

Do our mistakes affect me? Effect of negative information in ingroup identification and self-esteem¹

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Abstract: Classical theories on cognitive consistency have recently been explored not only as intraindividual processes, but influenced by group aspects. Given the human tendency to personal and group enhancement and the unified theory of implicit social cognition, negative information about the ingroup has the potential of generating inconsistency through cognitive dissonance and imbalance. To test the protective functions of cognitive consistency considering the threats to the positive evaluation of the ingroup, 156 participants underwent pre- and post-test of self-esteem and by neutral or threat experimental manipulation. There was no significant difference in participants' self-esteem nor in their affective state. In experimental groups, although behaviors were pointed as negative, many claimed to be cunning and the *jeitinho brasileiro* (the Brazilian way of doing things). Research on dissonance point that, when the object of counterattitudinal writing is a cultural norm, the effects of dissonance and the possibility of change in attitude are minimized. Results will be discussed.

Keywords: cognitive consistency, cognitive dissonance, implicit self-esteem.

Attitude is the association of an object or social group to an attribute/valence. As for the self-esteem, it is an attitude which refers to the association of the concept of self to an attribute/valence (Greenwald, Rudman, Farnham, Nosek, & Mellott, 2002). In turn, the self-concept is the association between the concept of self and other concepts (Schnabel & Asendorpf, 2010). In the attitude towards the ingroup, the self-esteem and the self-concept are associated with implications in maintenance processes of the cognitive consistency and the understanding of these associations implies greater understanding of social phenomena (Greenwald et al., 2002).

The social identity theory (Tajfel, 1978) points that the belonging to the group is the most important dimension of the vision of the self. The four basic categories of groups are: primary groups (such as family and close friends), social groups (such as employees of a company, study groups), associations (neighbors in large neighborhoods, students in large institutions) and categories (people of the same nationality and/or of the same sex) (Forsyth & Burnette, 2010). These types of groups differ as to the entitativity – perceptual factors, as similarity, proximity and common destiny that influence the perception of both members and non-members in relation to the unit of the group (Campbell, 1958).

People tend to have positive attitude – evaluate positively – towards the groups to which they belong (Tajfel, 1978) and, therefore, negative information about

the ingroup are inconsistent with the maintenance of this positive attitude. The human being, however, does not deal well with inconsistencies. Classical theories on cognitive consistency, as the theory of cognitive dissonance (Festinger, 1957) and the balance theory (Heider, 1958), have as fundamental presupposition that inconsistencies between cognitions are unpleasant, unstable and tend to equilibrium (Fiske & Taylor, 2013).

The human tendency to maintain cognitive consistency is considered a basic principle of human thinking and has key role in how the social information are processed (Gawronski & Strack, 2012). This tendency is currently understood as being associated with cognitive and motivational processes (Baumeister, 2010) and related to processes of self defense (Greenwald & Ronis, 1978). The objective of this study is to test the effect of negative information about the ingroup in the identification with the group and in self-esteem.

Theories on cognitive consistency and influence of social aspects in maintenance of consistency

The cognitive dissonance theory indicates that to approach information inconsistent with previous attitudes creates a threat to the sense of self, which has to be reduced (Gawronski & Strack, 2012). The cognitive dissonance is negative, uncomfortable and physiologically excitatory (Cooper, 2007). Its resolution can occur with the change in attitude (Fiske & Taylor, 2013), but, when changing the attitude can become a threat to the self vision, other procedures may occur, as: 1) distortion of information conflicting with the maintenance of a positive self-evaluation

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(Cooper, 2007); and 2) commitment strategies of personal and ingroup enhancement when in situations of social comparison (Vignoles, Regalia, Manzi, Gollidge, & Scabini, 2006).

Cognitive dissonance according to Festinger (1957) has a substantial social component which did not receive attention until recently, since most studies conceptualize it as an intraindividual process (McKimmie, 2015). Clémence (1994) points that there are two levels of conflict elicited by counterattitudinal behavior – experimental procedure more used to create the inconsistency that causes cognitive dissonance (Cooper, 2007): intraindividual level and intergroup level. The latter creates motivation to protect the social identity and limits the ability of dissonance reduction by attitude change. Taking into consideration the association of personal and social identity in the constitution of the self-concept as central in the processes of dissonance, Glasford, Dovidio and Pratto (2008) conducted two experiments and found results that suggest that people who had an important personal belief violated by group behavior reduced the dissonance by decreasing the identification with the group or committing in activism in favor of this belief. Thus, the possibility of reduction of the group identification exists when a very important personal belief is violated by the group. When this was not the case, the resolution of the inconsistency occurred through strategies of enhancing social identity, the greater were the identification with the group.

Another theory on cognitive consistency is the balance theory of Heider (1958) who, as well as the theory of cognitive dissonance, postulates about the selectivity of perception of information with the purpose of self-protection and maintenance of cognitive consistency (Fiske & Taylor, 2013). It diverges from the theory of cognitive dissonance because it points the formation of cognitive structures of balance that associate triads of concepts and attributes, having implications not only in storage, but in recovery of memories (Fiske & Taylor, 2013).

The understanding about automaticity introduced by Bargh (1994) in which people engage, without choosing consciously, in both controlled and automatic processes (Calrston, 2010) and that automatic processes influence motivations that unleash cognitions and behaviors (Fiske & Taylor, 2013) resulted in methodological ramifications, with the creation of indirect instruments of measuring attitude, and new theoretical ramifications regarding cognitive consistency (Petty, Briñol, & Johnson, 2012).

