deviation above the mean of analytical-holistic thinking.
Figure 5. The moderating effect of observers’ analytical-holistic thinking on the effect of fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) on observers’ intention to volunteer (Study 2). High analytical thinking is one standard deviation below the mean of analytical-holistic thinking. High holistic thinking is one standard deviation above the mean of analytical-holistic thinking.
Figure 6. The moderating effect of observers’ analytical-holistic thinking on the effect of fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) and observers’ trust in fundraisers (Study 2). High analytical thinking is one standard deviation below the mean of analytical-holistic thinking. High holistic thinking is one standard deviation above the mean of analytical-holistic thinking.
Figure 7. The mediated moderation model, in which observers’ trust in fundraisers mediates the interactive effect between expressers’ inauthentic displays of happiness (vs. authentic displays of happiness) and observers’ analytical-holistic thinking on observers’ intention to volunteer (Study 2). Given that $N$ was 57 for intent to volunteer, I re-ran the regression analysis testing for the interaction between fundraisers’ inauthentic displays of happiness (vs. authentic displays of happiness) and observers’ analytical-holistic thinking when predicting trust with an $N$ of 57 and the interaction was significant, $b = .71$, $t(53) = 2.71$, $p < .01$. * $p < .05$. † $p < .10$. 