Gaming Emotions

*Working paper*

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Eduardo B. Andrade and Teck-Hua Ho*

University of California, Berkeley
*Eduardo B. Andrade and Teck-Hua Ho. University of California, Berkeley. We thank Bruce Barry, Cameron Anderson, and Joel B. Cohen for their helpful comments on previous versions of this manuscript. We also thank Vincent Chan, Jason Harakh, Esther Hwang, Julia Lee, Caroline Wang, and the Xlab for their assistance with data collection. The manuscript also benefited from helpful comments from seminar participants at Yale University (SOM) and the Bay Area Marketing Colloquium. Correspondence about this article should be addressed to Eduardo B. Andrade, University of California, Berkeley, CA, 94720-1900. Phone #: (510) 643-4376. E-mail: eandrade@haas.berkeley.edu.
One’s own emotions may influence someone else’s behavior in a social interaction. If one believes this, s/he has an incentive to *game emotions*—to strategically modify the expression of a current emotional state—in an attempt to influence her/his counterpart. In a series of three experiments, this paper investigates the extent to which people (1) misrepresent a current emotional state, (2) are willing to acknowledge their strategic actions, and (3) improve their financial wellbeing from emotion gaming.
Consider the following vignette:

Jerry is thrilled these days. His wife passed the bar exam, he received a deserved raise, and their first baby girl was recently born. It is time to move beyond the sports car and buy a minivan. After browsing the web, Jerry and his wife fall in love with a particular model, although the price seems a bit high. Jerry then goes to the car dealer, meets the salesperson, and starts the price negotiation. During the interaction, Jerry chooses to strategically display his emotions. Instead of excitement, he portrays a low level of enthusiasm. Instead of happiness, his facial expression conveys slight signs of anger. Instead of pleasure, he quite often displays boredom. After a few hours of intense negotiation, Jerry closes the deal and allows himself to smile again. This car-buying vignette suggests that a consumer’s emotional expression may be important in determining the final outcome of a buyer-seller price negotiation.

There is a limited literature on buyer-seller negotiation in consumer research, let alone the moderating role of emotion expressions. This is rather surprising due to the wide range of consumer purchasing contexts in which a negotiation indeed takes place between the buyer and the seller (e.g., car, house, furniture, and etc.). Moreover, bargaining is the norm and perhaps the most dominant form of interaction between a buyer and a seller in many countries. Yet, the number of research articles in the Journal of Consumer Research that adopt any sort of actual negotiation paradigm is unusually small (see Buchan, Croson and Johnson 2004 for a discussion). This small stream of research, however, highlights the importance and complexity of the topic. Schurr and Ozanne (1985) showed that when the buyer expected the seller to be a tough and trustworthy bargainer, the former conceded more to the latter. More recently, Srivastava and Oza (2006) demonstrated that contextual issues such as the time delay between the offer and the response could also influence the final bargaining outcomes. Proposers were more
satisfied with the outcomes when their offer was accepted after a delay than when it was accepted immediately.

In this paper, we investigate the role of emotional expressions in buyer-seller negotiation. We posit that consumers are willing to game emotions—to strategically modify the expression of a current emotional state—in an attempt to influence sellers. In a series of three experiments, we investigate the extent to which consumers (1) misrepresent a current emotional state for strategic reasons, (2) are willing to acknowledge their actions, and (3) improve their financial wellbeing from emotion gaming.

EMOTIONS IN NEGOTIATIONS

Although absent in the CB literature, research on the effect of emotions on interpersonal relationships has received growing attention in social psychology and organizational behavior (Allred 1999; Barry and Oliver 1996; Davidson and Greenhalgh 1999; Morris and Keltner 2000; Thompson, Nadler, and Kim 1999). The earliest tradition has focused on how one’s emotions would influence one’s own behavior in a dyadic relationship. More than forty years of research has shown that, in general, happy people are more willing to help, to cooperate with, and to trust others in a negotiation (Allred et al. 1997; Baron, 1990; Baron et al. 1990; Berkowitz, 1987; Carnevale and Isen 1986; Dunn and Schweitzer, 2005; Forgas 1998). On the other hand, people experiencing negative emotions—particularly, anger—are in general less trustworthy, more competitive, and more selfish (Allred et al. 1997; Berkowitz 1989; Baron 1990; Baron et al. 1990; Dunn and Schweitzer 2005; Pillutla and Murnighan 1996; Sanfey et al.2003; Travis 1989).

A more recent research stream has asked whether other people’s emotions would influence one’s own decision in negotiations (Andrade and Ho 2007; Kopelman, Rosette, and
van Kleef, de Dreu, and Manstead (2004) show that proposers frequently revise their offer after knowing receivers’ allegedly angry, neutral, or happy reactions to their prior offer (e.g., an angry reaction: “This offer makes me really angry”, p. 61). Proposers concede more to an angry than to a happy receiver, with neutral being somewhere in the middle. These results show that other’s *integral* affect—e.g., the angry feeling generated by an unappealing offer during a negotiation—is taken into account in a subsequent negotiation. Andrade and Ho (2007) move a step further by showing that people can take other people’s feelings into account even when the source of affect is *incidental*, and as a result, the affective state is independent of the level of satisfaction associated with the negotiation process or outcome. In an ultimatum-type game where proposers move first by dividing a given pot of cash (keeping 50% or 75% of the pot) and receivers respond by choosing the size of the pot (from $0 to $1), proposers are more likely to make an uneven offer (i.e., to keep 75% of the pot) if they are told that receivers have watched a funny sitcom, rather than a movie clip portraying anger, in an unrelated study prior to the game. However, this systematic effect occurs only if proposers know that receivers are not aware of the sharing of their affective state. Also in an ultimatum setting, Kopelman, Rosette, and Thompson (2006) demonstrate that receivers are more likely to accept a given offer from a proposer (confederate) who displays positive (vs. negative or neutral) emotions. Similarly, Sinaceur and Tiedens (2006) show that receivers with unattractive outside options concede more to a purportedly angry (vs. neutral) proposer. van Kleef, de Dreu, and Manstead (2006) show that people concede more to an opponent who displays disappointment or worry and less to an opponent who displays guilt. In short, there has been growing evidence suggesting that one’s emotions influence the other’s decision in the negotiation process. If this is the case and people...
are able to intuit it, they may be willing to strategically modify the expression of a current emotional state in order to improve their material wellbeing in a negotiation.