The unified theory of implicit social cognition by Greenwald et al. (2002) integrates cognitive and affective constructs based on three influences: the growing interest in automaticity and implicit cognition, development of the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998), and theories of cognitive consistency from the 1950s, in particular the balance theory of Heider (1958). This theory uses three common terms in modern theories about neural network (Greenwald et al., 2002): concepts (representing people, groups and attributes – positive and negative valence), strength of

association (potential of one concept to activate another one) and activation of concepts (excitement due to existing association between a concept with another already active). The theory demonstrated the positive association of balance between self-esteem, attitude towards the ingroup and group identification (Greenwald et al., 2002). Thus, the greater the self-esteem and group identification, consequently, the greater the positive evaluation in relation to the group, being, therefore, a theory that assumes the close relationship of self-esteem and ingroup identification for the maintenance of cognitive consistency. This article tests the effect of threat to the maintenance of the positive evaluation regarding the ingroup in the other elements of the cognitive structure that involves them, self-esteem and group identification, since the occurrence of inconsistency is expected according to the presuppositions of the theory of cognitive balance (Heider, 1958). In the social categories used in the studies of the unified theory of implicit social cognition (Greenwald et al., 2002), men and women are part of the same basic type of one of the groups of this research – Brazilians – and are different from the other group – university students (Forsyth & Burnette, 2010). The criterion of choice was: groups in which all target-participants of the research were members. There are no restrictions of types of groups that fit or not in effectiveness and existence of the balance structure involving attitude in relation to the ingroup, identification with the group and self-esteem. The balance structure identified in the unified theory of implicit social cognition is potentially applicable to any group (Greenwald et al., 2002).

Specificities of self-esteem on cognitive consistency

Self-esteem is associated with the group identification (Stets & Burke, 2013) and is part of the balance structure investigated in this work (Greenwald et al., 2002). Its conceptualization was also impacted with the advent of the knowledge on automaticity, since people process social information not only explicitly, but also implicitly (Bargh, 1994), and the self acts differently in these two processing modes (Greenwald & Farnham, 2000). Today, two categories for self-esteem are conceptualized: the explicit one, which refers to consistent and deliberately substantiated evaluations; and the implicit one, which refers to highly efficient evaluations that occur unintentionally and out of the conscious attention (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003).

One of the least contested prerogatives in social psychology is that people are motivated to protect and increase their self-esteem (Vignoles et al., 2006). Rudman, Dohn and Fairchild (2007) show that the self-esteem participates in automatic processes considering its functioning against threats to the self-concept. They showed, in four experiments, that the compensation of implicit self-esteem is a self-defense process in response

to threats, which occurs spontaneously and effortlessly, maintaining the cognitive consistency and working as a regulator of affection.

In addition to the implicit self-esteem being related to the maintenance process of cognitive consistency, there is yet another issue that influences this process: the implicit ambivalence – when implicit and explicit evaluations differ in relation to something (Petty et al., 2012). As the principle of balance seems to operate in a primary level of thought, the implicit ambivalence is related to secondary and metacognitive processes. The reason is that when a person denies an evaluative reaction or considers that it refers to another source (not to one's personal vision), one does not use it in deliberate self-reports, but this evaluation can still affect automatic processes. Therefore, the explicit measure accesses only the association endorsed by the person, as the indirect measure can identify existing evaluations that the person does not endorse consciously (Petty et al., 2012).

Jordan et al. (2003) point to the existence of two types of high self-esteem. One named secure high self-esteem, well-substantiated, and another, named defensive high self-esteem, which would have fragile characteristics and susceptible to threats. The latter would result from the simultaneous maintenance of two discrepant attitudes toward the self: to feel good, at a conscious and explicit level, and relatively negative, at an implicit level. The authors' results indicated that people with defensive high self-esteem tend to engage in self-enhancement strategies through bias in relation to the ingroup, and to present more justifications for their answers than people who have secure high self-esteem (high, explicit and implicit). Defensive self-esteem is still associated with the greater tendency to distortion of information harmful to the self (Kernis, Lakey, & Heppner, 2008) and greater discomfort when facing threats (Jordan, Logel, Spencer, Zanna, & Whitfield, 2008). Being the defensive high self-esteem an example of implicit ambivalence (Petty et al., 2012), it is important to take this into consideration in studies that explore processes of defense through inconsistencies, taking into account the characteristics of defensiveness indicated.

The effect of threat to cognitive consistency on the triad of balance of the unified theory of implicit social cognition, considering the potential moderator effect of the implicit ambivalence was not, in the manner proposed, previously tested in literature. In addition, this article aims to contribute methodologically to the preparation of the Implicit Association Test for intracultural employment surveys. It also incites the understanding of group processes in Brazil, beyond the incorporation of results from research conducted in other countries.

Considering the human tendencies of evaluating positively the groups to which one belongs to (Tajfel, 1978), and of protection and elevation of self-esteem (Vignoles et al., 2006), and maintenance of the cognitive consistency as basic principle of information processing (Gawronski & Strack, 2012) and, yet, considering the

defensive character of the search for cognitive consistency (Cooper, 2007), the objective of this article is: to test the effect of negative information about the ingroup in the group identification and in self-esteem. The hypotheses are:

H1: Participants exposed to text containing threat to positive evaluation of the group will distort information, evaluating them as less negative.

H2: Participants exposed to text containing threat to positive evaluation of the group will present higher scores of negative affects.

