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The Role of Individual Differences in Shame-Induced Behavior: a Review of the Literature and Investigation of the Contribution of Attachment Individual Differences in Predicting Prosocial Behavior Following Shame

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ÍNDICE DE QUADROS

GLOSSÁRIO DE SIGLAS

ISCTE-IUL – Instituto Superior de Ciências do Trabalho e da Empresa – Insituto Universitário de Lisboa

IRI – Interpersonal Reactivity Index

PSS – Pictorial Shame Scale

RQ – Relationship Questionnaire

SAM – Self-Assessment Manikin

1. THE ROLE OF INDIVIDUAL DIFFERENCES IN SHAME-INDUCED BEHAVIOR: A REVIEW OF THE LITERATURE

ABSTRACT

In this article I will review research on the role of individual differences in predicting shame-induced behavior. Shame emerges essentially from a perception that one is viewed as unattractive by others and serves the important evolutionary function of warning individuals that they may be rejected and excluded by others. To help people deal with the threat of rejection, shame is postulated to motivate them to engage in socially valued behaviors that will protect or improve their social images and in this way grant them the acceptance of others and prevent their loss of group membership. Nevertheless, research has for decades focused on the negative interpersonal and psychological consequences of shame, with studies showing how this emotion leads people to hide when commiting transgressions, become more aggressive and hostile and exhibit dimished empathy for others. Only recently have the positive behavioral functions of shame begun to be uncovered, with studies showing how this emotion may also motivate people to behave in ways that promote interpersonal acceptance (e.g. striving in performance situations, engaging in reparations following wrongdoing and behaving prosocially towards others). However, the extent to which shame will promote one type of behavior or another is dependent upon individual differences that predispose people towards adaptiveness or maladaptiveness in the face of this emotion. Because space does not allow for a consideration of all such relevant individual differences, I will review evidence of the role of self-esteem and attachment individual differences in predicting adaptive versus maladaptive behavior following shame.

Keywords: Shame, Behavior, Evolutionary theories of emotion, Personality traits and processes, Group and interpersonal processes

RESUMO

Neste artigo serão revistos os resultados da investigação existente acerca do papel das diferenças individuais na predição do comportamento em situações de vergonha. A vergonha surge essencialmente de percepções de ausência de atractividade social aos olhos dos outros e serve a importante função evolucionária de avisar os indivíduos de que podem ser rejeitados ou excluídos. Por forma a lidar com a ameaça da rejeição, tem sido defendido que a vergonha motiva os indivíduos a terem comportamentos socialmente desejáveis que irão proteger ou melhorar as suas imagens sociais aos olhos dos outros e assim garantir-lhes que são aceites por eles. No entanto, a investigação durante décadas focou-se nas consequências interpessoais negativas da vergonha, com vários estudos a demonstrar como esta emoção leva as pessoas a fugir quando cometem transgressões, tornar-se mais agressivas e hostis e exibir menor empatia pelos outros. Apenas recentemente têm as consequências interpessoais da vergonha vindo a ser desvendadas, com alguns estudos a evidenciarem que esta emoção também pode motivar as pessoas a comportar-se de formas que promovem a sua aceitação social (e.g. dedicação em domínios de performance, reparações após transgressões, comportamento pro-social). Porém, a medida em que a vergonha irá promover um tipo de comportamento ou o outro depende de diferenças individuais que predispõem as pessoas a comportar-se adaptativamente ou não quando confrontadas com esta emoção. Porque o espaço não permite a consideração em detalhe de todas as diferenças individuais relevantes para este tópico, evidência acerca do papel da auto-estima e da vinculação na predição do comportamento em situações de vergonha será revista em maior detalhe.

Palavras-chave: Vergonha, Comportamento, Teorias evolucionárias das emoções, Traços e processos da personalidade, Processos de grupo e interpessoais.

1.1. Introduction

For decades, a view of shame as an inherently maladaptive emotion has dominated the literature. Several studies have supported this view, by showing that shame not only relates to psychopathology, but also prompts people to behave in self-centered, distancing and defensive ways which severely compromise interpersonal adjustment (Tangney, 1991; Tangney & Tracy, 2011). Recently, however, this view has increasingly been challenged by studies showing that, in addition to promoting withdrawal and maladaptive conduct, shame can also promote adaptive behaviors such as motivating people to work harder in achievement domains, engage in reparation following transgressions and even motivating them to engage in prosocial behavior (De Hooge, Breugelmans & Zeelenberg, 2008; Frijda, Kuipers & Ter Schure, 1989; Roseman, Wiest & Swartz, 1994; Turner & Schallert, 2001). However, the extent to which shame promotes adaptive or maladaptive outcomes appears to depend crucially, not only on situational variables, but also on individual differences.

In this article, I review theory and research on the nature and types of shame experiences and what interpersonal functions shame appears to serve as an emotion. For this purpose, I will review evidence of shame's behavioral outcomes and outline some individual differences that may help in predicting such outcomes. I will begin by providing a working definition of shame sustained on recent empirical evidence. I will then proceed to examine the adaptive functions that shame may serve, by means of an evolutionary framework that combines contributions from several fields, within and outside psychology. Afterwards, I will discuss why a dominant view of shame as "ugly" and maladaptive has prevailed in the literature and how it is currently being questioned, by reviewing studies that show evidence of adaptive shame-induced behavior. I will then conclude by reviewing studies on individual differences that, once contingent with shame, may predict engagement in adaptive *versus* maladaptive behaviors. Because space does not allow for a detailed consideration of all the relevant individual difference variables for this topic, I will focus on discussing the effects of two dispositions that research shows may be important in predicting shame-induced behavior: self-esteem and attachment.

1.2. What is shame?

No discussion of shame-induced behavior can begin without a discussion of what shame is and what functions it serves as an emotion. However, because contributions for the understanding of shame span across multiple disciplines and schools of thought, with theorists evincing many differences of view, no single definition of shame could possibly encompass them all (Pattison, 2003). Thus, in order to provide an account of what shame is and what functions it serves ultimately requires that I support some of these views and discard others. Nevertheless, the framework within which I will portray shame and discuss its effects reflects an integrative view that resolves and accommodates many of the contradictions and divergences of opinion found in shame research. It is also one that takes into account the contributions of many different theorists and disciplines both within and outside psychology, thus providing a multidimensional outlook on shame and its functions as an emotion.

1.2.1. The subjective experience of shame

Shame has been described as an inherently painful emotion, which often produces intense distress, anxiety and confusion (Gilbert, 1998; Wicker, Payne, & Morgan, 1983). People describe their experiences of shame as entailing a sense of "being small", inferior, worthless and powerless in some way (Tangney & Dearing, 2002; Van Vliet, 2008; Wicker et al., 1983).

A central aspect of the subjective experience of shame is a feeling of unexpected, involuntary exposure (Gilbert, 1998; Kaufman, 1996; Pattison, 2003; Smith, Webster, Parrott & Eyre, 2002; Tangney & Tracy, 2011; Van Vliet, 2008;). As Sartre (1956, pp. 259) so eloquently describes it his discussions of shame:

"*What I apprehend immediately when I hear the branches crackling behind me […] is that I occupy a place and that I can not in any case escape from the space in which I am without defense — in short, that I am seen.* "

This perception of defenseless exposure — of "being seen" and not wanting to be seen — is, perhaps what leads ashamed people to feel strong desires to hide or escape the shame-eliciting situation, to "sink into the floor" and disappear from view (Tangney, Miller, Flicker, & Barlow, 1996; Tangney & Tracy, 2011). Interestingly enough, the shame word itself derives from notions of covering and concealing (for an explanation on this issue see Pattison, 2003).

Shame experiences are also often marked by a distinct non-verbal display (Keltner & Harker, 1998; Izard, 1971). Consistent with shame-induced feelings of smallness and urges to disappear, ashamed people tend to exhibit a shrinking and folding in of their bodies (slumped shoulders, head down), gaze aversion, frowns, and motor avoidance (Dixon, Huber, Gilbert, et al., unpublished manuscript cit. in Keltner & Harker, 1998). The experience of shame may also sometimes be accompanied by blushing (Ablamowicz, 1992; Tangney et al., 1996; Wicker et al., 1983) and the related sensation of rapid increases in body temperature (Scherer & Wallbott, 1994). Some people also report feeling a rapid acceleration in their heart rates (Scherer & Wallbott, 1994; Tangney et al., 1996), although others report that shame is characterized by sensations of reduced physiological arousal (Scherer & Wallbott, 1994). Also, people very often feel uncomfortable in displaying their shame and thus frequently report engaging in efforts to conceal it (Keltner & Harker, 1998).

In addition to possessing a distinct non-verbal display, shame also appears to orchestrate specific patterns of psychobiological changes (Dickerson, Gruenewald, & Kemeny, 2004). Namely, it has been found that shame experiences are associated with substantial cortisol and pro-inflammatory cytokine activity, and that these changes are uniquely related to shame and not to other more general or composite affective states (i.e. distress) (Dickerson et al, 2004). Furthermore, cortisol and inflammatory activity tend to become especially high in shame situations where there is uncontrollability and the presence of evaluative others (Dickerson et al., 2004; Dickerson & Kemeny, 2004).

1.2.2. What triggers shame: shame-eliciting cognitions

Appraisal theory posits that all emotions emerge from specific appraisals of events (Lazarus, 1991; Tangney & Dearing, 2002; Tracy & Robins, 2004). In the case of shame, the main appraisal theme appears to be, at its core, one of *unnatractiveness*, of *negative evaluation about the self* (Gilbert, 1998; Dickerson & Kemeny, 2004). Although most shame theorists would agree on this, there are still divergences of view regarding the specificities and sources of these negative evaluations.

1.2.2.1. Self-blame, global and specific self-condemnation

A widely held assumption about shame is that it has the defining feature of emerging from self-blame and global negative self-evaluation. In other words, shame is regarded by many as, essentially, a self-conscious affect that emerges when a person perceives the untoward outcome of a situation as being caused by his stable, global and unchangeable

negative self-characteristics (Lewis, 1971,1986; Niedenthal, Tangney, & Gavanski, 1994; Tangney & Tracy, 2011; Tracy & Robbins, 2004; Wicker et al., 1983). Theorists who endorse this view argue that self-blame and global self condemnation are in fact what distinguishes shame from other negative self-conscious emotions such as guilt — which is postulated to emerge when the person blames a particular action, and not the whole self (self-blame but no global self-condemnation) — and from other, more "basic" emotions — in which there is no perception of blame for an untoward outcome (no self-blame and no global self-condemnation) (Lewis, 1971; Tangney & Dearing, 2002; Tracy & Robins, 2004). However, a careful look at the shame literature suggests that relying solely on self-blame and global self-condemnation as the defining features of shame provides a rather incomplete picture of the various forms shame experiences may undertake (Gilbert, 1998; Dickerson & Kemeny, 2004). This is illustrated by two sets of findings. The first, is comprised of a set of studies showing that the negative self-evaluations that give rise to shame need not always involve global self-condemnation; shame may also emerge from blaming solely one's actions or circumvented and changeable rather than global and unchangeable aspects of the self. The second set of findings consists of a number of studies that demonstrate how shame may also arise solely from perceptions of devaluation of the self by others and thus need not rely on self-blame and self-evaluation in all instances.