**GAMING EMOTIONS IN NEGOTIATION**

The impression management literature has provided robust evidence that, in a social interaction, people are usually willing to control or modify displayed aspects of the self for strategic reasons (Baumeister 1982; Goffman 1959; Schlenker 1975; Schlenker and Pontari 2000; Vohs, Baumeister, and Ciarocco 2005). Emotions may well be one of such aspects (Jones and Pittman, 1982). Since emotions convey social cues in a negotiation (Keltner and Kring 1998; Morris and Keltner 2000), people have an incentive to strategically express their feelings (Barry 1999; Thompson, Nadler, and Kim, 1999).

Employees may display non-experienced emotions, especially when their jobs require them to do so. This so-called *emotional labor* literature has addressed (a) the extent to which the workplace demands specific emotional expressions and (b) how much such requirements influence employees’ wellbeing (Ashforth 1993; Gosserand and Diefendorff 2005; Grandey 2003; Hochschild 1983; Morris and Feldman 1996). Employees are frequently obliged either by implicit social norms or by explicit company policies to display, and usually fake, specific emotional states. The service industry has numerous examples. Amusement parks (Rafaeli and Sutton 1987), airline companies (Hochschild 1983), and fast food chains (Boas and Chain 1976) often suggest or request their employees to continuously display positive feelings when they interact with their customers.

The dissociation between inner and outer feelings has negative physiological and psychological costs, which can reduce employees’ wellbeing in the long run. For instance, there
is evidence suggesting that the pressure to deliberately fake feelings is negatively correlated with job satisfaction (Grandey 2003). Similarly, deliberate attempts at suppressing one’s positive and negative feelings can be physiologically costly (Gross and Levenson 1997). Nevertheless, it is possible that people may deliberately choose to game emotions, especially if by doing so they can obtain other benefits (Rafaeli and Sutton 1987). It has been shown that customers give a higher tip when positive feelings are made salient in a restaurant, either through a server’s “maximal” smile (Tidd and Lockard 1978) or a joke card next to the check (Gueguen 2002). Similarly, receivers are more likely to accept an offer in an ultimatum game when they are matched with a proposer—a confederate—who expressed more positive (vs. negative or neutral) emotions (Kopelman, Rosette, and Thompson 2006). Hence, those who intuit that their emotions will influence other people’s decisions may wish to game emotions, especially when the associated physiological and psychological costs are low compared to the likely benefits.

There are a few studies to suggest that people do game emotions. In a consumer survey, Spiro (1983) shows that emotion gaming is one of the persuasion tactics used by spouses to resolve disagreements about a purchase decision. In an experimental setting, Clark, Pataki, and Carver (1996) demonstrate that when people are presented with a goal to get others to like them, they report higher levels of happiness relative to their own previous assessment before knowing the goal. The authors argue that if people intuit that happiness and likeability are positively associated, they may intensify their happiness in order to be perceived as a more likeable person (see also Pataki and Clark 2004). Finally, Cole, Martin, and Dennis (2004) show that children are less likely to display either a positive or a negative emotion in the presence of their friends than in front of their parents or when they are alone (Zeman and Garber 1996).
Hence, there may be circumstances where the gains of emotion gaming are greater than its associated psychological and physiological costs, so people find it profitable to do so. Surprisingly, there is little empirical evidence to simultaneously examine (a) the extent to which individuals wishfully modify the expression of a given emotional state during a social interaction in an attempt to increase their financial wellbeing, and (b) whether such a deliberate strategy influences negotiation outcomes. In a comprehensive review of the affect and negotiation literature, Barry (2008) notes, “…it is sufficiently easy to present experimental participants with manipulations of ‘tactical’ emotion, but not so easy to study how negotiators actually use emotion tactically. In other words, we can explore how individuals respond to emotional gambits with conventional methods (as Kopelman et al. 2006 have), but not necessarily how individuals themselves choose to engage and deploy emotions strategically” (p. 103).

In this paper, we advance the literature by first proposing a simple paradigm that allows us to directly capture people’s strategic display of emotions. Second, we assess whether or not people are willing to acknowledge their emotion gaming behavior. Third, we test whether emotion gaming pays. Finally, we investigate the extent to which people choose to game an emotional state (i.e., anger) over another piece of information (i.e., expectation).¹

OVERVIEW OF THE EXPERIMENTS AND GENERAL HYPOTHESES

Three experiments are conducted with a similar procedure. Participants arrive at the lab and are randomly assigned to one of the laptops located in the east or west side of the room. The instructions inform that they will be participating in two tasks involving interactive decision-making. In addition, they are told specifically that their payment is contingent on the outcome of

¹ For the purposes of this research, emotion gaming is defined as a deliberately effort to misrepresent the expression of emotions. We do acknowledge, however, the possibility that emotion gaming might happen involuntarily, which would, then, require little introspection about the intuitive theory of its effectiveness.
the two tasks. Thus, participants’ decisions are consequential and they have an incentive to perform well (their potential payoffs can range from $2.5 to $16.5). Finally, all experiments are web-based so that interactions between participants occur (a) anonymously and (b) in real time.

In both tasks, participants play a 2-person game (see figure 1). They are told that they will be playing the same role and will be matched with the same partner in both games. The Dictator Game (DG) is used in “Task 1,” whereas the Ultimatum Game (UG) is used in “Task 2” (see also Buchan, Croson, and Johnson 2004). In the DG, there are two players (labeled as proposer and receiver). The proposer is endowed with a pot of money and asked to divide the pie between him/her and the receiver. The receiver has no choice and must accept the offer as proposed (i.e., the proposer is a dictator). The DG is used to manipulate receivers’ level of anger (e.g., proposers are led to make an unfair offer to receivers who must accept it).