H2a: Among the participants exposed to the text, the ones with defensive high self-esteem will present higher scores of negative affects.

H3: Participants exposed to the text containing threat to the positive evaluation of the group will present higher implicit self-esteem scores in the post-test than in the pre-test (compensation of implicit self-esteem).

H3a: Among the participants exposed to the text, the ones with defensive high self-esteem will present higher compensation of implicit self-esteem.

H4: Participants in which the measurement of group identification has been conducted before exposure to the text containing threat to the positive evaluation of the group will have higher identification scores than participants in which the measurement was conducted after.

Method

Participants

A total of 156 university students selected by convenience participated in the study; 18 were removed for having provided answer contrary to instructions. Of the 138 remaining, 75.4% were women. The participants' age ranged from 17 to 35 years ($M = 20.21$, $SD = 2.55$).

Instruments

Rosenberg self-esteem scale: the scale of Rosenberg (1965) was used to evaluate the global self-esteem. This instrument became, over more than four decades, a reference, being the most used scale of global self-esteem evaluation in psychological research (Zeigler-Hill & Jordan, 2010). Ten items were classified by the participant in a four-point response scale (α pre-test = 0.86; α post-test = 0.87).

Implicit Association Test – IAT (Greenwald & Farnham, 2000): for measuring implicit self-esteem (α pre-test = 0.73; α post-test = 0.67).

The IAT (Greenwald et al., 1998) is used as an instrument to measure implicit attitudes and was developed as a methodological unfolding resulting from the demand for measurement of automatic cognitions (Calrston, 2010). The IAT measures the strength of association between concepts and attributes, whereas

the latency time of response, and has the premise that the easier a mental task, the faster the decision-making and the lower the quantity of errors. This is an instrument used in several areas, such as cognitive, social, forensic and clinical psychology, neuropsychology, market research, etc. (Lane, Banaji, Nosek, & Greenwald, 2007). An IAT of self-esteem, for example, indicates that the person has high implicit self-esteem if the answers are faster and with fewer errors when the self-referring categories and positive attributes are together than when the self-referring categories and negative attributes are together.

The stimuli used for the target-categories – I and not I – were proposed by Modesto (2014) and Modesto and Pilati (2015). The stimuli used for the attributes, positive and negative, were chosen from a list of words classified according to their norms of valence for the Portuguese language (Oliveira, Janczura & Castilho, 2013). After producing the IAT of self-esteem, a pilot testing with 113 participants was performed for identification of the suitability of the measure built for use ($\alpha = 0.65$). The participants' age ranged from 18 to 49 years ($M = 21.65$, $SD = 5.158$) and 70.8% were women. The correlation between block one and block two of the instrument was $r = 0.483$, $p < 0.001$. A bias that may be harmful to the IAT is the influence of the first block of tests over the second (Lane et al., 2007). Therefore, it is more appropriate to find a moderate correlation between the two blocks.

In-group identification scale: adapted from Leach et al. (2008). Fourteen items classified by the participant in a seven-point scale, which can be adapted for use in research of identification with any group (see Appendix A). In this research, the groups chosen were Brazilians ($\alpha = 0.91$) and university students ($\alpha = 0.79$). The scale has five components (Leach et al., 2008): Solidarity (items 3, 8 and 14; indicates the psychological connection and commitment felt in relation to group members); Satisfaction (items 1, 2, 5 and 9; indicates the maintenance of a positive evaluation in relation to the group); Centrality (items 6, 10 and 13; indicates the salience and importance attributed to the belonging to the group); Self-stereotype (items 7 and 11; indicates how much the person perceives his/herself as similar to a typical group member); and Homogeneity (items 4 and 12, indicates how much the person perceives the group as homogeneous and distinct from other groups).

Scale of affective state: adapted from the scale used by Norton, Monin, Cooper and Hogg (2003) in research on cognitive dissonance. Twelve items classified by participants in a seven-point scale, contemplating positive personal affect ($\alpha = 0.83$), global psychological discomfort ($\alpha = 0.62$) and negative self-directed affect ($\alpha = 0.92$). The instruction for answering the scale concerned the moment at which the scale was being answered, for checking of cognitive dissonance. Thus, the instruction was: "Answer the following items indicating, on a scale from 1 to 7, in which 1 = does not apply at all and 7 = applies very much. There are no right or wrong answers. For each

item, choose the value on the scale that best represents what you are feeling. Any value in the scale can be used. Use the cursor and click on the option chosen." The terms for the dimension "positive personal affection" were: energetic, friendly, good, optimistic and happy. The terms for the dimension "global psychological discomfort" were: uneasy, bothered and uncomfortable. The terms for the dimension "negative self-directed affect" were: angry with myself, annoyed with myself, dissatisfied with myself and disgusted with myself. The order of the terms followed the proposed by Norton et al. (2003).

Procedure

The Informed Consent Form was presented to participants. It contained information related to the mean length of the survey, to the laboratory to which it was linked, to the goal, to information about the secrecy of participation and destination of data obtained, to the indication of the need of carefully reading the instructions for each step, to the voluntary nature of participation, and to the possibility of withdrawal at any time. The survey was conducted individually, by computer, through the software Inquisit version 4.0.

The experimental design consisted of three groups: Brazilians, university students and control. The designation of participants to groups was randomized by the software used. In all groups, participants underwent pre- and post-test for measuring implicit and explicit self-esteem, given that the post-test was the reapplication of measures. In research on test-retest reliability, the Rosenberg test ($r = 0.80$) and the IAT ($r = 0.69$) showed the best stabilities over time among other tests of self-esteem (Bosson, Swann, & Pennebaker, 2000).