Shame does not always relate to global self-condemnation. Studies of recalled experiences of shame show that there are, in fact, many instances, especially those of extreme, intense shame, where global self-condemnation and self-blame go hand in hand with this emotion (Van Vliet, 2008; Tangney & Dearing, 2002). Research also shows that statements of wishing to "*undo*" or change aspects of the self more often follow people's descriptions of shameful situations than of guilt situations (Niedenthal et al., 1994). However, this does not hold true for *all* shame experiences. For example in a study by Tangney et al. (1996), recalled shame and guilt experiences did not differ in the degree to which participants blamed their actions and behaviors or their personality and self, suggesting that shame may also emerge from blaming solely one's untoward actions (Andrews, 1998). This idea was in fact advocated by Kaufman (1996, pp.6), who stated that "*the target of shame can be either the self or the self's actions, just as one can feel guilty about deeds or else feel essentially guilt-ridden as a person"*. Additionally, shame can also be role-focused: for example, a person might feel intense shame when in the role of sexual engagement but not in the role of a public speaker (Gilbert, 2007). It can also be circumscribed to specific, rather than global, attributes of the self, such as appearance or perceived lack of intellectual ability (Andrews, 1998). In fact,

research on self-esteem contingencies, shows that the degree to which failure in a given domain grants a spread to a global sense of self as inadequate and unworthy largely depends on the meaning and importance people attach to that domain as being central for their self-definitions and sense of self-esteem (e.g. Andrews, 1998; Park & Crocker, 2008; Park, Crocker & Vohs, 2006).

Shame may emerge solely from perceived or potential negative evaluation by others. There are also instances where people feel shame in the absence of both self-blame and negative self-evaluation, whether global, domain-specific or action-specific (Gilbert, 1998). As emphasized by theorists such as Gilbert (1998), and Fessler (2007), shame often arises solely from perceived or potential negative evaluation by others, from believing that others see oneself as flawed and unattractive and thus will actively ignore or reject oneself. As an example, consider a situation in which a man is falsely accused of a crime (Gilbert, 1998). He may feel shame because he sees condemnation in the eyes of others, who believe he is guilty, yet he does not blame himself nor makes any negative-self-evaluations whatsoever because he has done nothing wrong (Gilbert, 1998). In order words, the shame this man experiences is in no way related to self-blame or self-condemnation, but instead emerges because he feels others see him as bad or flawed. Since people generally try to present themselves in a positive light (Leary, 1995) because it grants them the acceptance of others and inclusion in social groups (Gilbert, 2007), situations where there is a perceived loss of such acceptance and potential for inclusion because others judge the self as unworthy, flawed or otherwise wanting in some respect may by themselves constitute important elicitors of shame, social anxiety and depression (I will return to these issues on later sections when I discuss the evolutionary perspective on shame) (Gilbert, 1998; Dickerson & Gruenewald, 2004; Dickerson et al., 2004; Panksepp, 1998). The fact that shame can also be elicited solely by concerns about one's social image also provides support for the view of embarrassment as a mild form of shame, which has been advocated by some theorists (Gilbert, 1998; Izard, 1971, Tomkins, 1963). Those who have challenged this view have argued that embarrassment is distinct from shame mainly because it reflects concerns for social image whereby one does not claim the evaluations of others as one's own, while shame requires that there is an actual negative self-judgment (Tracy & Robins, 2004; Stets, 2006; Robbins & Parlavecchio, 2006). However, as we have seen above, shame, like embarrassment, can also emerge solely from perceptions that one has created a negative image of oneself in the eyes of others, regardless of whether one believes that that image is an accurate reflection of who one is. Additionally, shame and embarrassment exhibit considerable overlap both in terms of non-verbal signals (e.g. blushing,

gaze aversion) (Keltner & Harker, 1998; Izard, 1971) and types of eliciting situations (e.g. failure to adhere to norms of appropriate behavior, being seen as inept) (Keltner & Harker, 1998), with embarrassment being both milder and elicited by less serious untoward consequences than shame — i.e. embarrassing situations usually signify more "temporary errors" (Stets, 2006).

Internal and External Shame: a comprehensive understanding of shame-eliciting appraisals. Taken together, these findings support Gilbert's (1998, 2004, 2007) assertion that there appear to be two different kinds of shame experiences, relying on different attention, monitoring and processing systems. The first, which he called *internal shame*, is the kind of shame experience that emerges from reflexive negative self-evaluation of one's self or one's actions. Internal shame appears to rely on processing systems that evolved to track what is in one's own mind about one's self, including inwardly focused attention and an interplay of a variety of self-processes and memory systems, such as early experiences of being shamed (Gilbert, 1998, 2004, 2007). The second domain of shame experience, what Gilbert (1998, 2004, 2007) coined *external shame*, denotes shame experiences that emerge from an outward focus on the social world, from what is on other people's minds about the self. Thus, external shame, like other basic threat defenses such as fear, appears to be based on processing systems that evolved to track threats on the environment, which, in the case of shame, consist of threats to social acceptance and inclusion (Gilbert, 1998, 2004). These are systems that are highly attuned to signs of rejection by others and thus might include complex cognitive competencies such as empathy, theory of mind and emotion-perception (Gilbert, 1998).

The main controversy remains on whether shame can occur solely from negative other-evaluation, without corresponding negative self-evaluations — or, in other words, whether self-evaluation (or internal shame) is a *sine qua non* condition for shame to occur (Andrews, 1998; Gilbert, 1998; 2007). Research measuring internal and external shame as separate constructs, shows that, although both forms of shame often co-occur (as shown by the fact that they tend to correlate highly), internal and external shame emerge, nonetheless, as different and independent constructs (Allan, Gilbert, & Goss, 1994; Galhardo, Pinto-Gouveia, Cunha, & Matos, 2011; Gilbert, 1998, 2000; Goss, Gilbert, & Allan, 1994; Pinto-Gouveia & Matos, 2011). Furthermore, studies have shown that people who possess socially undesirable traits or who engage in socially approbated behaviors (e.g. being obese, visiting prostitutes) know that their traits or behaviors are stigmatized (externally shamed) but it does not follow that they feel internal shame about them (Crocker & Major, 1989). In fact, even in studies measuring shame as a unitary construct, there also appears to be evidence that internal

and external shame can occur separately from one another. This is because on the one hand, shame appears to correlate significantly with marked concerns about others' opinions about the self (e.g. Tangney et al., 1996; Van Vliet, 2008; Wicker et al., 1983) but, on the other, many shame experiences have been found to occur privately and in the absence of observing others (Tangney et al., 1996; Tangney & Tracy, 2011). Although in these private shame experiences there is often imagery about how one's self and actions would be judged by others — (Tangney & Tracy, 2011) — what Lewis (1971) coined "*imaginary audiences*" — in these instances shame appears to emerge essentially from people's own negative self-evaluations.

Thus, because people can be ashamed because of what they are, what they do (Andrews, 1998) and the images others have of them — regardless of their role in creating such images — it follows that a comprehensive understanding of shame needs to take into consideration the fact that it can emerge from a focus the social world and perceptions about how others judge the self, from a focus on the internal world and one's own negative self-evaluations, or even from both at the same time (how one sees oneself as a consequence of how one thinks others see the self) (Gilbert, 1998; Fessler, 2007). Or, as Kaufman (1996, pp.6) put it, it appears that "*the source of shame can be either in the self or in another […]. [Its feeling of] exposure can be of the self to the self alone or it can be of the self to others*".

1.2.2.2. Failure to reach standards

Shame has also been frequently linked to a failure to meet personal or other people's standards of worth (e.g. Lewis, 1971). This idea stems from psychodynamic theories which postulate that shame stems from a failure to reach the ego-ideal (Lewis, 1971; Piers & Singer, 1971). However unpleasant failing to reach a standard may be, it appears that not all such failures are more likely to lead to feelings of shame than to, say, feelings of mere disappointment (Gilbert, 1998; 2007). In fact, research suggests that it is not so much a perceived distance from an ideal self but rather a perceived closeness to an "undesirable" self that is crucial to shame. For example, in a study conducted by Lindsay-Hartz, de Rivera and Mascolo (1995), participants describing shame experiences talked about who they did not want to be rather than about failures to be who they wanted to be. They said things like "*I am fat and ugly*" not "*I failed to be pretty*"; or "*I am bad and evil*", not "*I am not as good as I want to be*" (Lindsay-Hartz, de Rivera, & Mascolo, 1995). The authors also report that when they questioned participants about this issue, they insisted the distinction was important, and not a mere semantic difference. Sheik & Janoff-Bulman (2010) also report a series of studies

in which shame is distinctively associated with proscriptive violations in the moral domain. Namely, that shame is experienced when people interpret their transgressions or behaviors as reflecting negative end-states and moral "*should nots*", the becoming of the immoral person one should not be, rather than failures to be the moral person one "*should*" (Sheik & Janoff-Bulman, 2010).

Thus, shame requires not just a failure to reach a standard, but an appraisal that there is actually something "*unattractive*" and undesirable about the person, whether in the person's own eyes or in the eyes of those around him or her (Gilbert, 1998).

1.2.2.3. Inferiority and social comparison

Shame is sometimes referred to as "*the affect of inferiority*" (Kaufman, 1996). In fact, and as mentioned above, when people describe their shame experiences they often report that it entails a feeling of being small and inferior to others (Smith et al., 2002). Because standards and ideals about desirable and undesirable traits and behaviors are taken from other people — e.g. from one's social interactions and cultural values and norms (Park, Crocker, & Vohs, 2006) — social comparison may be a salient cognition in many shame experiences (Gilbert, 1998). In fact, research show that measures of inferiority and unfavorable social comparison tend to correlate highly with shame (Gilbert, 1998; Smith et al., 2002). However, not all feelings of inferiority are likely to result in shame. In some instances, people may gladly accept their positions of inferiority because it warrants them lessened effort or the protection and care of "superior others" (Gilbert, 2000). Thus, it is likely that only perceptions of *unwanted, involuntary* inferiority, whereby one is deemed inferior because one possesses negative aversive attributes that one does not wish to possess (or be seen by others as possessing), are likely to result in a feeling of shame (Gilbert, 1998).

1.2.2.4. The cognitions of shame – concluding remarks

From the findings reviewed above, it becomes clear that shame is a multidimensional emotion that can be colored by a multitude of perceptions. As noted by Nathanson (as cited in Andrews, 1998, pp. 44):

"*Try as I might, I was unable to understand shame from the excellent writings already available. So many authors described shame from such highly individual points of view that sometimes it seems as if they were describing different emotions*"

Thus, and as has been argued Gilbert (1998), perhaps self-blame, self-consciousness, other-condemnation, failing to meet standards and negative social comparison, although

common correlates of shame, are not what is central to it. Rather, what seems to capture shame's essence more closely is an inner experience of the self as *unnatractive* (Gilbert, 1998). It does not matter if one is rendered unattractive by one's own negative self-judgements, by one's own actions or by other people's judgements. What is common to all the appraisals that may lead to shame is that they all are different cognitive routes of arriving at a sense of being in the social world as an undesirable social agent, one that possesses aversive attributes, and a sense that such undesirability may lead to rejection and isolation (Gilbert, 1998).