In the UG, a proposer is also endowed with a pot of money and asked to propose a division of the pie between him/her and the receiver. However, unlike the DG, the receiver in an UG can either accept or reject the proposer’s offer. If the receiver rejects an offer, both players earn nothing. Note that the UG is the targeted market exchange between a consumer and a seller. It is meant to capture the common retail setting where a seller (i.e., proposer) posts a fixed price and a consumer (i.e., receiver) must decide whether or not to accept the price offer. The UG can also capture the very last phase of a complex negotiation involving multiple stages (e.g., buying a new car) where one party gives the final ‘take-it-or-leave-it’ offer before walking away from the negotiation table.
Emotion Gaming

Right after the DG (i.e., the emotion manipulation), receivers are asked to report how angry they are feeling on a 101-point scale (report 1). After a short duration (filler task), participants are introduced to the UG. Right before proposers decide on the division of the pie, receivers are asked to report once again their current level of anger (report 2). Half of them are informed that their last report of anger will be shown to proposers before proposers make a decision on the offer (displayed emotion condition). The other half is simply told that we want to assess how emotions change over time (control condition). We hypothesize that receivers will misrepresent their actual level of anger by inflating it (i.e., report 2 > report 1) when they know that proposers will see their anger display before deciding on their offer (experiments 1, 2, and 3). We further hypothesize that receivers will be ready to acknowledge their strategic display of emotions when asked to explain why they decided to report a different level of anger (experiment 2) and that receivers will prefer to send an inflated level of anger than an inflated level of expectation when given a choice (experiment 3).

Effectiveness of Emotion Gaming

After being presented (or not) with the matched-receivers’ level of anger, proposers then determine their division of the pie. We hypothesize that the proposers’ offer is positively correlated with the receivers’ reported level of anger (experiment 1). That is, angrier receivers will get a higher share of the pie. However, this effect will be contingent on the credibility of the reported anger information. When proposers know that receivers might be gaming emotions, this conceding effect should diminish (experiment 2). Finally, we posit that anger will be perceived as a more persuasive tactic than plain information about one’s prior expectation in the UG game.
That is, proposers who are informed about receivers’ anger -- “This previous offer [in the DG] made me angry”-- are more likely to concede than proposers who are informed about receivers’ violated expectations --“The previous offer [in the DG] was below my expectations”-- (experiment 3). Figure 1 shows the overall design of the 3 experiments.

--- Insert Figure 1 around Here ---

Changes in Emotion Expression or Experience?

It is well established that physical postures, and particularly facial expressions, can actually change one’s current experienced emotions (for a review, see Adelmann and Zajonc 1989). Therefore, when people attempt to display an emotional state, they may end up changing it. To control for this potential confound, receivers in all three experiments are asked to report their experienced emotion on a 101-point scale on a computer screen. Since there are no physical changes required as a function of emotional expression (e.g., smile or frown), this procedure allows us to separate changes in emotion expression (i.e., emotion gaming) from changes in emotion experience.

EXPERIMENT 1

Method

Participants and design. One hundred fifty two students from a western university participated in this experiment. They were paid a flat $5 show-up fee plus additional cash earnings contingent on the outcome of the games. The experiment adopted a 2 (affective
information: control vs. displayed emotion; between) by 2 (self-report of anger: first vs. second; within) mixed design.

Procedure. Participants were randomly assigned to either the east or the west side of the room. The general instructions informed that the experiment was about interactive decision-making and that subjects would be participating in two web-based tasks. Each participant in one side of the room was randomly matched with another person from the other side of the room. Participants were randomly assigned the role of a proposer or a receiver and were told that in both forthcoming tasks they (a) would be playing the same role and (b) would be matched with the same partner. They were informed that they would play the two games in complete anonymity and that their total cash earnings in the experiment would be the sum of their earnings in each of the two games (i.e., earnings in DG + UG) plus the $5 flat fee.

DG. The DG was a variant of the standard dictator game. In the standard dictator game, there are two players (labeled as proposer and receiver). The proposer is endowed with a pot of money and asked to divide the pie between him/her and the receiver. The receiver has no choice but to accept the offer as it is. In our version, the proposer was endowed with $10 and asked to choose a division of the pie. To systematically manipulate the offers made and, as a result, the receivers’ emotional reaction to it, proposers in the DG had only two options to choose from (e.g., “Proposer gets $7.0 and Receiver gets $3.0” or “Proposer gets $3.0 and Receiver gets $7.0”). Moreover, receivers were not aware of this choice constraint faced by proposers. To increase generalizability, proposers were randomly assigned to one of the three possible choice sets (P:$7.0/R:$3.0 or P:$3.0/R:$7.0; P:$6.5/R:$3.5 or P:$3.5/R:$6.5; P:$6.0/R:$4.0 or P:$4.0/R:$6.0). These different choice sets also allowed us to disguise from receivers the constraint the experimenter imposed on proposers (i.e., the word of mouth after the experiment.
could be problematic if all receivers got identical offers in the DG). In all three choice sets, we expect proposers to select the option that provided them with a larger share of the pie.

*Measuring Anger.* After receiving a fair or an unfair offer and being required to accept it, receivers were asked to report their level of anger on a 101-point scale - “Right now, I feel ____ (0=not angry at all, 50=moderately angry, 100=very angry – any number from 0 to 100 is allowed).”

*UG.* Participants were then introduced to task 2 (UG). They were reminded that they were (a) playing the same role and (b) matched with the same partner. Like the UG, the proposers were once again endowed with $10 and asked to propose a division of the pie. Unlike the DG, however, receivers here could either accept or reject the offer. Any division of the pie was possible and both proposers and receivers were fully aware of this possibility.

*Gaming Anger.* Before the targeted social interaction began (i.e., before proposers proposed a division of the pie), receivers were asked to report once again their current level of anger. At this point, a manipulation was introduced. Half of them were informed that since the game required full information disclosure, this second report would be sent to their matched-proposers (displayed emotion condition). The other half was not provided with this additional information (control condition). They were simply told that the experimenter wanted to assess how their emotions changed overtime. A short filler task (an irrelevant 27-item survey) was inserted between games in an attempt to mitigate people’s level of anger over time. Thus, any inflation of anger would provide initial evidence that receivers were indeed gaming emotions.

In summary, all receivers in the DG were expected to receive an unfair offer, which had to be accepted. Right after, they were asked to report their current level of anger. Following this, a short distracting task took place. Participants were then introduced to the UG. Just before the
targeted social interaction (i.e., before proposers proposed a division), receivers were again asked to report their level of anger. Half of the receivers were told their second report would be seen by their matched-proposers (displayed emotion condition) whereas the other half were told we want to assess whether/how their emotions changed over time (control condition). The respective matched-proposers either saw or did not receive the second report of anger, and then made their offer, which was either accepted or rejected by their matched-receivers.

