Eliciting Guilty Feelings: A Preliminary Study Differentiating Deontological and Altruistic Guilt

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Guilt has been identified as both an intrapsychic and an interpersonal emotion. The current study presents evidence of the existence of two senses of guilt, deontological and altruistic guilt, induced through different experimental paradigms. Deontological guilt evolves from having slighted moral authority or norms, while altruistic guilt arises from selfish behavior and the distress of others. We hypothesize that specific stimuli would evoke, separately, deontological guilt and altruistic/interpersonal guilt feelings. Two different procedures were used to test our hypothesis, adding two emotions as control conditions (i.e. anger and sadness). Results clearly indicate that two different guilt emotions can be evoked separately, by appropriate stimulation. Findings and possible clinical implications are discussed.

Keywords: Guilt, Deontological Guilt, Altruistic Guilt, Emotions

Introduction

We usually experience a feeling of guilt when we recognize ourselves as the cause of another person's misfortune. However, beyond this main meaning, guilty feelings might arise in different situations. Within psychological literature on guilt emotions, two main hypotheses have been identified: the intrapsychic (Izard, 1977; Lewis, 1971; Monteith, 1993; Mosher, 1965; Mosher, 1966; Piers & Singer, 1971; Wertheim & Schwartz, 1983) and the interpersonal perspective (Baumeister, Stillwell & Heatherton, 1994; Hoffman, 1981; Hoffman, 1987; Niedenthal, Tangney & Gavanski, 1994; Tangney, 1999; Tangney & Dearing, 2002).

The intrapsychic theory states the inner moral rules and values we have learned and introjected since early stages of our lives, resulting in Freud so called "Super-Io", one of the most fundamental structures of our psyche. According to this approach, guilt represents the emotional result of a conflict between our introjected moral authority rules and values, and our behaviours, or their omissions. Its evolutionary function is the respect of others' rights and of authority. In this view, guilt concerns with the feeling of having disobeyed to one's own inner moral values, even without really acting or sharing with others. This might cause an expectation of punishment, expiation or apologize. The person feeling guilty has the feeling of being a "bad person" (Lewis, 1971).

The interpersonal theory posits that guilt results from the awareness of having caused unjustified harm to another or, in a more general sense, of not having behaved altruistically, thus resulting in selfish behavior. This feeling is based on empathy and compassion (Weiss, 1986). Within the interpersonal understanding, guilt might arise simply by observing someone who has been unjustly penalized. More generally, interpersonal, or altruistic guilt, might derive from not having behaved altruistically toward another person. Here, the trigger is the presence of a suffering person, being unjustly penalized by chance, we did not help, or not even tried to share his or her pain with others. The evolutionary function of altruistic guilt is to establish non-aggressive relationships and its aim is altruism (Baumeister, Stillwell, & Heatherton, 1994).

According to this, the first aim of this article was to clear out this difference. A couple of experiments were also used to validate an appropriate set of stimuli for a functional magnetic resonance imaging (fMRI) paradigm (Basile, Mancini, Macaluso, Caltagirone, Frackowiak, & Bozzali, 2010). An additional goal achieves a methodological issue. Specifically, we aimed to test which, between two distinct emotional procedures, was the most appropriate to evoke a complex emotion, such as guilt. Finally, we ran a third experiment in order to check whether guilt, and not other emotional stimuli, selectively evoked guilty feelings. According to this purpose, in our third study, guilt stimuli were contrasted against other control emotions (that is, anger and sadness). We also expected both deontological and altruistic guilt being characterized by a specific emotional halo, further strengthening and characterizing their difference. We predict deontological guilt to be associated with emotions of shame and disgust, and altruistic guilt with compassion and sadness feelings.

We will present three experiments, involving a total of 128 healthy volunteers. In all studies we used Ekman's 'Pictures of Facial Affect' (Ekman & Friesen, 1976) depicting different emotional facial expressions (50% males and 50% females) coupled with specific sentences. Statements were matched by length and complexity, in order to control for eventual confounding effects. Appropriate associations between faces and statements aimed to evoke deontological and altruistic guilt emotions. Typical target trials evoking deontological guilt were elicited by coupling an angry face with sentences like: "Oh my God! How could I do such a thing!?" or "How could I behave that immorally!". Conversely, altruistic guilt was evoked asso-

ciating a sad face with a sentence such as: "Why am I so lucky. and why is she so unlucky?" or "How unfair! I am doing so well, while he is so unlucky!". Participants were presented with trials in a random order. Subjects were asked to observe each face and to imagine that an external person was experiencing the specific emotion directed toward themselves. When confronted with the short sentence, subjects were asked to imagine those words as being part of their inner dialogue, associated with the specific facial expression (See Figure 1, for timing of trials). After each stimulus (face + statement) participants were asked to rate the intensity of each of nine emotions (deontological guilt, altruistic guilt, shame, sadness, anger, compassion, fear, disgust, absence of emotion) on an eighteen-point visual analogue scale (Visual Analogue Scale; VAS: 0 = not present, 18 = very intense). Each VAS answer was defined by the emotion's name, its distinctive action tendency and a short description (i.e. VAS descriptions for deontological and altruistic guilt, respectively: "feelings of guilt related to lack of respect, need to apologize, regret", "feelings of guilt and sorrow towards the other person, desire to sacrifice oneself to help"). For each stimulus, subjects had one minute time to fulfill all nine-emotions VAS ratings.