1.3. An evolutionary perspective on shame

Because shame has been observed in most social species and across time and cultures, it is appropriate to consider an evolutionary perspective on its existence and functions (Fessler, 2007; Williams, 2007). According to evolutionary theories, emotions evolved through natural selection to serve the attainment of important survival and reproduction goals (Frijda, 1986; Gilbert, 2007; Gilbert & McGuire, 1998; Izard, 2009; Niedenthal, Krauth-Gruber, & Ric, 2006). Shame and other social self-conscious emotions appear to serve these survival goals in a more indirect, but nonetheless important way — namely, by promoting the attainment of the important socials goals of attaining social acceptance and inclusion in social groups (Tracy & Robins, 2004). Because being a part of social groups results in increased chances for cooperation, protection from threats and reproduction, the accomplishment of these social goals is ultimately fundamental in increasing individual chances of survival and reproduction (Fessler, 2007; Gilbert, 2007; Gilbert & McGuire, 1998; Tracy & Robins, 2004; Williams, 2007). Social self-conscious emotions appear to serve these functions as part of an evolved set of mechanisms that together function as a guide to "*how we exist in the minds of others*" (Gilbert, 2007), a system whose purpose is to help people constantly monitor, and increase or maintain their attractiveness and acceptance in the eyes of others and thus their chances of being a part of social groups (Fessler, 2007; Gilbert, 1998, 2004, 2007; Tracy & Robbins, 2007). Different theorists have referred to this system in different ways — *social attention holding potential* (SAHP; Gilbert, 1998), *social self-preservation system* (Dickerson & Kenemy, 2004), *sociometer* (Leary & Baumeister, 2000) — but, whether named one way or another, the central idea is that it is a system that relies on a multitude of cognitive and attentional competencies that constantly evaluate our relative social position, detect potential and/or actual threats to such position and motivate behaviors to protect or restore these positions in case of threat (Gilbert, 1998; Dickerson & Kemeny, 2004; Leary & Baumeister,

2000). Put more simply, self-conscious emotions help us "*stimulate liking in our friends, desire in our sexual partners, and admiration of our talents or skills in our bosses*" (Gilbert, 2007, pp. 293).

As a part of this evolved system, shame and its inherent unpleasantness appears to function as a warning that one is failing to create a positive image of oneself in the eyes of others, that one is not being adequately valued as a relationship partner, and is thus in danger of being rejected and left in social isolation (Gilbert, 2007; Leary, 2003; Panksepp, 1998). When such signs of waning of the affection of others are detected, shame enters the picture by increasing the desire to be liked and mobilizing changes that will bring it about (Toby & Cosmides, 1996 cit. in Leary, 2003). It is thought to do so by coordinating a set of psychological, physiological and behavioral responses, that lead people to act in socially desirable ways that will help them restore their positive social images and prevent the loss of group membership (Leary & Downs, 1995; De Hooge, Zeelenberg, & Breugelmans, 2010; Gausel & Leach, 2011; Williams, 2007). As we have seen above, these rejection cues can be detected both externally and internally, as evinced by the differences between internal and external shame. In fact, internal shame emerges largely from an internalization of norms of socially valued behavior and characteristics and from a perception that our behaviors or personal characteristics violate those standards and render us vulnerable to rejection (Leary, 2003; Gilbert, 1998). Thus, the feelings of internal shame that arise from one's own self-evaluations and other self-processes such as self-esteem, ultimately relate to the evolutionary need of being accepted by others, by serving as a gauge of relational evaluation that alerts individuals that their relational value may be at stake without the need to constantly receive explicit social feedback (Leary, 2003). In fact, as symbolic interactionists noted, one function of the self is to allow people to think about themselves from the perspectives of other people (Leary, 2003; Baumeister, 2010).

1.4. Shame-induced behavior

Despite emotion theories ascribing shame with positive functions, the dominant view in the literature has been, for decades, one of shame as an "ugly", villainous emotion that motivates people towards withdrawal, self-centeredness and defense, ultimately hindering their interpersonal adjustment and psychological health (De Hooge et al., 2008; Tangney, 1991). Undeniably, a large body of empirical research consistently shows that shame prompts withdrawal, defensive and maladaptive behaviors. Namely, it has been found that the experience of shame leads people to escape and hide when committing transgressions rather

than make amends (e.g. Tangney et al., 1996; Scherer & Wallbot, 1994), exhibit diminished empathy for others and perspective taking (e.g. Joireman, 2004; Leith & Baumeister, 1998; Tangney, 1991; Yang, Yang, & Chiou, 2010), externalize blame for wrongdoing and become more aggressive and hostile towards others (e.g. Bear, Uribe-Zarain, Manning & Shiomi, 2009; Hejdenberg & Andrews, 2011; Stuewig, Tangney, Heigel et al., 2010; Tangney, Wagner, Fletcher & Gramzow, 1992; Wicker et al., 1983). Also, shame has been consistently related to a host of psychopathological symptoms such as generalized anxiety, depression and low self-esteem (e.g. Matos & Pinto-Gouveia, 2010; Pinto-Gouveia & Matos, 2011; Tantam, 1998; Thompson & Berenbaum, 2006).

Although recognizing that shame may produce maladaptive and withthdrawal behavior is unavoidable, a careful look at the empirical research on shame also reveals strong evidence that it may actually be not as ugly as most believe it to be (e.g. De Hooge et al., 2008; Ferguson, Brugman, White, & Eyre, 2007). In fact, several studies have shown that, in addition to withdrawal and defense, shame also has the potential to elicit approach motivations and behaviors that can promote positive interpersonal adjustment. For example, when it comes to the motivations elicited by shame, in the Tangney and colleagues' (1996) study, in which the researchers asked 182 undergraduate students to describe personal embarrassment, shame and guilt experiences, they found that in their descriptions of shame, participants reported a greater willingness to make amends relative to their willingness to hide. Also from recalled experiences of shame, Frijda et al. (1989) found that shame activated both a stronger desire to disappear and a stronger desire to undo the situation, when compared to guilt and regret. Roseman, Wiest and Swartz (1994) also report that recalled shame experiences tend to be characterized by moderate degrees of wanting to correct one's mistake, improve performance and try harder. Similar conclusions were reached in a series of 5 studies, undertaken by De Hooge and colleagues (2010), in which inducing shame through imagined or recalled failure in achievement domains led participants to report more willingness to perform and re-enter performance situations in order to succeed, when compared to neutral conditions. These results were again reproduced in a later study by the same authors (De Hooge, Zeelenberg, & Breugelmans, 2011).

Research examining actual shame-induced behaviors, both in real life and in laboratory settings, also provides strong support to the assumption that shame can promote approach, adaptive, and even prosocial behaviors that foster social acceptance and inclusion. For example, Turner & Schallert (2001) found that shame elicited by failure in a real-life academic test caused some students (those who were extrinsically motivated, self-assured,

and that saw academic achievement as instrumental for future goals) to increase motivated behavior, which ultimately resulted in higher levels of academic achievement. De Hooge et al. (2008) report similar results regarding prosocial behavior in the form of money donation. In a series of four experiments, these researchers show that endogenous shame (either induced via a scenario measure, recall of past shame experiences or induced in the laboratory via negative performance feedback) led participants who were more self-oriented — i.e. proselves— to behave more prosocially in the 10 coin give some dillema (De Hooge et al., 2008). Also, research on social rejection, exclusion and ostracism — which has surprisingly received limited or no attention from many shame theorists — provides compelling evidence that behaving in ways that improve the inclusionary status of individuals (called *tend-and-befriend responses*) is also a common corollary of experiencing shame (Williams, 2007). For example, in an early study by Steele (1975) it was found that being criticized led to an increased willingness to help a good cause. Also, Williams & Sommers (1997), in a laboratory induction of ostracism, found that female participants were more likely to work hard on a collective task after being ostracized by other group members. Similarly, Erez, Sleebos, Mikulincer, et al. (2009) found that receiving feedback of low respect from group members (rejection condition) lead people high in anxious attachment to increase pro-group responses when compared to those who received average respect ratings (i.e. more effort expenditure on a subsequent group task and to more money donations towards the group). In fact, even the nonverbal expression of shame appears to draw forgiveness and increase sympathy and liking from onlookers after a social transgression, thus serving an important appeasement function (for a more detailed discussion on this topic see Fessler, 2007; Keltner & Harker, 1998).

1.5. A functionalist account of shame-induced behavior

The findings reviewed above then reveal that from a more careful look at the shame literature emerges a picture of shame as an emotion that can activate both avoidance and approach tendencies and behaviors, that can be both adaptive and maladaptive, which appears as a rather counterintuitive and even contradicting finding (De Hooge et al., 2010). How can an emotion promote both withdrawal and approach at the same time? It is precisely the difficulty in accommodating such disparate and apparently contradicting results that may have led many shame theorists to dismiss these studies, and continue to deem shame an "ugly" emotion (De Hooge et al., 2010). Also, because many theorists see shame as linked to global, unchangeable self-condemnation, the repair of shame thorough approach, socially desirable behavior may make little sense (Gilbert, 1998). In fact, a perception of an irreversibly

damaged self leaves no room for reparation (De Hooge et al., 2010). However, as mentioned before, shame need not always warrant this belief in the globality and unchangeability of self-characteristics. Because shame may also emerge only from blaming one's untoward actions or specific and changeable aspects of the self, there are situations in which people will choose to engage in approach, motivated behavior designed to repair the negative self-characteristics or actions that have led to the feeling of shame.

In order to make sense of these seemingly contradicting results, De Hooge, et al. (2010) have recently proposed the adoption of a pragmatic stance towards the behaviors following shame. These authors suggest that, because shame reflects a concern with a threatened self, it can motivate both approach and avoidance motivations, depending on whether the ashamed person appraises the situation as allowing for the restoration of a positive self-view (De Hooge et al., 2010). According to this framework, withdrawal behaviors aimed at protecting the self from further damage will only be activated when restoration of the threatened self is *perceived* to be impossible or too risky (De Hooge et al., 2010). In fact, in instances where restoration is not possible, the most adaptive tendency is probably to escape the situation so that one's self-image suffers no further damage (Gilbert, 1998).

This view of shame-induced behavior is consistent with the evolutionary theories of shame reviewed above, which view shame as eliciting a set of motivational and behavioral responses to deal with threats to social acceptance and inclusion. Although De Hooge and colleagues (2010) mostly emphasize concerns for self-view in the experience of shame, both their studies and the evidence reviewed above show that shame also elicits concerns about others' views of the self and wishes to regain acceptance by others. Also, as I mentioned above, people's self-views are intimately linked to others' views of them, which suggests that the motivation to restore a damaged self elicited by shame can represent either a wish to recover a positive self-view in one's own eyes, or a wish to recover a positive image of the self in the eyes of others — or even both at the same time (Gausel & Leach, 2011; Leary 2003).

1.6. Individual differences and shame-induced behavior

From the findings reviewed above it becomes clear that shame can promote a host of behavioral outcomes ranging from withdrawal, appeasement, approach and even prosocial, helping behavior. The extent to which shame will likely promote one type of behavior or another, however, appears to depend crucially, not only on situational variables, but also on

several individual traits, such as gender (Williams & Sommers, 1997), general proneness to experiencing shame across situations (i.e. shame-proneness) (Tangney & Dearing, 2002), prosocial orientations (De Hooger et al., 2010), self-esteem (Park & Crocker, 2008) and attachment (Erez et al., 2009). Because space does not allow for a consideration of all such factors, herein I will review empirical evidence on two individual difference variables that research shows may predict shame-induced behavior in important ways: self-esteem and attachment styles.