Results

Manipulation Check. As expected, all proposers chose the option that gave them a larger share of the pie. It means that receivers were offered $4, $3.5, or $3 out of $10 depending on the provided choice set. More unfair offers led to higher receivers’ level of anger at time 1 ($M_{4} = 26.4$, $SE = 4.7$ vs. $M_{3.5} = 45.0$, $SE = 5.1$ vs. $M_{3} = 41.7$, $SE = 5.3$; $F(2, 73) = 4.16$, $p < .05$, $\eta_{p}^{2} = .10$). Most importantly, the offer size in the DG did not interact with the two main factors in the design ($F(2, 70) = 1.19$, $p > .10$, $\eta_{p}^{2} = .03$). In other words, the to-be-reported findings were not constrained to a given range of anger reactions or offer size. The levels of this factor were then collapsed.

Gaming Anger. An analysis of variance with repeated measures was conducted to test the extent to which the timing of the report (first vs. second) and affective information (control vs. displayed) interacted on the self-report anger. The results confirmed the interaction ($F(1, 74) = 8.2$, $p = .005$, $\eta_{p}^{2} = .10$; see figure 2). Precisely, the control condition showed that the receivers’ level of anger in the second report ($M = 32.8$, $SE = 4.6$) was marginally lower than in the first report ($M = 39.1$, $SE = 4.1$; $F(1, 74) = 2.94$, $p < .10$, $\eta_{p}^{2} = .04$), probably due to the fact that (a) a time delay/filler task took place between the two reports, and (b) receivers were in a less
disadvantaged position in the UG relative to the DG. However, when receivers knew that their second report of anger would be sent to their matched-proposers (i.e., displayed emotion condition), the second report \((M = 43.5, SE = 5.0)\) was significantly higher than the first one \((M = 34.4, SE = 4.5; F(1, 74) = 5.3, p < .05, \eta_p^2 = .07)\). In other words, receivers pretended to be angrier than they actually were right before the proposers decided on how to divide the pie.

**Did the strategy work?** To test whether or not proposers in the displayed condition considered their matched-receivers’ level anger before deciding how to divide the $10, we ran a Pearson correlation between the receivers’ displayed level of anger and the share of the pie offered to them by their matched-proposers. The results show a significantly positive correlation between the two variables \((r = .38, p < .05)\). In other words, purportedly angrier receivers were offered a larger share of the pie from their matched-proposers. Note that, in the control condition, where there was no display of anger to proposers, the correlation between these two variables was not significant \((r = .09, p > .10)\). The difference between the two correlations was significant at the margin \((z = 1.22, p = .10, \text{one-tailed test})\).

--- Insert Figure 2 around Here ---

**Discussion**

Experiment 1 provides initial evidence that people game emotions in social interactions. The control condition shows that receivers were actually experiencing a lower level of anger over time. However, when receivers knew that their level of anger would be presented to their matched-proposers before the latter proposed a division of the pie, they exaggerated their level of
anger in a deliberate attempt to improve their chance of getting a good offer. Also, the receivers’ belief about the proposers’ reaction to an angry display was accurate. The strategy to inflate anger in the displayed emotion condition seemed to work. Receivers who reported higher levels of anger ended up “extracting” a higher share of the pie from their matched-proposers.

This experiment, however, has a few caveats and raises some open questions. It is possible that the receivers in the displayed emotion condition are not gaming emotion, and the higher level of anger represents their true feeling state. Since, in this condition, the source of anger (i.e., the matched-proposer) is made salient right before the second report of anger (“your current feelings will be sent to the matched-proposer”), participants might have indeed felt worse during the second report (“just thinking of this guy makes me feel angry”). In experiment 2, thought processes after the second report of anger are obtained to assess whether and, if so, why participants deliberately inflate their anger.

Also, one might argue that, even if people are indeed inflating their anger, this might take place only when it is easy to justify the increase without having to acknowledge that one is in fact lying (see Mazar, Amir, and Ariely, 2008). For instance, in the current paradigm, participants could have rationalized their higher second report of anger by blaming either their inattention during the first report (e.g., “I was not paying attention to my first report 5 minutes ago. This is my true level of anger.”) or the filler task they had just completed (e.g., “The boring filler task between games fueled my anger.”). This ease to rationalization might have facilitated their willingness to game emotions. In the second experiment, we also address this potential boundary condition by allowing participants in the control condition to change their mind (i.e., revise or confirm their level of anger) right after the second report. That should make any justification of emotional change much more difficult.
Finally, it is an open question whether proposers respond to receivers’ level of anger as long as they see themselves as the source of anger, or whether the credibility of the emotion information also plays a major role. In experiment 1, not only were proposers the source of anger but they also had no reason to believe that receivers might be inflating it. In experiment 2, we test whether uncertainty about the credibility of receivers’ reported level of anger leads proposers to disregard receivers’ reported emotions even when they are the source of receivers’ anger.

EXPERIMENT 2

Method

Participants and design. One hundred eighty four students from a western university participated in this experiment. They were paid a flat $5 show-up fee plus additional cash earnings contingent on the outcome of the two games. The experiment adopted a 2 (affective information: control vs. displayed emotion; between) by 2 (self-report of anger: first vs. second; within) mixed design. Also, a third report of anger was added to the control condition only. Within the control condition, it was possible to assess whether this third report significantly differed from the second report. Finally, the credibility of receivers’ emotion information—to be sent to their matched-proposers—was manipulated. Before deciding on the division of the $10, proposers knew that receivers could (vs. could not) be gaming emotions.

Procedure. The procedure was similar to the one used in experiment 1 except for the following changes. First, a third report of anger was gathered in the control condition. Specifically, right after the second report, receivers were informed that their current level of anger would to be sent to their matched-proposers. Therefore, they should either confirm or revise the second report before sending it off. They were further informed that proposers would
be exposed to the last (third) report of anger only. The third report allows us to test whether receivers are still willing to inflate their current level of anger in a situation where it may be difficult and even awkward to justify a change to their current affective state unless one is open to acknowledge an emotion gaming strategy. Second, an open-ended question after the last report of anger asked all receivers to indicate whether or not they had changed their reported emotion and why they had entered that particular number on the anger scale. Finally, half of proposers were informed that receivers could potentially be gaming emotions. Specifically, proposers were told that receivers reported their level of anger after knowing that this information would be sent to their matched proposers. The other half of proposers was told that receivers could not have strategically misreported their emotions. Here, proposers were informed that receivers reported their level of anger before knowing that this affective information would be sent to their matched proposers. In both cases, the information was provided in the paragraph below the anger message. We assessed the extent to which proposers’ reaction to receivers’ level of anger would be a function of the credibility of the emotion information.