In both groups, the experimental manipulation consisted of the participants reading a fictional and negative piece of news about group to which they belong, being invited to list group characteristics that led to their presence in the news, in addition to writing a short paragraph, directed at people from other groups, warning about the negative characteristics of the group – counterattitudinal behavior (see Appendices B and C). Names of institutions were used in fictional news only to increase the perception of truth. They did not prepare nor disclose such content. After, participants evaluated the news (as negative, neutral or positive – for measuring the valence attributed to the information) and responded to the instrument for measurement of affective state (Panas). In addition, they answered a scale of group identification, with randomized presentation: before or after the experimental manipulation. In the control group, participants read a true news about the discovery of a new fish species (see Appendix D), evaluated the news – as negative, neutral or positive – and answered the measurement instrument of affective state. At the end, all participants responded socio-demographic items. Participants were asked if they judged the news clear and

convincing. At last, the clarification and acknowledgment for the participation were performed.

To analyze the association between implicit and explicit self-esteem, the sample was divided into three groups, each equivalent to approximately 33% of respondents. Participants were categorized as having secure high self-esteem (explicit and implicit high self-esteem) when their scores on both measures were in the interval related to the higher scores; as possessing defensive high self-esteem (high explicit and low implicit self-esteem) when the explicit measure score was in the interval for higher scores and indirect measurement in the interval for the lower scores; and as having congruent moderate self-esteem when they presented the scores on both measures of self-esteem in the interval referring to the median scores.

The number of participants in each self-esteem category, in the experimental groups, was balanced (13 participants with insecure, 12 with secure and 12 with congruent moderate self-esteem). The other participants presented, then, associations between implicit and explicit self-esteem without effects, pointed in the literature, as differentiators through resolution of inconsistencies.

Results

To calculate the score D – result of IAT – the trials with response latency less than 400 ms and greater than 10,000 ms were excluded according to guidelines of the area (Greenwald, Banaji & Nosek, 2003). To enable comparisons between the IAT and the Rosenberg scale, the scores of the two measures were standardized to a scale ranging from 0 to 4. Both measures showed low, positive and non-significant correlation in the pre-test ($r = 0.104$, $p = 0.225$) and in the post-test ($r = 0.079$, $p = 0.354$).

H1: *Participants exposed to text containing threat to positive evaluation of the group will distort information, evaluating them as less negative.*

The values 1, 2 and 3 were attributed for the evaluations given as negative, neutral and positive, respectively. Thus, when analyzing the mean of the evaluations per group, it was possible to verify the general tendency of these evaluations. The piece of news was more positively evaluated by participants in the control group ($M = 2.39$, $SD = 0.60$) than by the experimental groups of Brazilians ($M = 1.42$, $SD = 0.65$) and students ($M = 1.21$, $SD = 0.47$). This difference was significant, $F(2, 135) = 55.179$, $p < 0.001$, $\omega^2 = 0.44$. Thus, the evaluation made by participants in the control group was, on average, between neutral and positive, and the experimental groups, between negative and neutral.

The post-hoc Bonferroni test was performed, which identified that the difference in evaluation between experimental group of Brazilians and students was not significant ($p = 0.30$). In these groups, 64 participants evaluated the news as negative (73.6%), 18 as neutral (20.7%) and 5 as positive (5.7%). Although most

participants in these groups have rated the news as negative, fewer participants evaluated the news as neutral or positive among those who responded to the scale of group identification before exposure to text containing threat to the positive evaluation of the ingroup. ($M = 1.23$, $SD = 0.48$) than among those who responded to the scale after ($M = 1.42$, $SD = 0.66$), but this difference was not significant, $F(1, 86) = 2.4$, $p = 0.125$, $\eta^2p = 0.027$.

In analyses considering the components of the identification scale, the way the piece of news was evaluated had no significant implications in any component of the identification for participants who responded to the identification scale after exposure to texts containing threat to positive evaluation of the group. For participants who responded to the scale before, the only component that had significant effect on evaluation of the piece of news was the satisfaction, $F(1, 44) = 3.123$, $p = 0.005$, $\eta^2p = 0.575$.

The distortion of valence of negative information (H1) was not identified as defense process for maintenance of cognitive consistency (Cooper, 2007).

H2: *Participants exposed to text containing threat to positive evaluation of the group will present higher scores of negative affects*

The affective state was not significantly different considering the experimental condition, $V = 0.07$, $F(3, 133) = 1.758$, $p = 0.10$, $\eta^2p = 0.038$. This result indicates that the negative information had no significant implication in the affective state as hypothesized (H2). As shown in Table 1, in the dimension of positive personal affect, the highest mean was found in the Brazilian group, followed by the control group, and group of university students. As for the global psychological discomfort dimension, the highest mean was found in the student group, followed by the Brazilian group, and the control one. In the negative self-directed affect scale, the highest mean was found in the control group, followed by the groups of Brazilians, and of students.

In analyses considering the components of the identification scale, for the participants who responded to the identification scale before, the centrality had significant effect on the positive personal affection, $F(1, 44) = 2.28$, $p = 0.03$, $\eta^2p = 0.55$. The correlation between centrality and personal affect was positive, low and non-significant, $r = 0.228$, $p = 0.14$, indicating a tendency of participants who presented higher scores of centrality before presenting higher scores of positive personal affect after exposure to texts containing threat to positive evaluation of the group.