1.6.1. Self-esteem

Research suggests that individual differences in self-esteem play an important role in people' experience of shame and the behaviors they engage in when experiencing this emotion. In fact, shame and self-esteem are closely linked to one another (Brown & Marshal, 2001). Both are related to people's affectively laden appraisals of their own value both as a person and in particular domains (Leary and Baumeister, 2000). In fact, one definition of trait global self-esteem is "*the balance between pride and shame states in a person's life, taking into account both duration and intensity*" (Scheff, 1988, p.399). Furthermore, shame appears to exert its motivational influence in part through temporary decreases in state self-esteem, which help motivate people to deal with their threatened self-views (Brown & Marshall, 2001; Park & Crocker, 2008).

In general, research shows that people high and low in trait self-esteem tend to differ in the self-presentational strategies they adopt, namely, in the extent to which they especially favor strategies designed to make favorable impressions of themselves on others or strategies aimed at avoiding unfavorable impressions (Leary, 2003).

From a comprehensive review of empirical evidence, Baumeister, Tice and Hutton (1989) show that people with high self-esteem tend to engage in strategies aimed at making a positive impression of themselves on others — acquisitive self-presentation (Arkin, 1981) — whereas those with low self-esteem mainly make use of strategies aimed at preventing others from developing negative impressions of them — protective self-presentation (Leary, 2003). Also, high self-esteem people tend to engage in self-enhancement more than low self-esteem people (Wolfe, Lennox & Cutler, 1986), who are usually more cautious, prudent or evasive in their self-presentational efforts, particularly when self-presentational failure may have negative repercussions (Baumeister et al., 1989).

Trait self-esteem also negatively correlates with self-protection (Wolfe, Lennox & Cutler, 1986), suggesting that low self-esteem people are more prone to engaging in self-

protective strategies following failure, such as escaping situations and coping with self-threats in less interpersonally risky ways (i.e. more socially isolated ways). These findings can be made sense of by considering that if people perceive that they are generally capable of presenting themselves in a positive light and be accepted by others, as is conveyed by having high self-esteem, they are more likely to engage in motivated, approach behaviors to restore their self-image following shame (Gilbert, 1998; De Hooge, Zeelenberg, & Breugelmans, 2011; Park & Maner, 2009). Because people who possess low self-esteem usually have a feeling that they do not possess the qualities that allow them to be accepted by others, they are less likely to engage in self-presentational strategies and become more protective of their self-images (Leary, 2003; Park & Maner, 2009). Also, since a sense of low self-esteem conveys the idea that others do not generally value oneself, self-presentational efforts can present an unwanted risk because if they fail, one is left with an even lower relational value than before (Baumeister, 1982; Leary, 2003).

Studies of self-esteem and shame-inducing events, also show that high self-esteem people tend to cope with threats to their self-worth by enhancing their self-views directly, focusing on their own personal strengths, qualities and abilities (Vohs & Heatherton, 2001). Low self-esteem people, on the other hand, tend to become more interpersonally focused after such events and engage in strategies to gain others' approval and avoid disapproval (Leary & Baumeister, 2000; Vohs & Heatherton, 2001).

Self-esteem contingencies — i.e. the domains upon which people base their self-esteem — also play an important role in the behaviors people engage in following shame-inducing situations (e.g. Park, Crocker & Vohs, 2006). Several studies suggest that the more important to one's self-worth a given domain is, the more shame and decreased state self-esteem one experiences, and thus the more motivated one becomes to engage in approach, motivated behavior designed to regain a positive self-view (e.g. Crocker & Wolfe, 2001; Park & Crocker, 2008; Zeigler-Hill, Besser & King, 2011) — what Park, Crocker & Vohs (2006) call *self-validation goals*. In other words, because people differ in the domains upon which their self-esteem is contingent — e.g. being morally virtuous, having one's family support, being academically competent or gaining other's approval — failure in domains where people's self-esteem is highly contingent are more likely to lead them to pursue these self-validation goals than failures in domains where their self-esteem is not contingent (Park & Crocker, 2008). It follows that, although situations where there is perceived rejection or social disapproval can be shaming for everyone, they will be more so for people whose self-esteem is highly contingent on gaining other people's approval, thus making these people more

motivated to engage in self-validation, approach efforts in such instances (Park & Crocker, 2008).

Additionally, high and low self-esteem people also appear to differ in the self-presentation goals they pursue after experiencing failures on domains of contingency. For example, in a study by Park & Crocker (2008), participants possessing high self-esteem reported greater desires be seen by others as warm/caring/kind, the more they based their self-esteem on others' approval and received negative feedback from an interaction partner about their likability. In contrast, low self-esteem people whose self-esteem was highly contingent on other's approval tended to reported stronger wishes to be perceived as physically attractive by others after receiving negative interpersonal feedback (Park & Crocker, 2008), which is a "safer", less interpersonal way of increasing one's inclusionary status.

In addition to predicting whether people will engage in approach or withdrawal behaviors after experiencing shame-inducing events, these self-esteem variables also appear to predict whether these behaviors will likely be adaptive or, in other words, whether they will in fact lead to increased acceptance and positive evaluation by others. As shown by the impression management literature, people's attempts to shape others' views of themselves will sometimes be successful but other times may backfire (Leary, 2003). Generally, while in neutral conditions high and low self-esteem people tend to be equally liked by interaction partners, a person's level of self-esteem crucially predicts how the experience of ego-threats and their impact on behaviors will lead to increased or decreased liking by relationship partners (e.g. Vohs & Heatherton, 2001; Park & Crocker, 2005). For example, Vohs & Heatherton (2001) have shown that while in neutral conditions high-self esteem and low self-esteem people are perceived as equally likable by relationship partners, after experiencing an ego-threat, low self-esteem people tend to become more liked and high-self esteem people tend to become less liked. Also, fragilities of self-esteem (i.e. highly contingent self-esteem in the domain of threat, unstable self-esteem and/or discrepant implicit/explicit self-esteem) appear to interact with self-esteem level in predicting likability after shame-inducing events. For example, in a study conducted by Park & Crocker (2005), half of the participants were subjected to an ego-threat via failure in the academic domain (i.e. failure in a GRE test) and then interacted with another participant who expressed a personal problem. Results suggested that people who had high-self esteem and whose self-esteem was highly contingent upon academic success (i.e. fragile high self-esteem) became less liked by their interaction partners and were perceived as less supportive (Park & Crocker, 2005). This pattern of decreased likability after threat was not found for people whose self-esteem was high but non-contingent

on academics (i.e. secure self-esteem), neither for high-self-esteem people who received no failure feedback, suggesting that fragile high self-esteem people's shame-induced behaviors may hinder their interpersonal relationships and thus not be adaptive after all.

Taken together, the findings reviewed above show that individual differences in self-esteem exert an important influence in the behaviors people engage in to subsume the threats to acceptance and self-worth posed by shame. Also, and perhaps more importantly, these individual differences also appear to play a role in the extent to which such a choice of behaviors will ultimately be adaptive and indeed increase one's interpersonal adjustment.

1.6.2. Attachment

Another individual difference variable that appears to play an important role in predicting shame-induced behavior is people's attachment orientations. The attachment behavioral system is a psychobiological system that drives people, from infancy to adulthood, to seek proximity to significant others in times of distress as means to attain safety and security (Bowlby, 1982, 1988; Shaver & Mikulincer, 2012). Mikulincer & Shaver's (2003; 2007) model of attachment behavioral system functioning in adulthood suggests that attachment orientations profoundly shape how people behave and cope in stressful situations, of which shame and its threat of rejection is an example. When a child has repeated experiences with reliable, attuned parents who consistently respond to his needs for security and safety he develops into an adult with an internalized sense of attachment security (Mikulincer & Shaver, 2007). This sense of attachment security encompasses cognitive representations of oneself as a worthy, lovable and competent person and a view of others as reliable, trustworthy and available in times of need (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). Although in infancy normal attachment system functioning leads toddlers to seek proximity to significant others in times of distress — which is called the *primary attachment strategy* — , in adulthood actual proximity seeking is not always necessary to attain safety (Mikulincer & Shaver, 2007). Because of their internalized positive images of self and caring others, securely attached individuals possess a host of psychological resources that allow them to face life's vicissitudes without the need to constantly resort to actual proximity-seeking or the care of others. In fact, research suggests that in times of distress, securely attached individuals activate their positive mental representations of self and loving others, which function as psychological resources that allow them to deal with such situations without losing their sense of cohesiveness and safety (Mikulincer, 1998; Mikulincer, Gillath & Shaver, 2002).

However, when people have repeated early experiences with caregivers who were unresponsive or rejecting in the face's of their plights of distress, a sense of attachment security is never attained and worries about self-protection and lovability become salient concerns in people's lives (Mikulincer & Shaver, 2007). This sense of insecurity is what leads people to resort to what Cassidy & Kobak (1988) called *secondary attachment strategies*, rather than to the appropriate proximity-seeking *primary attachment strategy*. There are two types of such secondary attachment strategies: attachment system hyperactivation and attachment system deactivation (Mikulincer & Shaver, 2003; 2007). *Hyperactivation attachment strategies* develop when a child is faced with unreliably responsive caregivers, who sometimes provide the adequate soothing but others remain unresponsive the child's plights (Bartholomew & Horowitz, 1991; Bowlby, 1982, 1988). Because caregivers are inconsistent, the child comes to rely on hyperactivation strategies, which are an exaggeration of the primary proximity-seeking attachment strategy, as means to get the attention and proximity of significant others (Davila, 2001; Mikulincer & Shaver, 2007). *Deactivation attachment strategies*, on the other hand, come to be utilized when attachment figures are perceived as dangerous or unresponsive, leading the child to learn that he cannot count on others to relieve distress (Bowlby, 1982, 1988; Fraley & Shaver, 2000; Main & Weston, 1982). Deactivation thus denotes a strategy that consists of the inhibition of the primary proximity-seeking attachment strategy, whereby the person denies their attachment needs and comes to rely on himself/herself alone to deal with distress (Mikulincer & Shaver, 2003). In addition to an excessive self-reliance, deactivation also includes repressing threats and interpersonal needs, so that the attachment system remains deactivated (Cassidy & Kobak, 1988; Fraley & Shaver, 1997; Fraley, Davis, & Shaver, 1998).