Results

Manipulation Check. In the DG, half of proposers were given the option to choose between P:$6/R:$4 vs. P:$4/R:$6. The other half was presented with the P:$6.5/R:$3.5 vs. P:$3.5/R:$6.5 option. All proposers chose the option that gave them a larger share of the pie. It means that receivers were offered $4 or $3.5 out of $10 depending on the choice set. More unfair offers increased receivers’ level of anger at the first report ($M_{4} = 32.6, SE = 3.8$ vs. $M_{3.5} = 47.6, SE = 3.9; F(1, 90) = 7.34, p < .05, \eta_p^2 = .08$). Importantly, this factor did not interact with the two main factors in the design ($F(1, 88) = 1.22, p > .10, \eta_p^2 = .01$). In other words, similar to
experiment 1, the to-be-reported findings were not constrained to a given range of anger reaction or offer size. The levels of choice set were then collapsed.

*Gaming Anger.* An analysis of variance with repeated measures was conducted to test the extent to which the time of the self-report of anger (first vs. second) and the emotion information (control vs. displayed) interacted on the level of anger. The results confirmed this interaction ($F(1, 90) = 13.62, p < .001, \eta^2_p = .13$). In the control condition, receivers’ second report of anger ($M = 33.1, SE = 4.1$) was actually lower than the first report ($M = 41.3, SE = 4.0; F(1, 90) = 3.95, p = .05, \eta^2_p = .04$). However, when receivers knew that their second report of anger would be sent to their matched-proposers (i.e., displayed emotion condition), the second report ($M = 51.9, SE = 4.12$) was significantly higher relative to the first one ($M = 38.5, SE = 4.1; F(1, 90) = 10.43, p < .01, \eta^2_p = .10$). As in experiment 1, receivers pretended to be angrier than they actually were right before proposers proposed a division of the pie.

Recall that a third report of anger was introduced in the control condition. After receivers reported their level of anger for the second time, they were told that this information would be sent to proposers. They were then given the opportunity to confirm or revise their current level of anger. The results show that in this condition, receivers’ third report of anger was significantly higher than the second one ($M_{2nd\ report} = 33.1, SE = 3.4$ vs. $M_{3rd\ report} = 50.3, SE = 4.7; F(1, 45) = 20.65, p < .001, \eta^2_p = .31$), even though only a few seconds took place between these two measures (see figure 3).
Thought Processes. Right after the final report of anger (2\textsuperscript{nd} report in the displayed emotion condition and 3\textsuperscript{rd} report in the control condition), participants were asked to indicate whether or not they had changed the reported emotion relative to the previous measurement and why they had entered the specific number on the anger scale. Two coders, blinded to the purpose of the experiment, classified the thoughts into three categories: 0 = actual anger, 1= strategic display of anger, 2=other.\textsuperscript{2} The coders agreed on 93.5% of the assigned categories. Disagreements were solved by consensus.

The results show that whether it represented participants’ 2\textsuperscript{nd} or 3\textsuperscript{rd} report of anger, the majority of participants (78.3\% and 76.1\%, respectively) acknowledged that they had strategically displayed their emotions in an attempt to prevent unfair offers from their matched-proposers. These numbers were significantly greater than chance ($z = 3.83, p < .001$ and $z = 3.54, p < .001$, respectively), and did not differ from one another ($z = .25, p > .10$). A sample of the comments suggested how comfortable participants were at gaming emotions and acknowledging it: (1) “…I’m not as angry as I said. I just want him/her to give me more money…,” (2) “I did revise my anger level by increasing it. I wanted to push the proposer into making an allocation that would be fair to me…,” (3) “…I decided it was OK to lie and tell the other party I was angrier than I am to ensure that I get a more fair-sized slice of the money…,” and (4) “I decided to dramatically increase the reported level of anger in hopes that this would suggest to the proposer that I was infuriated with the lack of power I had in the first situation [DG] and would

\textsuperscript{2} “Actual anger” means that participants’ last level of anger represents their true anger. “Strategic Display of Anger” means that participants acknowledge they are exaggerating or reducing their emotions in a deliberate attempt to reduce the chances of getting an unfair offer from the matched-proposer.
be willing to reject the offer so that neither of us would get the money unless she offered a higher amount…” ³

*Did the strategy work?* Proposers were informed that receivers had reported their anger either before or after knowing that their level of anger would be sent to their matched-proposers. Within each of these scenarios, a Pearson correlation was conducted between receivers’ displayed level of anger and the share of the pie offered to them by their matched-proposers. When proposers knew that receivers reported their level of anger *before* knowing that this information would be sent to their matched-proposers (i.e., receivers could not be gaming emotions), there was a significant positive correlation between these two variables ($r = .32, p< .05$). In other words, similar to experiment 1, angrier receivers were offered a larger share of the pie from their matched-proposers. However, when proposers knew that receivers reported their level of anger *after* knowing that this information would be sent to their matched-proposers (i.e., receivers could potentially be gaming emotions), there was no correlation between receivers’ level of anger and the share of the pie offered to them by their matched-proposers ($r = -.05, p> .10$). In this case, contrary to experiment 1, proposers disregarded their matched-receivers’ reported anger. Also, the difference between the two correlations was significant ($z =1.77, p< .05$, one-tailed test).

**Discussion**

Experiment 2 provides further evidence that people strategically game emotions. It replicates experiment 1 and further demonstrates that people seem quite comfortable with faking their own emotions for pure financial benefits. When receivers in the control condition were told

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³ In a few rare occasions, receivers decided to deliberately *decrease* their level of anger in an attempt either to increase their financial payoff (“If I show that I’m less mad, I will get more money”) or to be more revengeful (“By choosing a low level of anger my proposer will make a money division in his favor, which I can reject.”)
that their 2nd report of anger would be sent to proposers and were then given the opportunity to modify it, they did not hesitate to inflate their prior display of anger reported a few seconds before. Also, thought processes gathered after the last report of anger rule out the alternative hypothesis that receivers might indeed be feeling worse as soon as they are reminded of the source of anger (i.e., their matched-proposers). The vast majority of receivers acknowledged that they were exaggerating their emotions and, consistent with our hypothesis, were doing so in an attempt to extract a larger share of the pie from their matched-proposers. Finally, while proposers represented the source of receivers’ anger, the impact of receivers’ emotions on proposers’ decisions was contingent on the perceived credibility of the affective information. When proposers believed that the receivers’ report of anger was credible, they offered a higher share to angrier receivers. However, when proposers inferred that receivers could be strategically gaming emotions, the former ignored the latter’s report of anger.