Method

Study 1

In the first experiment, involving 72 healthy volunteers (age M = 30.06 SD = 4.74) years; range = 25 - 53: 63 females), we aimed to investigate whether deontological and altruistic guilt could be induced separately. Subjects were confronted with eight, randomly occurring, trials (four stimuli for each condition). Our two experimental conditions included deontological and altruistic guilt emotions. Stimuli were composed by an emotional face and a guilt-inducing statement (See Figure 1 for trials structure and timing). Faces, representing angry or sad emotions, where coupled with specific statements in order to evoke deontological or altruistic guilt emotion. Subjects were asked to observe each face and to imagine that an external person was experiencing the specific emotion directed toward themselves. Then, a short sentence, representing an inner dialogue in response to the specific facial expression, was shown. Finally, after each stimulus, volunteers were asked to rate the intensity of each of nine emotions (fear, anger, sadness, shame, disgust, compassion, deontological, and altruistic guilt, or no emotion) on an eighteen-point VAS scale.

All statistical analyses were performed using the SPSS 13.0 statistical package.

Results and Discussion

Stimuli, which were supposed to induce deontological guilt, indeed, were rated as significantly more intense on deontological guilt (M = 8.46 SD = 5.04), than on altruistic guilt (M = 3.6 SD = 3.48), VAS emotions (t paired-test t (71) = 8.96, two-tailed p = 0.000). Conversely, altruistic guilt trials evoked significantly more intense altruistic guilt (M = 6.88 SD = 5.47) VAS ratings, compared against deontological guilt ones (M = 2.35 SD = 2.54) (t paired-test t (71) = 7.99, two-tailed p = .000). Finally, while deontological guilt inducing stimuli evoked selectively their congruent emotion, altruistic guilt stimuli induced compassion (M = 10.19 SD = 5.16) and sadness (M = 6.09 SD = 4.17) (see Figure 2, upper panel).

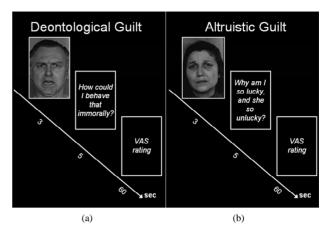


Figure 1.

Timing of each event in each trial is illustrated schematically. Each trial included the presentation of an emotional face (angry or sad, for 3 seconds), followed by a contextual sentence (5 sec.). The content of the sentence lead to two types of guilt (deontological and altruistic). At the end of each trial, subjects were asked to rate the intensity of each of the randomly occurring stimuli, rating each of nine emotions (deontological guilt, altruistic guilt, shame, sadness, anger, compassion, fear, disgust, absence of emotion) on an eighteen-point visual analogue scale (VAS: 0 = not present, 18 = very intense) (60 sec.). Two examples for study 1 ("emotional face/emotional sentence" procedure) are illustrated showing a trial with an angry face plus sentence inducing deontological guilt (a), and a trial with a sad face plus sentence inducing altruistic guilt (b).

This first experiment confirmed our hypothesis, showing that appropriate stimuli could elicit different kinds of guilty feelings, respectively deontological and altruistic guilt.

Study 2

Aiming to test which method was the most effective in evoking deontological and altruistic guilt emotions, we performed another experiment. Here stimuli were the same as in the previous experiments, but order was inverted, resulting in the "emotional sentence/emotional face" procedure. In this second study, we recruited 55 new healthy volunteers (M = 31.05 years SD = 6.29; range = 25 - 56; 47 females). Again, each stimulus of the two experimental conditions was followed by emotional intensity VAS ratings on nine emotions.

Results and Discussion

As expected, deontological guilt stimuli evoked more intense deontological guilt feelings (M = 10.16 SD=4.38), than altruistic guilt ones (M = 3.0 SD = 4.17), on VAS emotions (t paired-test t (54) = 9.29, two-tailed p = .000). Conversely, altruistic guilt trials selectively evoked stronger altruistic guilt (M = 6.91 SD = 4.72) VAS ratings, than deontological guilt ones (M = 2.1 SD = 2.52) (t paired-test t (54) = 7.99, two-tailed p = .000). Again, altruistic guilt stimuli also induced intense ratings in VAS of compassion (M = 12.67 SD = 3.52) and sadness (M = 7.37 SD = 3.78). Deontological guilt stimuli evoked the most intense rating in the expected VAS response (that is, deontological guilt). However, significant halo effect was observed in shame (M = 8.57 SD = 5.32) and sadness (M = 6.34 SD = 4) VAS ratings.