People's attachment styles — their systematic pattern of relational expectations, emotions and behaviors, conceptualized as residues of a particular early attachment history (Fraley & Shaver, 2000) — are usually conceptualized in a two-dimensional space (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2007). The first dimension, called *attachment anxiety* (or *model of self*) reflects the degree to which a person worries that a partner will not be available in times of need and thus hyperactivates efforts in order to gain the partner's attention or support. Also, attachment anxiety reflects people's underlying models of self, with high attachment anxiety denoting a view of oneself as flawed, unworthy and less undeserving of love (*negative self-model*) and low attachment anxiety a view of self as worthy and deserving of love and affection by others (*positive self-model*) (Bartholomew & Horowitz, 1991; Byslma, Cozzarelli & Summer, 1997). The second dimension, *attachment*

avoidance (or *model of others*) reflects the extent to which a person is distrustful of relationship partners' good intentions and availability in times of need and thus resorts to deactivating attachment strategies, by attempting to become independent and distanced from partners (Bartholomew & Horowitz, 1991; Fraley & Shaver, 1997). Thus, attachment avoidance reflects people's perceptions of others, with high avoidance denoting a view of others as unavailable, rejecting and mean-intended (*negative model of others*) and low avoidance denoting a view of others as benevolent, caring and available in times of need (*positive model of others*) (Fraley, Davis & Shaver, 1998). Securely attached people are those people who score low on both attachment anxiety and avoidance (Bartholomew & Horowitz, 1991).

Attachment theory and research suggest that, although acquired during childhood, attachment styles have a powerful influence on people's emotional responses and behavior throughout their whole lives, even though attachment styles are not immune to change (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987; Mikulincer & Shaver, 2007). Particularly, because shame threatens people's self and social image, it is likely that the attachment behavioral system becomes activated during shame eliciting experiences, and thus it is conceivable that attachment-system-related behavioral strategies will predict shame's behavioral outcomes.

Indeed, several empirical studies show that attachment-related individual differences have important consequences for people's susceptibility to experiencing shame as well as their reactivity to such experiences. For example, people who score high in attachment anxiety have been found to be both more emotionally reactive and sensitive to cues of rejection and failure and more prone to feeling shame and low self-worth in response to such situations (e.g. Collins, 1996; Mikulincer & Shaver, 2005a; Mikulincer & Shaver, 2007). For example in a study by Fraley, Niedenthal, Marks, et al. (2006), in which the authors used a morph movie paradigm (faces changing gradually from neutral to emotional faces or from emotional faces to neutral faces), high attachment anxiety was related to perceiving both the onset and the offset of emotional expressions earlier than everyone else. Also, in an fMRI study of people's responses to facial expressions conveying positive and negative feedback on task performance, it was found that negative feedback conveyed by angry faces resulted in greater amygdala activation for people who scored high on attachment anxiety (Vrticka, Andersson, Grandjean, et al.,2008). This means that high attachment anxiety is associated with the enhanced activation of brain systems associated with emotional arousal and fear,

suggesting that attachment anxiety involves increased vigilance towards significant emotional and social cues (Vrticka et al., 2008).

Conversely, attachment avoidance appears to make people prone to dismissing socially relevant feedback (Fraley & Shaver, 1997). In the above mentioned fMRI study by Vrticka et al. (2008), it was found that attachment avoidance was related to decreased activity in brain areas related to social reward following positive task performance feedback, suggesting that attachment avoidant individuals are relatively more impervious to feedback about themselves. In fact, avoidant people are known to cope with negative events by engaging in the deactivating strategies mentioned above, which involve suppressing and denying their anxiety and negative emotions (Hazan & Shaver, 1987; Magai, Hunzinger, Mesias, et al., 2000). The denying of these negative emotions and thoughts, however, does not denote a mere concealment of avoidant people's latent distress. Rather, avoidant individuals are effectively able to divert their attention away from emotionally arousing events, which is shown by the physiological arousal decreases they tend to experience when instructed explicitly suppress negative thoughts (Dozier & Kobak, 1992; Fraley, Davis & Shaver, 1998; Fraley & Shaver, 1997).

Secure people, on the other hand, although reactive to events of negative feedback and social rejection, tend to construe these events in more positive ways, which helps them downplay the negativity of such experiences and keep them from becoming emotionally overwhelmed by them (Collins, 1996; Mikulincer & Shaver, 2007). Also, because secure individuals possess realistic and well-anchored feelings of self-worth, which they activate in times of distress (Foster, Kernis & Goldman, 2007; Mikulincer, 1998), they are more likely capable of confronting their own weaknesses and imperfections without being threatened or highly damaged (Zeigler-Hill, Besser, & King, 2011). This ability to accept and confront personal shortcomings without becoming deeply hurt is also made possible secure people's mental representations of others as warm and supportive. Research has shown that access to schemas of warm, supportive relationships help people cope better with failure and become less upset by it (Baldwin & Dandeneau, 2005; Mikulincer, Gillath & Shaver, 2002).

In addition to differing in the ways they experience shame-inducing situations, some studies also suggest that attachment individual differences may predict how people behave when experiencing threats to their self-worth such as rejection and performance failure. For example, Erez, Sleebos, Mikulincer, et al. (2009), investigated how an ego-threat induced via group rejection affected subsequent pro-group behavior, depending on attachment individual differences. They found that the induction of group disrespect led to more pro-group

responses (more money donation to the group and higher actual effort expenditure on behalf of the group) only among those scoring high on attachment anxiety but not when attachment anxiety was relatively low. Increased pro-group responses occurred even though high anxiety participants reported lower group commitment, suggesting that although their commitment to the group was low, high attachment anxiety people's strong needs for acceptance and approval from others may have led them to increase their contribution and effort expenditure on behalf of the group (Erez et al., 2009). In a recently published book chapter, Shaver & Mikulincer (2012) report similar findings but this time with regard to moral behavior. These authors report two as of yet unpublished studies in which they induced ego-threat via failure feedback on a performance task to half of the participant sample and then assessed participant's moral choices either via a scenario measure (Study 1) or via an actual behavioral measure (whether participants would return an extra lottery ticket mistakenly given to them by the experimenter; Study 2). Like Erez et al. (2009), they found that *only* those who scored relatively high on attachment anxiety were more likely to make moral choices in the threat condition than in the no threat condition. Again, the authors view attachment anxious people's increased morality as being, not due to an intrinsic concern for other's welfare, but rather as a defensive strategy designed to regain a positive self-view after their self-esteem has been threatened (Shaver & Mikulincer, 2012).

Taken together, these findings thus suggest that, when faced with shame, those who score high on attachment anxiety may become especially motivated to engage in approach, socially desirable behaviors designed to regain a positive self-view. Because shame crucially enhances their already prominent concerns about their own lovability, it is likely that attachment anxious people will become especially motivated to deal with its distress by behaving in ways that will grant them the approval of others. In fact, research shows that because anxious people posses a decreased capacity for self-reinforcement (Wei, Mallinckrodt, Larson, & Zakalik, 2005), they tend to deal with distress by resorting to hyperactivating strategies that include excessive reassurance seeking and frantic efforts to gain the approval of others (Davila, 2001). Thus, they may even engage in apparently altruistic and prosocial behaviors, not because of a genuine concern for the welfare of others, but rather because these socially valued behaviors grant them the approval they need to repair their wounded self-esteem (Erez et al., 2009; Shaver & Mikulincer, 2012). At this point, it is important to note that this is not to say that securely attached people will not behave in adaptive ways following shame (Shaver & Mikulincer, 2012). Rather, it means that for secure people, behaving in socially appropriate and adaptive ways is more of a dispositional

tendency that manifests itself consistently across situations, and not one especially motivated by the self-related concerns of shame (Shaver & Mikulincer, 2012; Mikulincer & Shaver, 2005b). As I have mentioned above, secure individuals are normally able to maintain their sense of cohesiveness and agency even in distressing situations. Because they can confront their own weaknesses without becoming overwhelmed with distress, secure people are generally able to deal with stressful situations in constructive ways that promote their positive interpersonal functioning (Mikulincer & Shaver, 2005b). These tendencies towards adaptive functioning are in fact corroborated by numerous studies showing that secure attachments usually result in high levels of subjective well-being, positive and rewarding interpersonal relationships and good psychological health (for a complete review on the benefits of attachment security see Mikulincer & Shaver, 2007).

1.7. Conclusion

As we have seen throughout this article, shame is a complex emotion that can lead people to behave in many different ways. Contrarily to what has been the dominant view in the literature, there is now compelling evidence that shame may serve important adaptive functions, by leading people to behave in socially desirable ways that improve their potential for acceptance and inclusion, such as striving in performance domains, behaving prosocially and making reparations for wrongdoing. However, the extent to which shame will elicit adaptive or maladaptive behavioral outcomes and promote interpersonal adjustment appears to depend crucially on individual difference variables, such as sex, shame-proneness, attachment or self-esteem. Nevertheless, research on when, for whom and why shame promotes adaptive tendencies still has much room to grow. Although promising, the existing results regarding certain traits and their effects on shame-induced behavior still need to be further replicated so that firmer conclusions can be drawn. Also, the inclusion of physiological measures of shame along with self-reports in future studies of shame-induced behavior should prove useful in advancing our knowledge on this issue. As mentioned above, shame appears to be associated with specific psychobiological markers, such as elevated cortisol and increased pro-inflammatory cytokine activity (Dickerson & Kemeny, 2004). Because there are still many definitional issues regarding the differences between shame and other self-conscious emotions such as guilt, the use of psychophysiological markers along with self-reports in future studies should help researchers in distinguishing more clearly the behavioral outcomes of shame from those of other similar emotions. Furthermore, we still need to gain a better understanding of the mechanisms through which individual differences exert their effects on behavior in shame situations. Personal characteristics are known to influence, not only behavior, but also the ways in which individuals appraise and encode emotion-eliciting events as well as the extent to which they are more or less reactive to such events (Dickerson & Gable, 2004; Fraley et al., 2006). Perhaps it is in part through entailing predispositions for encoding shame-eliciting events in certain ways that individuals with specific traits are more likely to behave adaptively in the face of this emotion. For example, it is likely that people possessing traits that predispose them to appraise all shame situations as revealing a wholly and irreversibly flawed self will more likely become overwhelmed and paralyzed by the distress of shame, rather than find constructive ways to deal with this emotion. Also, it has been suggested that the ability to forgive oneself for wrongdoing and a belief in the forgiveness of others are likely important in predicting whether people will choose to repair their shame constructively (Gilbert, 1998). Thus, perhaps examining behavior

in consort with the cognitive encoding of shame experiences will provide a deeper understanding on why some people behave adaptively in the face of shame. Such an understanding should prove useful in helping people will shame-related issues construe their shame experiences in a more adaptive way that will allow them to behaviorally cope with this emotion in more functional and healthy ways.

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2. THE RELATIONSHIP BETWEEN SHAME AND PROSOCIAL BEHAVIOR: TESTING THE ROLE OF ATTACHMENT INDIVIDUAL DIFFERENCES

ABSTRACT

Although shame has for decades been viewed as an "ugly" and maladaptive emotion, recent studies show that it may have a role in promoting prosocial behavior. However, the extent to which it does so appears to depend crucially on individual differences, such as people's dispositional prosocial orientations. We sought to extent knowledge on the traits that make people behave prosocially following shame, by investigating the possible role of attachment styles. Because attachment theory and research shows that people's attachment orientations entail particular ways of behaving in distressing situations as well as different inclinations towards prosociality, it is conceivable that they may have a role in predicting choices to help another following shame. In line with previous findings we hypothesized that higher attachment anxiety scores would predict increased prosocial behavior following shame, but not when under neutral conditions. We also expected that avoidance would be negatively related to prosocial behavior overall and that shame would exert no effects on secure people's choices to be prosocial. To test these hypotheses we induced shame via failure on a performance situation to subjects possessing different attachment scores and investigated their effects on choices to help an experimenter, while controlling for the effects of trait empathy and relevant socio-demographic variables. The results revealed no effects of attachment, shame, empathy or demographics on prosocial behavior and also that a large majority of subjects chose the option to help. We propose some explanations for these findings and discuss implications for future research examining shame-induced behavior.