GAMING EMOTIONS OR EXPECTATIONS?

Displays of emotions provide social cues (Keltner and Kring 1998; Morris and Keltner 2000; Thompson, Nadler, and Kim 1999). Precisely, they help people to convey information about themselves to others. A sad face might convey empathy while a happy expression might communicate confidence. As Deighton and Hoch (1993) have pointed out, emotion is a “communicative act, and audiences are able to interpret the intentions and meanings of emotion displays” (p. 261). Therefore, when an individual chooses to game an emotional state in a dyadic negotiation, s/he is trying to manipulate inferences others will make about his or her future behavior. Hence, to game emotion is to convey information. What makes emotions so special is the fact that people might strategically display an emotional expression (a) because it is readily
available and well-learned, and (b) because they might actually believe it to be more persuasive than amere communication of “plain” information.

Consumer researchers have long investigated how firms, through advertising, may strategically elaborate emotional appeals in order to improve attitudes toward their ad/brand. These researchers have stressed the importance of distinguishing between thinking versus feeling commercials (Vaughn 1980), rational versus emotional appeals (Rothschild 1987), instrumental versus expressive messages (Holbrook & Hirschman 1982), or dramatic versus argumentative ads (Deighton, Romer, McQueen, 1989). Moreover, there is evidence supporting the relative effectiveness of affect-laden messages. For instance, in a study where 1215 consumers rated 40 commercials on a dramatization scale, Deighton and colleagues (1989) showed not only the existence of drama-type vs. argument-type ads, but also a greater effectiveness of the former. Pham et al. (2001) have also demonstrated the superiority of emotion-based (vs. purely cognitive-based) judgment on the predictability of the number and valence of people’s thoughts.

In our previous experiments, receivers did not have a choice between sending an emotional versus a non-emotional type of information to their matched-proposers. It could be that receivers might not have been interested in conveying any emotional state per se, but simply wanted to inform their matched-proposers about their violated expectations. Since experiments 1 and 2 restricted receivers to send only their anger level, it was possible that they were simply trying to convey that the previous offer (in the DG) had been below their expectation, and that they expected a larger offer in the UG.\(^4\)

In experiment 3, receivers are presented with two measures after the DG: an expectation scale (e.g., “The previous offer was \_X\_ below my expectations”) and an anger scale (e.g.,

\(^4\) We are thankful to Reviewers for pointing this out, and to the AE for his/her suggestion on how to address this issue.
“The previous offer made me feel __X__ angry”). During the targeted social interaction in the UG, receivers are given a choice between sending either their gamed expectation level or their gamed anger level to the matched-proposer. Moreover, in an open-ended question, receivers are asked to justify their choice. This procedure will allow us to assess whether receivers perceive both options as relatively similar to one another (choice measure), and if different, whether systematic and unique inferences were drawn (open-ended question). Proposers are asked right after seeing the reported level of expectation or anger to indicate the extent to which their matched-receivers are an impulsive, irrational, and vindictive person. Proposers then make a choice on the division of the pie. We assess whether proposers’ inferences about receivers’ traits mediate the impact of receivers’ reported information on proposers’ division of the pie. Most importantly, we test whether there is a difference in the mediational analyses between expectation and anger information.

We hypothesize that (1) receivers will not perceive anger as simply another way of conveying information about one’s violated expectations (their choice and justification should confirm it) and that (2) proposers will be more responsive to information about one’s anger at a previous offer than to information about one’s violated expectations on a previous offer (the mediational analyses should confirm it).

**EXPERIMENT 3**

**Method**

*Participants and Procedure.* One hundred thirty students from a western university participated in this experiment. The procedure was similar to the one used in experiment 1 except for the following changes. First, receivers were asked to report their level of expectations and
anger after their matched-proposers’ offer in the DG. Precisely, they were asked to indicate on a 101 point scale the extent to which this offer (a) was above/below their expectations (0=quite above my expectations; 50=met my expectations; 100=quite below my expectations; any number from 0 to 100 is allowed) and (b) made them feel angry (0=not angry at all; 50=mildly angry; 100=very angry; any number from 0 to 100 is allowed). Right before the targeted social interaction, all receivers were informed that they could send their matched-proposers either their level of expectation or their level of anger. Whatever option was chosen, receivers could also update the level (i.e., to game it) before sending it off to their matched-proposers. Receivers were also informed that their matched-proposers would not know that they (receivers) had a choice of which piece of information to send nor would their matched-proposers know that they were allowed to change their level of anger or expectation. Receivers then chose one of the pieces of information and were allowed to revise their report before the UG began. After that, they were asked in an open-ended question to justify their choices.

The chosen number and type of information were indeed sent to the respective matched-proposers. Proposers were then asked to indicate on a 9-point scale (9=agree completely) the extent to which they agree with the following statements: “I think my partner is an impulsive person”, “I think my partner can behave irrationally,” “I think my partner is a vindictive person”. Finally, proposers made their decision on the division of the $10, which was either accepted or rejected by their matched-receivers.

Results

Manipulation Check. Not surprisingly, the majority (91%) of proposers chose the option that gave them a larger share of the pie. All subsequent analyses are conducted within this group
(n=118; 59 proposers/receivers). To increase generalizability, proposers in the DG were given the option to choose either between P:$7/R:$3 vs. P:$3/R:$7 or between P:$7.5/R:$2.5 vs. P:$2.5/R:$7.5. The size of the offer ($3 vs. $2.5) did not influence participants’ willingness to game expectations ($F(1, 21) = 0.24, p > .10, \eta_p^2 = .01$) or anger ($F(1, 34) = .76, p > .10, \eta_p^2 = .02$). Nor it influenced participants’ preference on which information to send to their matched-propers (\(\chi^2 = .40, p > .10\)). The levels of this factor were then collapsed.