For participants exposed to the text containing threat to positive evaluation of the group before responding to the identification scale, the global psychological discomfort dimension showed significant effect on centrality, $F(1, 42) = 4.587$, $p < 0.001$, $\eta^2p = 0.696$. The correlation between global psychological discomfort and centrality was positive, moderate and significant, $r = 0.457$, $p = 0.002$,

indicating a tendency of participants who indicated higher global psychological discomfort scores to present, subsequently, higher centrality scores.

H2a: *Among the participants exposed to the negative text, the ones with defensive high self-esteem will present higher scores of negative affects*

In experimental groups, the type of self-esteem showed no significant differences in the affective state, $V = 0.28$, $F(6, 66) = 1.80$, $p = 0.11$, $\eta^2p = 0.141$. The hypothesis that individuals with high self-esteem would present greater discomfort in the face of defensive threats (Jordan et al., 2008) was not confirmed (H2a). According to Table 2, in the dimension of positive personal affect, the highest mean was from participants with secure high self-esteem, followed by participants with defensive high self-esteem and participants with congruent moderate self-esteem. In the dimension of global psychological discomfort, the highest mean was found in participants with defensive high self-esteem, followed by participants with congruent moderate self-esteem, and participants with secure high self-esteem. In the dimension of negative self-directed affect, the highest mean was found in participants with congruent moderate self-esteem, followed by participants with secure high self-esteem and participants with defensive high self-esteem.

H3: *Participants exposed to the text containing threat to the positive evaluation of the group will present higher implicit self-esteem scores in the post-test than in the pre-test (compensation of implicit self-esteem)*

The implicit self-esteem was differentiated by subtracting the post-test score by the pre-test one. Thus, the higher the difference value, the greater the increase in implicit self-esteem in the post-test and, the smaller the value, the greater the decrease in the post-test. No significant effect was found in the difference of implicit self-esteem in the pre- and post-test depending on the experimental condition, $F(2, 135) = 0.147$, $p = 0.863$, $\eta^2p = 0.002$. Participants, on average, had this negative difference ($M = -0.166$, $SD = 0.31$) and in all groups the differences were negative, indicating a decrease in implicit self-esteem in the post-test, regardless of the condition. In analyses considering the components of the identification scale, no component showed significant effect in the difference of implicit self-esteem. Thus, it was not possible to identify the process of spontaneous defense in the face of threats (Rudman et al., 2007), compensation of implicit self-esteem, as hypothesized (H3).

H3a: *Among the participants exposed to the negative text, participants with defensive high self-esteem will present higher compensation of implicit self-esteem*

In the experimental groups, explicit self-esteem of the pre-test ($M = 2.87$, $SD = 0.67$) and post-test ($M = 2.86$, $SD = 0.69$) showed positive, strong and significant correlation, $r = 0.935$, $p < 0.001$, and

showed no significant difference, $t(86) = 0.522$, $p > 0.05$, $r = 0.056$. As for the implicit self-esteem of the pre-test ($M = 2.59$, $SD = 0.43$) and post-test ($M = 2.43$, $SD = 0.39$), it showed positive, moderately strong and significant correlation, $r = 0.708$, $p < 0.001$, and showed no significant difference, $t(86) = 4.686$, $p > 0.001$, $r = 0.45$. It is observed that the implicit self-esteem in the post-test was, on average, lower than the pre-test. This difference was not significant depending on the type of self-esteem, $F(2, 47) = 0.482$, $p = 0.62$, $\eta^2p = 0.02$. This result indicates that the tendency of individuals with defensive high self-esteem of engaging in self-enhancement strategies through threats by bias in relation to the ingroup (Jordan et al., 2008) was not identified, therefore another hypothesis not confirmed (H3a). The smallest difference was for participants with congruent moderate self-esteem, followed by participants with defensive high self-esteem. The largest decrease in implicit self-esteem in the post-test, was from participants with secure high self-esteem, as shown in Table 3.

H4: *Participants in which the measurement of identification with the group has been conducted before exposure to the text containing threat to the positive evaluation of the group will have higher identification scores than participants in which the measurement was conducted after*

No significant difference was found in the identification with the group for participants who responded to the scale before ($M = 64.95$, $SD = 11.73$) and after ($M = 66.67$, $SD = 12.19$) the experimental manipulation, $F(1, 86) = 0.45$, $p = 0.504$, $\eta^2p = 0.005$. The mean of ingroup identification of participants of the group of students ($M = 67.29$, $SD = 9.92$) was greater than the mean of identification of participants from the Brazilian group ($M = 64.42$, $SD = 13.49$), being this difference not significant, $F(1, 86) = 1.257$, $p = 0.265$, $\eta^2p = 0.015$.

In analyses considering the components of the identification scale, its counter-balance (respond to scale before or after the experimental manipulation) had no significant effect on scores of components. However, there was significant difference for the group (Brazilians or students) in three components of the identification scale: solidarity, satisfaction and centrality.

For the component of solidarity, the mean of the Brazilian group ($M = 15.91$, $SD = 2.93$) was significantly greater than the student group ($M = 13.43$, $SD = 3.34$), $F(1, 86) = 13.647$, $p < 0.001$, $\eta^2p = 0.138$. For the component of satisfaction, the mean of the student group ($M = 22.79$, $SD = 3.8$) was significantly greater than the Brazilian group ($M = 19.89$, $SD = 4.2$), $F(1, 86) = 11.331$, $p = 0.001$, $\eta^2p = 0.118$. For the component of centrality, the mean of the student group ($M = 16.88$, $SD = 2.94$) was significantly greater than the Brazilian group ($M = 13.20$, $SD = 4.28$), $F(1, 86) = 21.539$, $p < 0.001$, $\eta^2p = 0.202$.