Keywords: Shame, Prosocial behavior, Attachment, Personality traits and processes, Group and interpersonal processes

RESUMO

Apesar de a vergonha ser vista há décadas como uma emoção "feia" e não adaptativa, estudos recentes sugerem que esta pode ter um papel importante na promoção do comportamento pro-social. No entanto, o efeito da vergonha neste tipo de comportamentos parece também depender de algumas variáveis disposicionais, como é o caso das orientações prosociais traço. Neste estudo procurámos avançar o conhecimento das variáveis disposicionais que predispõem as pessoas a comportar-se de forma prosocial em situações de vergonha, ao investigar o possível contributo das diferenças individuais na vinculação. Sendo que a investigação sobre vinculação demonstra que diferentes estilos de vinculação implicam diferentes formas de lidar com situações adversas, bem como diferentes inclinações para a pro-socialidade, é concebível que estas diferenças individuais tenham um papel importante nas escolhas de ajudar os outros em situações de vergonha. De acordo com a evidência existente, as hipóteses colocadas foram: scores mais elevados na dimensão de ansiedade prediriam aumentos no comportamento pro-social em condições de vergonha, mas não em condições neutras; que a vergonha não exerceria efeitos no comportamento prosocial de pessoas seguras e que o evitamento exibiria uma relação negativa com o comportamento prosocial em geral. Por forma a testar estas hipóteses, induzimos vergonha através de fracasso numa situação de performance a sujeitos com diferentes estilos de vinculação e investigámos os seus efeitos nas escolhas de ajudar um experimentador, controlando os efeitos da empatia disposicional e de variáveis sociodemográficas relevantes. Os resultados revelaram não existirem efeitos da vinculação, vergonha, empatia ou variáveis sociodemográficas no comportamento pro-social, e também que a grande maioria dos sujeitos escolheu a opção de ajudar o experimentador. São propostas algumas explicações para estes resultados e discutidas as suas implicações para investigações futuras acerca das consequências comportamentais da vergonha.

Palavras-chave: Vergonha, Comportamento pro-social, Vinculação, Traços e processos da personalidade, Processos de grupo e interpessoais

2.1. Introduction

Shame is a very distressing emotion that plays a central role in many aspects of personal and interpersonal functioning, such as development, self-regulation, self-esteem and psychopathology (Tangney & Dearing, 2002). Despite evolutionary theories ascribing shame with positive interpersonal functions, a view of shame as an "ugly" emotion has been dominant in the literature for years, fuelled by a host of studies showing how this emotion leads people to withdrawal, distance and defense, compromising their social and psychological functioning (Tangney, 1991; Tangney & Tracy, 2011). Recently, however, this view has been called into question by an increasing number of studies that consistently show that shame may also promote adaptive, approach motives and behaviors (De Hooge, Zeelenberg & Breugelmans, 2011). Of importance to the present study, there is now evidence that shame may have a role in promoting prosocial behavior towards others, but that the extent to which is does so may depend crucially on individual differences (e.g. De Hooge, Breugelmans, & Zeelenberg, 2008).

This study intends to further our understanding of how and for whom shame may promote prosocial behavior. Namely, we sought to investigate the role of individual differences in attachment style in the prediction of prosocial behavior in the form of interpersonal helping following shame. Since numerous studies show that attachment orientations entail different ways of coping and behaving in stressful situations, as well as different inclinations towards prosociality (Mikulincer & Shaver, 2007), they are likely to play an important role in the ways people cope with the distress of shame and their likelihood of choosing to be prosocial when faced with this emotion.

2.2. What is shame

Shame is a powerful negative emotion that often entails a subjective feeling of the self as undesirable and defective (Gilbert, 1998). Ashamed people tend to feel "small", inferior, weak, worthless, powerless (Tangney & Dearing, 2002; Van Vliet, 2008; Wicker et al., 1983) and involuntarily exposed — a sense of "being seen" and not wanting to be seen (Kaufman, 1996; Gilbert, 1998; Pattison, 2003; Van Vliet, 2008; Smith, Webster, Parrott, & Eyre, 2002). Perhaps this feeling of exposure is what leads ashamed people to feel strong desires to escape the shame-eliciting situation, to "sink into the floor" and disappear from view so that their flaws are no longer visible and subject to scrutiny (Gilbert, 1998; Tangney, Miller, Flicker, & Barlow, 1996; Tangney & Tracy, 2011).

2.3. Shame-eliciting cognitions

Many shame theorists have advocated that a central feature of shame is that emerges in situations where there is global negative self-evaluation, when people blame their undesirable, stable, global and unchangeable self-characteristics for an untoward outcome (e.g. Lewis, 1986; Tangney & Tracy, 2011). Furthermore, it has been argued that this is precisely what distinguishes shame from other social emotions such as guilt, which is seen as emerging when the person blames only their actions and not their whole self (Lewis, 1986, Niedenthal, Tangney, & Gavanski, 1994; Wicker et al., 1983; Tracy & Robbins, 2004). However, there is compelling evidence that, although extreme feelings of shame may grant global self-condemnation (e.g.Van Vliet, 2008; Niedenthal, Tangney & Gavanski, 1994), people can also feel ashamed only about their actions (e.g. Andrews, 1998; Tangney et al., 1996) or about specific, rather than global, aspects of their selves (Andrews, 1998; Gilbert, 2007). Additionally, shame may even occur in the absence of negative self-evaluation and self-blame, whether global or action specific (Gilbert, 1998). This is because people often feel shame only due to the fact that they believe they have created a negative image of themselves in the eyes of others, regardless of whether they believe that image is an actual portrayal of who they are (Andrews, 1998; Kauffman, 1996; Gilbert, 1998).

Hence, there appear to be two different but related kinds of shame experiences, that can be distinguished based on their specific cognitions and attention focci (Gilbert, 1998). The first, *internal shame,* is the kind of more private shame experience that emerges from an inward focus on the self and from one's own negative judgements about oneself or one's actions (Gilbert, 1998). Internal shame emerges when people reflect upon their self-characteristics or actions and, by comparing them against a set of rules or social standards,

arrive at a perception that they are "*wrong*" or "*bad*" in some way (De Hooge et al., 2011; Lindsay-Hartz, de Rivera & Mascolo, 1995; Sheik & Janoff-Bulman, 2000). *External shame*, on the other hand, emerges from a focus on the social world and from the potential or perceived negative evaluations of others (Gilbert, 1998). Research examining internal and external shame as separate constructs supports this distinction by showing that, although internal and external shame often co-occur, they may emerge independently from one another (Allan et al., 1994; Galhardo, Pinto-Gouveia, Cunha, & Matos, 2011; Gilbert, 1998, 2000; Goss et al., 1994; Matos e Pinto-Gouveia, 2009).

Whether emerging from a focus on the self, from a focus on others or even both at the same time, what is common to all shame experiences is a perception of being undesired in the social world, carrying aversive attributes, and an implicit sense that such negative attributes may lead others to reject oneself (Gilbert, 1998). In line with these findings, research shows that prototypical shame-eliciting situations are precisely those where people's negative characteristics or behaviors are made salient such as failure in performance domains, moral failure, rejection or social exclusion — i.e. commonly referred to as ego-threats, self-esteem threats or social self threats (Gilbert, 1998; Dickerson, Gruenewald, & Kemeny, 2004; Dickerson & Kemeny, 2004).

2.4. The functions of shame

According to evolutionary perspectives on emotion, shame and other social emotions evolved through natural selection as mechanisms to motivate individuals to behave in prosocial ways that promote their social acceptance and inclusion in social groups (Frijda, 1986; Gilbert, 2007; Gilbert & McGuire, 1998; Izard, 2009; Niedenthal, Krauth-Gruber, & Ric, 2006). Because being a part of a social group results in increased chances for cooperation, protection and reproduction, group acceptance is of utmost importance to increase one's fitness (Gilbert, 2007; Gilbert & McGuire, 1998; Tracy & Robins, 2004; Williams, 2007) and thus, traits and behavior tendencies favouring prosociality should have grown in the populations (Panksepp, 1998). It has been proposed that shame in particular might have evolved as a warning mechanism, conveying that one is not creating a positive image of oneself in the eyes of others and is thus in danger of being rejected, excluded or ostracized (Gilbert, 2007; Leary, 2003). While signaling our unattractiveness, shame is thought to coordinate a set of psychological, physiological and behavioral responses designed to help us protect or improve our social images and thus prevent the loss of group membership (Leary & Downs, 1995 cit. in Leary, 2003; De Hooge, Breugelmans, & Zeelenberg, 2011; Gausel &

Leach, 2011; Toby & Cosmides, 1996 cit. in Leary, 2003; Williams, 2007). As mentioned above, these potential rejection cues can be detected both internally and externally, as evinced by the differences between internal and external shame. In fact, internal shame emerges largely from an internalization of norms of socially valued behaviors and characteristics (Leary, 2003; Gilbert, 1998). Thus, the feelings that arise from one's own self-evaluations ultimately relate to the evolutionarily set need of being accepted by others, by serving as a gauge of relational evaluation that alerts individuals that their relational value may be at stake without the need to receive constant explicit social feedback (Leary, 2003).

2.5. Shame-induced behavior

In spite of the growing support received by these adaptive views grounded on evolutionary theory, the dominant view in the literature has been one where shame is portrayed as an "ugly", maladaptive emotion, driving people to self-centered, defensive and distancing conducts, which severely compromise their interpersonal adjustment and psychological health (Tangney, 1991; Tangney & Tracy, 2011). Undeniably, a large body of empirical research consistently shows that shame prompts maladaptive tendencies and behaviors. Namely, it has been found that ashamed people tend to escape and hide when committing transgressions rather than make amends (e.g. Tangney et al., 1996; Scherer & Wallbot, 1994), exhibit diminished empathy for others and perspective taking (e.g. Joireman, 2004; Leith & Baumeister, 1998; Tangney, 1991; Yang, Yang, & Chiou, 2010), externalize blame for wrongdoing and becoming more aggressive and hostile towards others (e.g. Bear, Uribe-Zarain, Manning, & Shiomi, 2009; Hejdenberg & Andrews, 2011; Stuewig et al., 2010; Tangney, Wagner, Fletcher, & Richard, 1992; Wicker et al., 1983). Also, shame has been consistently related to a host of psychopathological symptoms such as generalized anxiety, depression and low self-esteem (e.g. Matos & Pinto-Gouveia, 2010; Pinto-Gouveia & Matos, 2011; Tantam, 1998; Thompson & Berenbaum, 2006).