**Gaming Option.** Receivers were more likely to send the anger (61%) than the expectation level to their matched-proposers (\(z = 1.69, p < .05\), one-tailed test). A Chi-squared analysis showed that there were no gender effects (\(\chi^2 = .28, p > .10\)).

A possible explanation for participants’ preference for anger over expectation was that receivers anticipated that the former would be psychologically easier to game. If a change in level of anger is perceived as easier to justify than a change in expectation (e.g., feelings vary more quickly than expectations), that could explain why receivers were more likely to choose the anger option. However, an analysis of variance with repeated measures reveals that this is not the case. The results show no interaction between timing of report (report 1 vs. report 2) and option (anger vs. expectation; $F(1, 57) = 2.07, p > .10, \eta_p^2 = .03$). Those who chose to send the anger level inflated it as much ($M_{report1} = 47.6, SE = 4.5$ vs. $M_{report2} = 75.8, SE = 4.1$; $F(1, 57) = 36.1, p < .001, \eta_p^2 = .39$), as those who chose the expectation ($M_{report1} = 54.1, SE = 5.6$ vs. $M_{report2} = 71.6, SE = 5.1$; $F(1, 57) = 8.7, p < .005, \eta_p^2 = .13$).

**Thought Processes.** To directly assess the reason behind receivers’ behavior, a subsequent open-ended question asked receivers to justify their choice. Two coders blinded to the purpose of the experiment as well as to the receivers’ choice, categorized the answers into the following categories: 0= “Both options are similar. I’m somewhat indifferent between them”;
1=“Anger is more effective because it sends unique signals,” 2=“Anger is less effective because it might backfire or because it is too hostile,” 3=“Expectation is more effective/more precise and informative,” 4=“Expectation is less effective/more confusing,” and 5=“Did not answer/Other”. Category 0 would mean that anger is simply another way of reporting one’s expectations, whereas categories 1 through 4 indicate that participants do perceive differences between the two options and choose the one they think will maximize their chances of getting a better offer from their matched-proposers.

Nineteen percent of participants did not address the question or provided an answer that was not part of any of the categories. Most importantly, only 3.4% of receivers reported indifference between the two options (category 0). Within the remaining participants (n=50), the justifications varied as a function of choice. Among those who chose anger, 93.5% did so because they believed it to be a stronger, more threatening, and vindictive signal (category 1): (a) “I think anger is a stronger force to push the proposer to raise the offer. Expectation sounds weaker than anger,” (b) “I chose to send the anger to scare my proposer and to make him/her think that I wouldn't be accepting an offer that didn't favor me as well,” (c) “Hopefully the proposer will be more inspired to share because of fear of 'revenge' ”, and (d) “Anger reflects desire for revenge”. Among those who chose expectations, an interesting pattern emerged. Sixty percent chose it because they believed it to be a more effective, precise and informative piece of information (category 3):(a) “I think the expectation will give the proposer a clearer idea about what I am looking for than any measure of anger would,” (b) “I chose to send the expectation because I thought it would influence the proposer to share equally the ten dollars. If the proposer knows what I expect; then perhaps they will be more willing to cooperate”. The remaining 40% chose it because they believe that the anger choice could actually backfire (category 2): (a) “This
statement [expectations] was more neutral, not infused with feelings. Conveying a message of anger may work against me by making the proposer defensive and wanting to give less,” (b) “The anger statement is too harsh to be sent. I didn’t think they [the proposer] would have appreciated it much,” (c) “Positive feedback almost always leads to a better chance of success. If he knows I'm angry; he might just offend me again”.

It is clear from the previous analysis therefore, that anger and expectations are perceived as distinctive pieces of information: the former being stronger and more threatening.

*Which Strategy Worked Best? A* Pearson correlation was conducted between receivers’ gamed level of anger (vs. expectation) and the share of the pie offered to them by their matched-proposers. If anger represents a stronger and more effective signal (as most receivers hoped it would), a stronger correlation would emerge when proposers are presented with receivers’ anger (vs. expectation) level. In fact, when receivers’ reactions to the offer in the DG were presented to proposers in the anger format, proposers offered a larger share of the pie as the level of anger increased ($r = .44, p < .01$)—replicating the findings of previous experiments. When receivers’ reaction to the offer in the DG was presented to proposers in an expectation format, the correlation disappeared ($r = -.20, p = .35$). The difference between the two correlations was significant ($z = 2.38, p < .01$, one-tailed test).

*Mediational Analysis.* Recall that, before proposers decided on the offer, we asked them to indicate the extent to which the matched-receiver was perceived as an impulsive, irrational and vindictive person. The three items were strongly correlated ($\alpha = .81$) and were then collapsed to form a single “emotional trait” index. We assessed whether proposers’ perception of their matched-receivers as an “emotional” individual would mediate the impact of receivers’ anger on proposers’ offer. That is, would proposers perceive angrier receivers as more impulsive,
irrational and/or vindictive, which in turn would lead proposers to offer their matched-receivers a larger share of the pie?

Figure 4 (A & B) summarizes the mediational analysis. As it can be seen from Figure 4A, receivers who reported higher levels of anger were perceived as more impulsive, irrational, and/or vindictive by their matched-proposers ($r = .68, p < .001$). Similarly, receivers who were higher on this “emotional trait” got a larger share of the $10 (r = .53, p = .001)$. A Sobel Test confirmed that the impact of reported anger on proposers’ division of the $10 was mediated by proposers’ inferences about receivers’ “emotional traits” ($z = 1.99, p < .05$). Figure 4B performs that same type of analyses for those who chose to send the expectation information. There was a marginal correlation between expectation and the “emotional” index ($r = .35, p = .10$) and no correlation between the emotional index and receivers’ share of the pie ($r = -.31, p > .10$). The Sobel Test was also non-significant ($z = -0.99, p > .10$).

---Insert Figures 4A&B around here---

**Discussion**

Experiment 3 provides further evidence that people strategically game emotions. Moreover, it shows that people intuit that anger does not equate to expectation. Within the proposed paradigm, receivers anticipated that anger (vs. expectation) would be more effective and, hence, preferred to display to their matched-proposers. Moreover, their intuition seemed to be accurate. Those who chose to display a gamed level of anger were more likely to influence their partner’s behavior than those who chose to display a gamed level of expectation. The reason for such effectiveness was due in part to the fact that anger leads to inferences about one’s
willingness to overreact—be impulsive, irrational and vindictive—and, thus, to reject a given offer. The mediational analyses confirmed that such inferences mediated the impact of receivers’ expressed anger on proposers’ offer. Information about one’s violated expectations had no such impact.