Table 1. Mean of the affective state, in the three dimensions, depending on the group.

	Brazilians	Students	Control
Dimension of affective state	M (SD)/95% CI	M (SD)/95% CI	M (SD)/95% CI
Positive personal affect	23.67 (6.32)/[22; 25.33]	23.02 (4.60)/[21.3; 24.75]	23.33 (5.79)/[21.77; 24.90]
Global psychological discomfort	10.24 (3.72)/[9.13; 11.36]	11 (3.51)/[9.84; 12.16]	9.76 (4.05)/[8.71; 10.81]
Negative self-directed affect	12.38 (5.94)/[10.52; 14.24]	12.02 (6.55)/[10.10; 12.95]	13.35 (6.41)/[11.60; 15.10]

Note: CI = confidence interval

Table 2. Mean of affective state, in three dimensions, depending on the type of self-esteem, in experimental groups.

	Secure self-esteem	Moderate self-esteem	Defensive self-esteem
Affective state	M (SD)	M (SD)	M (SD)
Positive personal affect	26.25 (6.24)	22.67 (5.49)	24.38 (6.03)
Global psychological discomfort	8.58 (3.75)	10.42 (3.23)	10.62 (3.86)
Negative self-directed affect	11 (5.32)	12.42 (5.90)	8.92 (5.54)

Table 3. Difference of implicit self-esteem depending on the type of self-esteem in experimental groups.

Type of self-esteem	M (SD)	95% IC
Moderate self-esteem	- 0.143 (0.25)	[- 0.306; 0.019]
Defensive self-esteem	- 0.144 (0.26)	[- 0.305; 0.016]
Secure self-esteem	- 0.24 (0.32)	[- 0.446; - 0.036]

Discussion

This article aimed to test the effect of threat to the positive evaluation of the group on self-esteem and identification with the group. Given the human motivation of protecting and increasing one's self-esteem (Vignoles et al., 2006), the tendency to evaluate positively groups to which one belongs to and being the social identity a crucial part of self-concept (Tajfel, 1978), negative information about groups to which one belongs to has potential for establishing cognitive inconsistency. The defensive character of the search for cognitive consistency, to avoid aversive feelings and maintain personal integrity (Cooper, 2007) indicates that, in this case, the tendency to cognitive consistency would progress by processes that would not threaten the self-evaluation and relationship with the group: the distortion of information (Cooper, 2007) and the engagement in enhancement strategies (Vignoles et al., 2006).

Different from the expected, none of the proposed hypotheses was confirmed. Distortion of negative information (H1), as defense process for maintenance of cognitive consistency (Cooper, 2007), was not identified. However, for participants who responded to the group identification scale previously, the component of satisfaction had significant effect on how the piece of news was evaluated. Satisfaction is a component of the group identification that can lead to disregard for negative events and to resistance to negative information about

the ingroup aiming to maintain the positive evaluation in relation to the group (Leach et al., 2008).

The negative information had no significant implication in the affective state (H2). However, the component of centrality of the identification scale with the group showed effects that had not been hypothesized. These results indicate that, even after the contact with negative information about the ingroup, the positive affect is greater, the greater were the previous statement about the importance of belonging to the group. And that the greater the discomfort in the face of negative information about the ingroup, the greater the attribution of importance given to the belonging to the group later.

Also, it was not possible to identify the process of spontaneous self-enhancement in the face of threats (Rudman et al., 2007) – compensation of implicit self-esteem (H3). Participants with defensive high self-esteem did not show characteristics differentiated through threats (Jordan et al., 2008), but greater discomfort and tendency to engage more in self-enhancement strategy, than individuals with secure high self-esteem (H2a and H3a).

Participants who responded to the group identification scale before experimental manipulation showed no significantly higher identification scores compared to the ones who responded after (H4). This difference was expected based on Glasford et al. (2008), who indicate that people with an important personal belief violated by group behavior can reduce the dissonance decreasing group identification, engaging

in activism in favor of that belief or engaging in the enhancement strategies of social identity, the greater the identification with the group. This result, however, is not sufficient to affirm whether the information in the experimental manipulation, about the behavior of the group, violated or not participants' important individual beliefs. As indicated in the results of H2, the component of centrality showed effects that had not been hypothesized. Thus, despite not being possible to identify significant difference in identification with the group in general, the importance given to the belonging to the group (centrality) showed potential effects of mood regulation in the face of threats to the positive evaluation of the group. Finally, significant differences were found in the components of identification depending on the group (Brazilians or students), but there was no significant difference between them in the variables studied (humor, evaluation of the piece of new and difference of self-esteem).

Although they had generally identified the news of group of Brazilians and students as negative, processes related to resolving the inconsistency between negative information about the group and maintenance of positive assessment of the ingroup may have happened in another moment of the participants' life. The issue in which participants were questioned about the group characteristics they related to the presence of the group in the news, in the Brazilian group, 73.08% of answers indicated negative features, such as dishonesty, selfishness and hypocrisy. However, in 71.59% of the responses, participants also pointed to dubious features regarding the negative valence as trickery, cunning, the *jeitinho brasileiro* (Brazilian way of doing things) and opportunism. In a study with 171 participants, Fischer, Ferreira, Milfont and Pilati (2014) identified that Brazilians with greater identification with the country were more likely to endorse corruption scenarios, particularly when exposed to priming of trickery due to activation of positive national symbols and morally ambiguous connotations. The authors point to the need for intracultural research studies of variability of the psychological processes associated with this effect.