Whilst acknowledging shame's potentially negative consequences is unavoidable, stating that maladaptiveness is all there is to this emotion is a rather inaccurate portrayal of the existing evidence. This is because several studies show that, in addition to withdrawal and defense, shame may also elicit approach behavioral tendencies that promote people's adaptive functioning and inclusionary status. For example, several studies document that shame may lead people to make amends after wrongdoing (e.g. Frijda, Kuipers & Ter Schure, 1989; Roseman et al., 1994) and strive in performance situations following (e.g. Turner & Sshallert, 2001; De Hooge, Zeelenberg & Breugelmans, 2010, 2011). Furthermore, and of importance

to the present study, there is compelling evidence that shame may have a role in promoting prosocial behavior for people carrying certain traits. For example, in an early study, Steele (1975) found that when criticized, some people became increasingly willing to help a good cause. Also, Williams & Sommer (2007) reported that a laboratory induction of ostracism by fellow group members led female participants to work harder on a subsequent collective task. In a series of four experiments De Hooge, Breugelmans, & Zeelenberg (2008) also found that shame, elicited by multiple procedures, led to increased prosociality in the 10 coin give some dilemma, but only for those people who were dispositionally self-oriented.

In the present study, we sought to contribute for the understanding of other individual differences that may predispose people towards prosociality in the face of shame. Namely, we examined whether attachment individual differences would impact choices to behave prosocially following this emotion. Research on attachment shows that, although acquired during childhood, individual differences in attachment style have a powerful influence on peoples' emotional responses and behaviors throughout their whole lives (Mikulincer & Shaver, 2007). Most importantly, such interindividual differences in attachment have been shown to shape people's ways of coping and behaving in distressing situations as well as their tendencies towards prosociality (Collins, 1996; Mikulincer & Florian, 1995; Mikulincer & Shaver, 2007). Because shame is itself a distressing situation, it is likely that the attachment behavioral system becomes activated during shame eliciting experiences and thus it is conceivable that attachment behavioral strategies will be important predictors of whether people engage in prosocial behavior following shame.

2.6. Attachment as a script for social interaction

Bowlby (1982) concluded that humans are born with and innate psychobiological system — the "*attachment behavioral system*" — that motivates them, throughout their lives, to seek proximity to significant others in times of distress as means to attain safety and security (Shaver & Mikulincer, 2011). Attachment theory and research show that early attachment experiences result in fairly stable individual differences in *attachment styles*, which shape people's relational expectations, emotions and behaviors in important ways (Fraley & Shaver, 2000).

People's attachment styles are conceptualized as their positions along two orthogonal dimensions of attachment insecurity — attachment related-*anxiety* and *avoidance* (Brennan, Clark & Shaver, 1998; Mikulincer & Shaver, 2003, 2007). A person's position on the *attachment anxiety* dimension, reflects the degree to which he or she worries that a partner

will not be available in times of need and expends efforts to maximize proximity and dependence to relationship partners (Brenner, Clark & Shaver, 1998; Erez, Mikulincer, Van Ijzendoorn, et al., 2008). Scores in the attachment avoidance dimension, on the other hand, reflect the extent to which a person is distrustful of relationship partners' good intentions and availability and attempts to maintain independence and distance from partners (Erez et al., 2008; Fraley & Shaver, 2000).

Additionally, variations along the dimensions of attachment anxiety and avoidance also reflect people's sense of attachment security and the kind of behavioral strategies they engage in to deal with distress and regulate affect (Mikulincer & Shaver, 2003; 2007). Those who exhibit low degrees of anxiety and avoidance are said to possess a *secure attachment style*. Securely attached people, because of their early repeated interactions with loving and responsive caregivers, possess well-anchored feelings of self-worth (Bartholomew & Horowitz, 1991), confidence in other people's good intentions and availability and a sense of self-efficacy and optimism in dealing with distress (Collins & Read, 1990; Mikulincer & Florian, 1995). This allows secure people to feel comfortable in becoming intimate with others and seeking them in times of need, while at the same time retaining their sense of autonomy (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). Conversely, people who score high on attachment anxiety or avoidance are said to possess insecure attachment styles. Insecure people hold internalized representations of frustrating attachment figures and resort to behavioral strategies, other than the appropriate proximity-seeking, to cope with anxiety and insecurity (Erez et al., 2008). These strategies, which Mikulincer & Shaver (2003) coined *secondary attachment strategies,* are hyperactivation and deactivation of the attachment system. High scores on attachment anxiety denote reliance on hyperactivating strategies in dealing with distressing circumstances, while high scores in attachment avoidance indicate reliance of deactivating strategies. *Hyperactivating strategies* consist of an exaggeration of the appropriate proximity seeking primary attachment strategy, and involve energetic attempts to attain proximity, support and love from others combined with a lack of confidence it will be provided (Mikulincer & Shaver, 2003; 2007). *Deactivation strategies*, on the other hand consist of the inhibition of the proximity seeking primary attachment srategy, and denote a denial of attachment needs and choices to handle stressors alone (Main & Weston, 1982; Mikulincer & Shaver, 2007; Cassidy & Kobak, 1988).

2.7. Attachment and prosocial behavior

Prosocial behavior, as well as empathy and altruism, is thought by many theorists to emerge from another psychobiological evolved system whose main function is providing nurturance and care — which Bowlby (1982) coined the *caregiving behavioral system* (Gillath, Shaver, & Mikulincer, 2005; Mikulincer & Shaver, 2007; Wang, 2005; Batson, 2010). The caregiving behavioral system is thought to have evolved to complement the attachment system, so that parents would be especially attuned and responsive to their offspring's displays of distress (Gillath et al., 2005; Panksepp, 1998). Besides complementarity, the attachment and caregiving systems also appear to function in a dynamic interplay within any one person (Bowlby, 1982; Wang, 2005; Panksepp, 1998): activation of the attachment system appears to interfere with the optimal functioning of the caregiving system and other non-attachment activities such as exploration of the environment (Ainsworth et al., 1978; Gillath et al., 2005; Kunce & Shaver, 1994); due to the urgent need to protect oneself from imminent threats, activation of the attachment system leads people to become focused on their own vulnerability and needs for support rather attend to the needs of others and provide them with appropriate care or help (Gillath et al., 2005; Kunce & Shaver, 1994; Mikulincer & Shaver, 2005). Only when people feel relatively secure can they invest time and energy to deal with others' needs and suffering (Erez et al., 2008).

Consistent with this view, a large body of research has shown that an abiding sense of attachment security is strongly related to dispositional empathy, compassion for others and prosocial orientations (e.g. Erez et al., 2008; Feeney & Collins, 2003; Gillath et al., 2005; Kestenbaum, Farber, & Stroufe, 1989; Mikulincer and Shaver, 2007; Van Lange, Otten, De Bruin & Joireman, 1997). Furthermore, even among insecure people, methods of temporarily activating a sense of attachment security result in increased compassion for others' suffering (Mikulincer et al., 2001) and increased endorsement of the values of benevolence (i.e. enhancement of the welfare of close persons) and universalism (i.e. protection of the welfare of all people) (Mikulincer et al., 2003). The intimate connection between attachment security and prosocial feelings and behaviors stems from the fact that secure people are generally able to manage stress effectively and retain their sense of cohesiveness and safeness even in adverse circumstances. Because they are generally able to maintain emotional equanimity, secure people are able to consistently allocate their mental resources to attend to the needs of others and provide them with appropriate care.

Attachment insecurities, on the other hand, have been associated with distortions in prosocial feelings and behaviors (Shaver & Mikulincer, 2012). Research has consistently

shown that people who score high on attachment avoidance are usually less empathic and less likely to engage in prosocial behavior (e.g. Erez et al., 2008; Feeney & Collins, 2003; Gillath et al., 2005; Kestenbaum, Farber and Stroufe, 1989; Mikulincer and Shaver, 2007; Wei, Liao, Ku, & Shaffer, 2011). For example, attachment avoidance has been found to be negatively associated with volunteering (Erez et al., 2008; Gillath et al., 2005) and with providing help and support to people in distress (Mikulincer, Shaver, Gillath & Nitzberg, 2005; Simpson et al., 1992). Avoidant people also report that they dislike coping with other people's suffering (Feeney & Collins, 2003) and they provide less support as others' distress escalates (Simpson et al., 1992).

This negative relationship between avoidance and prosociality is explained by the fact that avoidant individuals tend to hold cynical views of human nature, and thus find other people undeserving of help (Mikulincer & Shaver, 2007). Furthermore, because avoidant individuals rely on the deactivation strategies reviewed above, they are less likely to attend to and elaborate upon events that have the potential to activate their attachment system, such as another's plight of distress (Fraley, Davis, & Shaver, 1998).

Although attachment anxiety does not reduce prosociality to the same extent as attachment avoidance does, anxious people may be prone to engage in prosocial behavior for egoistic reasons, as suggested by recent research showing that although attachment anxiety did not directly relate to volunteerism, it was significantly associated with the endorsement of more self-focused reasons for volunteering, such as getting social approval and admiration from others and increasing one's sense of group belongingness (Erez, Mikulincer, Van Ijzendoorn, & Kroonenberg, 2008; Gillath et al., 2005). Feeney & Collins (2003) also report that, although attachment anxious people endorse altruistic reasons for helping a romantic partner, they also tend to engage in helping for egoistic, self-focused reasons, such as gaining their partner's approval and increase their partner's relationship commitment. Although anxious people possess some of the qualities needed for effective caregiving (e.g. willingness to be close to others), their constant self-focused worries about the meeting of their own attachment needs may distort their motivations for being prosocial (Shaver & Mikulincer, 2012). Because they are constantly worrying about the availability of others and seek to maintain an exaggerate proximity and dependence to partners, the engagement in seemingly altruistic behaviors may be used as a pathway to attain these purposes and attenuate their insecurities (Shaver & Mikulincer, 2012).

2.8. Attachment and prosocial behavior in shame-eliciting situations

In addition to relating to prosocial tendencies and motives in general and across all kinds of situations, three recent studies indicate that individual differences in attachment may be important predictors of prosocial behavior following shame-eliciting events. The first study, by Erez, Sleebos, Mikulincer, et al. (2009), investigated how individual differences in attachment affected prosocial behavior towards a group following rejection feedback from group members. The authors found that the induction of group rejection led to more pro-group responses (more money donation to the group and higher effort expenditure on behalf of the group) only among those scoring high on attachment anxiety but not when attachment anxiety was relatively low. Interestingly, increased pro-group responses occurred even though high anxiety participants reported lower group commitment following threat (Erez et al., 2009 Shaver and Mikulincer (2012) also review similar findings but this time with regard to moral behavior. These authors mention two as of yet unpublished studies in which they induced ego-threat via failure on a performance task to half of the participant sample and then assessed moral choices either via a scenario measure (Study 1) or a behavioral measure (whether participants returned an extra lottery ticket mistakenly given to them by the experimenter; Study 2). Like Erez et al. (2009), they found that *only* those who scored relatively high on attachment anxiety were more likely to make moral choices in the threat condition than in the no threat condition. Furthermore, the effect of the ego-threat manipulation on anxious people's moral choices was eliminated by a security prime. These results suggest that people high on attachment anxiety become more likely to behave prosocially, when faced with threats to their self-images, than when they are under normal circumstances. These increased prosocial tendencies, however, are not likely to serve truly altruistic purposes (Erez et al., 2009; Shaver & Mikulincer, 2012). As aforementioned, anxious people will often engage in prosocial behavior for the egoistic reasons of attenuating their constant concerns about their own lovability and ensuring the acceptance of others. Because ego-threats aggravate these already prominent concerns, it is likely that anxious people become increasingly motivated to engage in prosocial behavior when feeling shame as means to restore their damaged self-esteem and regain the approval of others. Thus, in these instances, prosocial behavior may be just a part of the hyperactivating strategies anxious people resort to in order to deal with their heightened distress (Erez et al., 2009; Shaver & Mikulincer, 2012).