GENERAL DISCUSSION

Individuals believe that their expressed emotions can influence others’ decisions in a social interaction. As a result, individuals have an incentive to game emotions in an attempt to improve their wellbeing. In a series of three experiments, we show that people deliberately inflate anger when they believe this strategy can be financially beneficial. Precisely, receivers choose to inflate their reported level anger to ensure that proposers do not make them an “unfair” offer. Moreover, they seem quite comfortable in doing so for purely financial reasons and are willing to acknowledge it when asked.

Since our procedure involves an online negotiation with actual financial consequences, it is possible to address whether one’s attempt to inflate emotions increases the probability of success in a given social interaction. Our experiments demonstrate that the strategy may well pay off. Proposers offered more money to receivers who expressed angrier feelings. However, this effect existed only if proposers believed that receivers’ reported emotions were credible. When proposers knew that receivers could be gaming emotions, receivers’ strategy to inflate anger failed, even in a scenario where proposers were the main source of receivers’ mild anger (experiment 2). Finally, anger is not simply a way of communicating to your negotiation party that your expectations have been violated. Anger (vs. expectations) displays are perceived as stronger and more threatening cues and tend to lead to inferences about revenge. Experiment 3
shows that receivers believed anger would be more effective than expectation (i.e., chose the former more often) and that proposers were indeed more responsive to it relative to information about violated expectations.

The Costs and Willingness to Game Emotions

Our experiments demonstrate that people are ready to acknowledge their strategic misrepresentation of emotional displays. However, there are potential psychological and physiological challenges associated with emotion gaming, which may undermine this phenomenon. It is plausible that contextual cues can make moral costs (i.e., honesty concerns) higher or lower. A consumer may feel it is socially appropriate to fake anger to persuade the waiter to speed up service. However, a patient may feel inappropriate to inflate the display of pain to get an earlier appointment, when others with more serious symptoms would need to be put behind the queue. As Mazar and colleagues (2008) have pointed out, the extent to which people can justify a “dishonest” behavior and, consequently preserve a positive view of the self, moderates people’s willingness to game emotions. Finally, it is quite possible that there may be an asymmetry between situations where gaming emotions is designed to take advantage of others versus to avoid being taken advantage of. People may find it easier to justify morally by engaging in the latter and than in the former.

Physiological challenges can also play a major role. It is quite possible that people might not always be capable of physically expressing a faked emotional state. Professional poker players often hide their facial expression altogether with hats and sunglasses in part because of the difficulty associated with inhibiting facial expressions (Kappas, Bherer, and Thériault 2000).

There is also possibility of extrinsic costs. One may choose not to game emotions if s/he believes

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5 We thank a reviewer for this insightful observation.
that there is a high chance of being caught. This is particularly true if one anticipates that the
other can retaliate, which increases the costs of a non-successful strategy. Future research could
address the extent to which intrinsic (psychological and physiological) and extrinsic costs can
influence people’s willingness to game emotions.

Faking: Intensity versus Type

To fake an emotional state means to either report a stronger or weaker than experienced
affective state (i.e., misrepresent the intensity of the emotion) and/or to report a different
affective state (i.e., misrepresent the type of emotion). As Ekman and Friesen (1975) have
pointed out, there are several ways to express a non-experienced emotion. Among them, people
can (de)intensify emotions (i.e., to change the intensity) or mask emotions (i.e., to change the
type). Our results focus on the former. It is possible that people might be more willing and/or
capable of inflating a current state rather than expressing a different one. Second, a counterpart
might be less capable of detecting the misrepresentation of an inflated (vs. different) emotional
experience (see DePaulo et al. 2003). Therefore, it is an open question whether people would
display a different emotional state when gaming emotions. Angry individuals might instead want
to express sadness if they want to increase sympathy. Similarly, anxious speakers might smile
not only to hide their anxiety but also to portray happiness. It will be interesting to investigate
people’s willingness and ability to fake a different type of emotion as well as its impact on
others’ behavior.

Broadening the Scope
The context of this research has been limited to a one shot game in economics which allow us to measure whether and how much people inflate anger in an attempt to improve their financial wellbeing. It is worth investigating if the effects hold when the number of interactions between matched-partners increases. For instance, a seller might learn the buyer’s emotion gaming “tricks” and disregard the signal altogether overtime. Similarly, the buyer anticipating this might have to invest in reputation building. Two outcomes could follow: the buyer could (a) either avoid emotion gaming altogether (because s/he would be bluffing), (b) or be prepared to reject an unfair offer after an anger inflation in order to build reputation.

Different social contexts and emotional states should also be explored. At the time the experiments were conducted for this manuscript, the democratic primary in Iowa provided us with another example of how expressed emotions could have a powerful effect on others’ impressions and decisions. Senator Hillary Clinton’s unexpected tears during an interview became a media spotlight on whether or not she should have expressed or concealed her feelings. Under the title “Tears Have Turned Campaigns,” the Wall Street Journal speculated on how emotional displays might have helped or hurt several candidates in the past (Chozick 2008). Our final experiment also showed some disagreement on the extent to which people perceive anger as an (in)effective strategy. It is worth investigating, therefore, the circumstances under which anger (or any other emotional state) might be likely to backfire and produce unwanted outcomes. In summary, emotion gaming can occur in many different social settings and produce multiple outcomes, which provides an incredible array of opportunities to those interested in the line of research.
REFERENCES


Vohs, Kathleen D., Roy F. Baumeister, and Natalie J. Ciarocco (2005), “Self-Regulation and Self-Presentation: Regulatory Resource Depletion Impairs Impression Management and

**Figure 1. Overview of the experimental procedures/designs**

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Figure 2. Gaming Anger (Experiment 1)
Figure 3. Gaming Anger (Experiment 2)
Figure 4. Mediational Analyses (Experiment 3)

**FIGURE 1A**

Proposal’s Perception of Receiver (Impulsive/Irrational/Vindictive)

- Rec. Reported *Anger* → .44**
- Prop. Offer to Receiver

**FIGURE 1B**

Proposal’s Perception of Receiver (Impulsive/Irrational/Vindictive)

- Rec. Reported *Expectation* → -.20
- Prop. Offer to Receiver

*p = .10  
**p < .01  
***p < .001