Oneway-ANOVA was used to check for face/sentence order effect. Results showed how the second procedure (sentence followed by the facial expression) was more effective in inducing

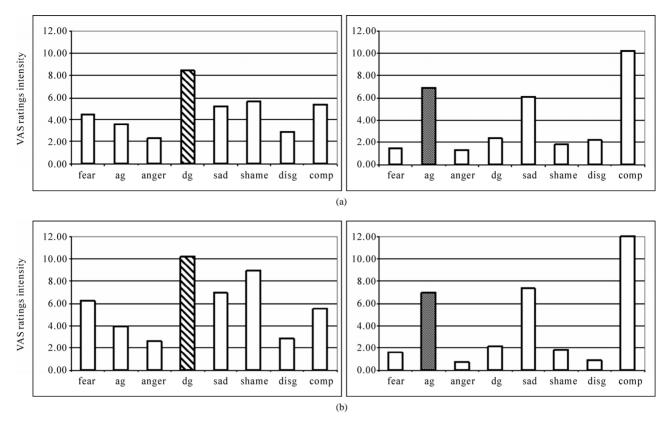


Figure 2.

Mean intensity of VAS ratings for deontological (left panel) and altruistic (right panel) guilt conditions. Means are shown, for study (a) ("emotional face/emotional sentence" procedure) and (b) ("emotional sentence/emotional face" procedure).

emotional states. Concerning with deontological guilt stimuli, shame, deontological guilt, and sadness, VAS ratings were significantly more intense in the "emotional sentence/emotional face" procedure (shame F(1.125) = 15.31, p = .000; deontological guilt, F(1.125) = 3.95, p < .05; sadness F(1.125) = 5.92, p < .01), compared against the "emotional face/emotional sentence" one. The same effect was detected in the altruistic guilt set of stimuli, concerning with compassion, disgust, and, almost reaching significance, sad VAS answers (disgust, F(1.125) = 9.49, p < .003; compassion, F(1.125) = 9.39, p < .003) (see Figure 2, lower panel).

Taken together, the prediction that deontological and altruistic guilt would be evoked separately was again supported. More specifically, a significantly stronger effect was observed in this procedure, compared against the "emotional face/emotional sentence" method. A possible explanation for these different findings is that contextualizing facial expression, through the statements representing subjects' inner dialogue, is more effective in emotional induction.

Study 3

In order to check whether guilt emotions were specific to guilt-inducing stimuli, a group of 35 subjects (M = 31.03 years SD = 5.01; range = 26 - 56; 30 females) was also administered with stimuli inducing angry, sad and no emotions. Anger statements, associated with the same angry faces used in deontological guilt stimuli, included sentences such as: "How dare she? Staring at me in such a way!" or "Who does he think he is?!

Looking at me in such a way!". Sad sentences, associated with previously used sad facial expressions, included statements like: "What has happened to her, she looks so sad!" or "He must be really desperate! Crying in such a way!". Neutral statements, such as "The restaurant is there, behind the corner", were coupled with neutral facial expression.

Results and Discussion

In this last experiment anger, sad and neutral stimuli were added to guilt-evoking trials. According to results obtained comparing VAS ratings intensity in study 1 and 2, we choose the "emotional statements/emotional faces" procedure, as resulting the most effective in inducing emotional states.

As expected, again, deontological guilt stimuli evoked significantly higher rates in deontological guilt feelings (M = 9.68SD = 4.64), than in altruistic guilt (M = 1.6 SD = 2.3) VAS emotions (t paired-test t(34) = 9.5, two-tailed p = 0.000). Conversely, altruistic guilt trials evoked significantly more intense altruistic guilt (M = 7.91 SD = 4.86) VAS ratings, compared against deontological guilt ones (M = 1.77 SD = 2.29) (t paired-test t(34) = 7.4, two-tailed p = .000).

Concerning with other than guilt stimuli, angry sentences followed by congruent faces, selectively elicited anger VAS responses (M = 12.01 SD = 4.4), compared against other VAS answers (t paired-test t(34) = 7.7, two-tailed p = .000). Similarly, sad statements plus sad faces were significantly more appropriate to evoke the congruent VAS answers, including both compassion (M = 12.82 SD = 3.7) and sadness (M = 7.78

SD = 4.11). Sad stimuli elicited significantly more intense compassion, than sadness VAS ratings (t paired-test t(34) = 8.35, two-tailed p = .000). Neutral stimuli did not evoke any significant emotion in VAS ratings, all reaching approximately zero.