The results obtained, contrary to what is postulated by the theories of cognitive consistency, indicate that it is possible that intracultural variables are influencing

these processes. Social norms have important role to the consistency of the group and to the vision of dissonance as phenomenon related to social identity (Robertson, 2006). Robertson and Reicher (1997) point that norms may reduce dissonance when they validate the counterattitudinal behavior or when they suggest that the inconsistency between attitude and behavior is normative. With that in view, it is possible that the inconsistency between attitude (positive evaluation of the group) and behavior (engagement in negative behaviors by members of the group, as indicated in the scenarios proposed) is a cultural norm. One problem is that the possibilities for change of attitude, resulting from the resolution of inconsistencies (Fiske & Taylor, 2013), if they are contrary to a norm of the group, tend to be inhibited (McKimmie, 2015). Cultural norms tend to be resistant to change, being necessary to understand or decipher the culture, aiming to decode hidden reasons that explain individual and collective behaviors considered as natural (Silva, Zanelli, & Tolfo, 2013).

Another possible explanation for these results is the potential non-suitability of the instruments for measuring the effect. The only indirect measure used was to measure the implicit self-esteem, but the unified theory of implicit social cognition by Greenwald et al. (2002) refers to automatic processes. Although there still is little evidence accumulated about this issue, self-relevant knowledge and threats tend to be processed automatically (Fiske & Taylor, 2013) and there are evidences that, when subjects have no ability to control their responses, as in responses to indirect measures, the association between favoritism in relation to the ingroup and increase in self-esteem is most promptly observed (Smurda, 2006). The use of indirect measures can evidence effects not captured by the instruments used in this research, as it would minimize the implications of the impression management and self-deception (Zeigler-Hill & Jordan, 2010). Future studies using more suitable instruments for measuring the effect are necessary. They should explore the components of identification with the group in the regulation of affect and evaluation of information on the group non-categorically, in addition to other possible cultural variables involved in the relationship of negative behaviors of the ingroup and its effects on human cognition.

Nossos erros me afetam? Efeito de informações negativas na identificação com endogrupo e na autoestima

Resumo: Teorias clássicas sobre consistência cognitiva recentemente têm sido exploradas enquanto processos não apenas intraindividuais, mas influenciados por aspectos grupais. Tendo em vista a tendência humana ao enaltecimento pessoal e grupal e a teoria unificada de cognição social implícita, informações negativas a respeito do endogrupo têm potencial de gerar inconsistência por meio da dissonância cognitiva e de desbalanceamento. Para testar as funções protetivas da consistência cognitiva diante das ameaças à avaliação positiva do endogrupo, 156 participantes passaram por pré e pós-teste de autoestima e por manipulação experimental de ameaça ou neutra. Não houve diferença significativa na autoestima dos participantes, nem no estado afetivo. Nos grupos experimentais, embora apontassem os comportamentos como negativos, muitos alegaram ser

esperteza e *jeitinho brasileiro*. Pesquisas sobre dissonância apontam que, quando o objeto da redação contra-attitudinal é uma norma cultural, os efeitos da dissonância e a possibilidade de mudança de atitude são minimizados. Resultados serão discutidos.

Palavras-chave: consistência cognitiva, dissonância cognitiva, autoestima implícita.

Nos erreurs me touchent? Effet des informations négatives sur l'identification avec endogroupe et l'estime de soi

Résumé: Les théories classiques de la cohérence cognitive ont été récemment exploré les processus non seulement intra-individuelle, mais influencé par les aspects de groupe. Compte tenu de la tendance humaine à agrandissement personnel et de groupe et théorie unifiée de la cognition sociale implicite, des informations négatives sur l'endogroupe a le potentiel pour générer incohérence en dissonance cognitive et de déséquilibre. Pour tester les fonctions de protection de la cohérence cognitive contre les menaces à l'évaluation positive de l'endogroupe, 156 participants ont subi l'estime de soi pré- et post-test et manipulation expérimentale de la menace ou neutre. Il n'y avait pas de différence significative dans l'estime de soi des participants, ou l'état affectif. Dans les groupes expérimentaux, bien que les comportements pointus comme négatif, beaucoup prétendu être moyen ruse et *jeitinho brasileiro*. La recherche sur la dissonance souligner que lorsque l'attitude contre l'écriture de l'objet est une norme culturelle, les effets de la dissonance et la possibilité d'un changement d'attitude sont minimisés. On discute les résultats.

Mots-clés: la cohérence cognitive, la dissonance cognitive, estime de soi implicite.

Nuestros errores me afectan? Efecto de la información negativa sobre la identificación con el grupo y en la autoestima

Resumen: Teorías clásicas sobre consistencia cognitiva recientemente han sido exploradas como procesos no solo intraindividuales, pero también influenciados por aspectos grupales. Reconociendo la tendencia humana al engrandecimiento personal y grupal y la teoría unificada de la cognición social implícita, informaciones negativas sobre el endogrupo tienen el potencial para generar inconsistencia por intermedio de la disonancia cognitiva y del desequilibrio. Para probar las funciones de protección de la consistencia cognitiva contra amenazas a la evaluación positiva del endogrupo, la autoestima de 156 participantes fue medida antes y después de la manipulación experimental de amenaza o neutra. No hubo diferencia significativa en la autoestima de los participantes, o en el estado afectivo. En los grupos experimentales, aunque consideraban los comportamientos como negativos, muchos dijeron que era astucia y el *jeitinho brasileiro*. Investigaciones sobre disonancia indican que cuando el objetivo de la redacción contra actitudinal es una norma cultural, los efectos de la disonancia y la posibilidad de cambio de actitud son minimizados. Resultados son discutidos.

Palabras clave: consistencia cognitiva, disonancia cognitiva, autoestima implícita.

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Appendix A

Items of the Identification Scale with the group “Brazilians” (measured in Likert scale from 1 to 7, ranging from “completely disagree” to “completely agree”)

I am happy to be Brazilian.
It is pleasant to be Brazilian.
I feel connected to Brazilians.
Brazilians are very similar to each other.
I think Brazilians have much to be proud of.
The fact of being a Brazilian is an important part of how I see myself.
I have a lot in common with a typical Brazilian.
I feel committed to Brazilians.
Being Brazilian gives me a good feeling.
I often think about the fact of being Brazilian.
I am alike a typical Brazilian.
Brazilians have a lot in common with each other.
The fact of being Brazilian is an important part of my identity.
I feel sympathetic to Brazilians.

Items of the Identification Scale with the group “University students” (measured in Likert scale from 1 to 7, ranging from “completely disagree” to “completely agree”)

I am happy to be a university student.
It is pleasant to be a university student.
I feel connected to university students.
University students are very similar to each other.
I think that university students have much to be proud of.
The fact of being a university student is an important part of how I see myself.
I have a lot in common with a typical university student.
I feel committed to college students.
Being a college student gives me a good feeling.
I often think about the fact of being a university student.
I am alike a typical university student.
University students have a lot in common with each other.
The fact of being a university student is an important part of my identity.
I feel sympathetic to college students.

Appendix B

News and issues: Brazilians

According to a study from Yale University, 80% of Brazilians commit some form of corruption, leading the ranking compared to other countries.

According to the results of the survey, commissioned by the UN, Brazilians are the most involved in corrupt behaviors in the world. We analyzed several behaviors, such as jumping the line, not returning the exchange, cheating on tests, petty thefts, using of social position to favor relatives, etc. Experts list as some of the main causes the culture and social norms in force in the country. After disclosure of the survey, on 04/15/2015, the frequency of posts on social networks increased, comparing the crisis of political corruption in the country with these common corrupt acts of the population.

1. Write 5 characteristics (and/or adjectives) of Brazilians that are related to the search result, indicated in the piece of news.
2. In this activity you must meet the objective proposed below, regardless of your opinion about it. Remember a situation in which you witnessed the occurrence of one of these common corrupt acts of Brazilians, or some story in which a family member or friend told you, which contains these acts, or that you have seen about, published somewhere. Write a short paragraph about the situation, aiming to warn tourists about the possible risks they suffer when coming to Brazil due to the predominant characteristic in Brazilians, indicated in the news, of involvement in some form of corruption. In case you have never seen, heard or read about, comment on the news you just read to justify the alert.

Appendix C

News and issues: University students

The Federal Government threatens to reduce transfer of funds to the University of Brasília (UnB) due to inappropriate behaviors of university students.

The University of Brasilia has the prestige of being one of the best universities in the country. However, problems involving the behavior of university students have been drawing the attention of the Federal Government. The Government threatens to decrease the transfer if an intervention, aiming the adequacy of the university students to the rules, is not accomplished. University students' behaviors considered inappropriate, based on the regulation of the UnB, include: misuse of property (tables, chairs, tables, toilets, etc.); throwing of parties unapproved by the institution that attract non-students, incurring damage to property and risks to students; absence of satisfactory commitment in studies, which has caused the evaluation grade of several courses to decrease, resulting in the drop of UnB in the national and international ranking.

1. Write 5 features (and/or adjectives) of university students that are related to the problems indicated in the news.
2. In this activity you must meet the objective proposed below, regardless of your opinion about it. Remember a situation in which you witnessed, or a colleague told you, or you saw published somewhere, at least one of the inappropriate behaviors of the students from UnB commented on the piece of news read. Write a short paragraph about the situation, aiming to warn students from foreign universities, who plan an exchange student program in Brazil, about the possible problems of coexistence that arise due to the problems of the UnB students' conduct, in addition to the possibility of finding the university scrapped due to the decrease in the transfer of government funds as a result of these conduct problems. In case you have never seen, heard or read about, comment on the news you just read to justify the alert.

Appendix D

News: Control

New fish species is discovered by researchers in Mambáí, GO

A new fish species was discovered in the Gruta da Tarimba, in Mambáí, 500 km from Goiânia. According to one of the persons responsible for the research, the Professor Maria Elina Bichuette, from the Federal University of São Carlos (UFSCar), in São Paulo, the fish is troglobite, that is, it lives exclusively in underground environments and is only found in that place. “The species is endemic and lives only in this cave. It took years of work so that we could, in fact, prove that it is a rare animal already threatened with extinction,” she said in an interview to the G1. According to the researcher, the first animals were discovered in 2004; however, the studies have only been focused, in fact, between 2012 and 2013. In December of last year, the fish was officially described in an article in the journal of the Brazilian Society of Zoology.

Source: G1.