The last study confirmed that specific guilt-inducing stimuli, and not other emotional stimuli, selectively evoked the hypothized guilty feelings. Finally, across all experiments, specifically in the second one, a halo effect was observed. Intense shame VAS ratings (M = 8.5 SD = 5.3) were reported when subjects were confronted with deontological guilt stimuli, while compassion (M = 12.6 SD = 3.4) and sadness (M = 7.31 SD = 3.7) were associated with altruistic guilt stimuli.

General Discussion

The purpose of the present study was to investigate whether deontological and altruistic guilt could be induced separately, through appropriate stimuli (facial expressions and contentspecific statements). We aimed to investigate whether guilt emotions could be differentiated on the basis of an intrapsychic (deontological guilt) and an interpersonal (altruistic guilt) perspective. Indeed, our three experiments showed evidence of different guilt expressions, which might be evoked separately. We showed how the appropriate association between specific statements and congruent facial expressions selectively elicited different types of guilt. In the first two studies different emotional induction procedures were used. In the first one, facial expressions were followed by deontological or altruistic statements, while in the second, and most effective, procedure sentences were shown first, followed by facial expressions. Finally, in the last study, two other set of emotional stimuli (representing angry and sad emotions), and an additional neutral one, were introduced in order to confirm the specific selective effect of guilt and other-than-guilt emotional responses.

Moreover, each type of guilt seemed to be characterized by a specific emotional halo. More specifically, feelings of deontological guilt seemed to be associated with shame, but not disgust, as expected (Miller, 1997) and, to a lesser extent, sadness. On the other hand, altruistic guilt, as enclosing more interpersonal emotions, was associated with intense feelings of compassion and sadness. These results emphasize the negative valence of guilt related emotions, and represent clear evidence of a common underlying substrate involving suffering toward one-self and toward others, the latter being more intense when experiencing altruistic guilt feelings (Tilghman-Osborne, Cole, & Felton, 2010).

Commonly, guilt has been considered as a pro-social emotion, promoting constructive and proactive pursuits, leading to reparative and more emphatic behavior (Lewis, 1971; Monteith, 1993; Tangney, Stuewig, & Mashek, 2007). This main goal is evident in altruistic guilt and, to less extend, in deontological guilt, which has shown to be associated with feelings of shame. Although shame has been defined as a moral emotion (Frank, 1988; Ketelaar, 2004; Smith, 1759) very closely related to guilt, there is growing evidence that they are clearly distinguishable (Tangney, 1991; Tangney, 1995; Tangney, 1995; Tangney, 1996; De Hooge, Zeelenberg, & Breugelmans, 2007). Guilt and shame share some common characteristics, but might be distinguished on the basis of their public-private dimension, their action tendencies (hiding and escaping in shame, and confessing, apologizing or undoing the consequences of the behavior in guilt) and on their intensity (shame being described as more painful and intense) (Lewis, 1971; Tangney& Dearing, 2002; Tangney, Stuewig, & Mashek, 2007).

Our results support previous literature suggesting a distinction between an intrapsychic and an interpersonal guilty feeling. While deontological guilt is a self-directed and inner feeling, which does not require an external agent, altruistic guilt needs an external cause (i.e. another person) to be elicited. In conclusion, our study supports the view of different kinds of guilty feelings, each characterized by specific goals, thoughts, and action tendencies (Roseman, Wiest, & Swartz, 1994).

Our findings could have also interesting clinical implications. Previous studies have demonstrated that both depressed and obsessive patients are sensitive specifically to interpersonal guilt (Esherick, M., O'Connor, L. E., Berry, J. W., & Weiss, 1999; O'Connor, Berry, Weiss, & Gilbert, 2002), which would correspond to our altruistic guilt. By contrast, Mancini (2008) has recently suggested that obsessive-compulsive patients could be selectively sensitive to deontological guilt, and not to altruistic, or interpersonal, guilt. In fact, Lopatcka, Rachman (Lopatka & Rachman, 1995) and Shafran (Shafran, 1997) have demonstrated that obsessives' concern over a harmful event, for instance, a gas explosion, was drastically reduced if responsibility for the event was transferred to someone else (i.e. the psychotherapist). According to this data, obsessive patients' concern is not for the victims, but for self-reproach or another's reproach for having violated a moral norm, like prudence. Moreover, as clinical observations suggest, obsessive patients are frequently concerned about sins. For instance, a religious or sexual nature, even though no harm is caused to anyone, and obsessions and compulsions are aimed to control or prevent them.

Our study has several limitations. In the three samples, females were over-represented, and participants were quite young and also influenced by Catholic culture. It is, thus, possible that our results may not be generalized to a broader population. Similar studies should be replicated including males and older populations. Additionally, a similar procedure might be used on clinical populations including patients with obsessive- compulsive or depressed patients.

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