Notably, in the above-mentioned studies of attachment, ego-threat and prosocial behavior, ego-threats did not influence secure people's decisions to be prosocial (Erez et al.,

2009; Shaver & Mikulincer, 2012). This is in line with the findings reviewed in the previous section, which show that for securely attached people behaving in prosocial ways is an authentic and enduring disposition that manifests itself consistently across situations and one motivated by self-enhancement motives (Shaver & Mikulincer, 2012). Also, when it comes to attachment avoidance, only Shaver & Mikulincer (2012) found an interaction between this attachment dimension and prosocial responding: those who scored high on attachment avoidance were less likely to engage in moral behavior across the two conditions, in line with the findings that avoidant people are less inclined to behave prosocially across time and situations. However, no significant interactions between attachment avoidance and ego-threat in predicting prosocial behavior were found, which suggests that shame might not affect avoidant people's tendencies towards prosociality (Shaver & Mikulincer, 2012). Since avoidant people have a tendency to dismiss self-relevant feedback from others and suppress distressing thoughts and emotions (Fraley, Davis & Shaver, 1998; Fraley & Shaver, 1997), it is likely that these defensive mechanisms make them more impervious to shame and its effects on behavior.

2.9. Objectives and Hypotheses

As shown by the studies reviewed throughout this article, individual differences appear to play a role in the extent to which shame may motivate prosocial behavior. Particularly, recent research suggests that shame may motivate increased prosociality, but only for people who score high on attachment anxiety. However, it remains unclear whether attachment anxiety and shame's relations to prosocial inclinations go in the same directions when considering other unstudied forms of prosocial behavior such as interpersonal helping. Furthermore, the studies that investigated the effects of attachment and ego-threats on prosocial behavior did not include emotional reactions to negative feedback as dependent variables. For this reason, it remains unclear whether the changes found in attachment anxious people's prosocial inclinations are indeed due to the influence of emotion, and particularly of shame.

In this study, we seek to address these issues by examining the effects of shame induced via performance failure and individual differences in attachment, on prosocial behavior in form of interpersonal helping. In other words, we examined whether failure and attachment exert effects on interpersonal helping and whether these effects are mediated by shame. In line with previous findings, we hypothesized that:

1) Increasing levels of attachment anxiety should predict significant increases in choices to help another person in the shame condition;
2) No such association should be replicated in the neutral condition. These hypotheses, (1 and 2), are based on the assumption that the positive association in the shame condition is due to feeling shame;
3) There shouldn't be differences in the behavior (choice to help) of securely attached individuals, between the shame and the neutral conditions;
4) Increasing levels of attachment avoidance should be negatively associated with choosing the option to help, in both conditions.

In order to control for the possible effect of trait empathy — a likely hidden variable — on the dependent variable (prosocial behavior), scores on two subscales of Davis' (1980) Interpersonal reactivity Index (IRI) – Empathic Concern (EC) and Perspective Taking (PT) were measure on all subjects, and tested for their association with the other measures. We also examined age and gender possible effects on the prosocial output of the experiment.

2.10. Method

2.10.1 Participants

One hundred and eleven ISCTE-IUL students and employees took part in this experiment in exchange for course credit (47 subjects) or a 5 euro gift-card (64 subjects). The sample comprised 67 females (60.4%) and 44 males (39.6%), with ages ranging from 18 to 52 years (M_{age} = 23.28, SD = 6.5, Mod = 20); 89 participants (80.2%) were between 18 and 25 years old, 15 subjects (13.5%) between 26 and 35 years old and the remaining 7 subjects (6.3%) between 36 and 52 years old; (107 subjects, 96.4%) were of Portuguese nationality, with only 4 subjects being of African nationalities. With regard to literacy, 67.6 % (75 subjects) had completed high-school, 26.1 % (29 subjects) had a Bachelor degree and 6.3% (7 subjects) a Masters degree. The majority of participants had grown up in an urban area (84 subjects, 75.7%), with only 27 subjects (24.3%) having grown up in a rural area.

2.10.2. Scales and measures

2.10.2.1. Attachment. The Portuguese version of the *Relationship Questionnaire* (Bartholomew & Horowitz, 1991) — "*Questionário de Estilo Relacional*" (Moreira, 2006) — was used in this study as a measure of adult attachment. This measure is comprised of four short paragraphs, with each describing a prototypical attachment orientation in adult relationships. Participants are asked to, first, rate the extent to which each paragraph describes their general style of relating to other people on a Likert-type scale ranging from 1 (*not at all like me*) to 7 (*very much like me*). Then, participants are asked to choose among the four paragraphs the one that best describes them or that is closest to their usual way of being in close relationships. Underlying attachment anxiety and avoidance dimensions are derived from linear combinations of the person's scores on the four prototypes. Attachment anxiety is computed as: scores in prototypes characterized by negative self-models (i.e. fearful score plus preoccupied score) minus scores in prototypes characterized by positive self-models (i.e. secure score plus dismissing score). In a similar manner, attachment avoidance is computed as: scores in prototypes characterized by negative other models (i.e. fearful score plus dismissing score) minus scores in prototypes characterized by positive other models (i.e. secure score plus preoccupied score). Previous studies have shown that the *Relationship Questionnaire* (RQ) is a stable and reliable measure of attachment individual differences, both in its English, original form (Bartholomew & Horowitz, 1991; Scharfe & Bartholomew, 1994) and in its Portuguese version (Moreira, 2006)

2.10.2.2. Trait empathy. We introduced trait empathy in this study as a control variable, since it has been established in the literature as one of the most important predictors of prosocial behavior (for an extensive review of the literature on this topic see Bierhoff, 2002). In order to measure trait empathy we used a Portuguese version of the *Interpersonal Reactivity Index* (IRI; Davis, 1980), translated and validated for use with the Portuguese population by Gaspar et al. (unpublished manuscript). The *Interpersonal Reactivity Index* is a widely used 28-item measure of dispositional empathy that contains four seven-item subscales — the perspective taking (PT) scale, the empathic concern (EC) scale, the personal distress (PD) scale and the fantasy scale (FS) — that measure four separate dimensions of the global concept of "empathy" (Davis, 1980). The perspective taking (PT) subscale contains items such as "*I try to look at everybody's side of a disagreement before I make a decision*" that assess people's spontaneous tendencies to adopt the perspective of other people and see things from their point of view. The empathic concern (EC) subscale inquires about people about their tendency to experience feelings of warmth, concern and compassion for others (e.g. "*I often have tender, concerned feelings for people less fortunate than me*"). The personal distress scale (PD), containing items such as "*In emergency situations, I feel apprehensive and ill-at-ease*", assesses feelings of anxiety and distress that people may tend to experience observing another's distress. The fantasy scale (FS) measures the tendency to identify with fictional characters and imaginatively transpose oneself to into fictional situations (e.g. "*When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me*"). Participants are asked to rate each of the 28 items on a 5 point Likert scale ranging from A ("*does not describe me well*") to E ("*describes me well*"). A total empathy score cannot be computed from this scale because the four subscales and the dimensions they purport to measure are not all positively correlated. Thus, individual IRI scores are composed by 4 scores, one in each of the four subscales, which are derived from scoring and summing scores for each scale's items. The IRI has been found to be a valid and reliable measure of empathy dimensions both in its original form (e.g. Davis, 1980; Carey, Fox, & Spraggins, 1988) and its Portuguese version (Gaspar et al., unpublished manuscripts), with the latter exhibiting a Cronbach's alpha of .74 and otherwise a similar structure to that of the original scale.

2.10.2.3. State emotions. Participant's emotional states were assessed before and after the induction of shame with the modified *Self-Assessment Manikin* (SAM; Bradley & Lang,

1994) and the *Pictorial Shame Scale* (*PSS,* Henriques & Gaspar*,* in prep.), which we devised for this study.

The SAM scale is a non-verbal self-report scale that measures subjects' affective reactions on three dimensions: arousal, pleasure and dominance. Each of the three dimensions is assessed by having subjects choose a picture of a character displaying a linear progression of arousal, pleasure and dominance, in a scale that ranges from 1 (lowest possible arousal/pleasure/dominance) to 9 (highest possible arousal/pleasure/dominance). Because we wished to assess participant's affective states at two points in time (i.e. before and after the shame induction), they were instructed to choose the picture of the character, in each of the three dimensions, that best represented the way they were feeling *at the exact moment they were filling the scale*.

The *PSS* is a scale comprised of 8 pictorial representations of people in various emotion situations (i.e. 8 bodily postures) in which participants are asked to choose among a list of emotion-words the one they think best represents the way the depicted person is feeling in each picture. We decided to devise this scale because most scales assessing real-time state shame available in the literature are rather obvious about what they purport to measure. Because when individuals are feeling shame they have difficulties in admitting to it or to the circumstances that have promoted it (Lynd, 1958) and may actually feel ashamed of being ashamed (Lewis, 1971; Keltner & Harker, 1998), we sought to develop a measure that would assess shame as indirectly and non-intrusively as possible so as to avoid the biases of shame self-reports. Since it is known that people tend to project their own emotional states to others, when others' emotional state is ambiguous (Baumeister, Dale, & Sommer, 1998; Schiffenbauer, 1974), by developing a scale that asks participants to report on what they think a depicted person in ambiguous emotional postures is feeling, we hoped to understand whether they were themselves feeling shame via projection, without resort to declarative knowledge and without subjects being aware of what was being measured. To devise this scale we first designed 13 pictures in which a full body, rather androgynous faceless manikin resembling a human being is depicted in 13 different body postures. Because our focus was to measure shame and in the end select images to which a people might attribute shame, we devised various postures that evinced the key features of the bodily posture of shame found in the literature (e.g. Fessler, 2007; Izard, 1971; Keltner & Harker, 1998). This instrument also includes postures that we thought might depict positive, neutral and other negative emotions because positive, neutral and negative emotions (other than shame) should be present in the final measure as distractor items. The 13 pictures were pre-tested using a sample of 79

ISCTE-IUL students during regular class time[1]. The students were given an answer sheet containing 21 numbered emotion labels and were asked to ascribe to each picture (labeled from A to M) the number of the emotion label they thought best described the way the depicted person was feeling. The 13 pictures were projected on a white canvas for 6 seconds, followed by 30 second resting periods in between so that students could give their responses. To control for possible order effects, the pictures were presented in two different, random series. With the pre-test data, we built a contingency table with use of labels by pictures and submitted it to a Chi-square test of independence. The test rejected independence, showing that there was a significant association between labels and pictures. We then chose 8 of the 13 pictures to be included in the final measure, based on frequencies of the emotion attribution these pictures had received and the following criteria: the final picture collection had to include: the picture that had the highest shame attributions but that did not get attributions of other negative emotion content that was typically high in the other pictures that also evinced shame content (i.e. 22% shame attributions and 0% sadness attributions); pictures that evinced shame attributions but that also evinced high attributions of other negative emotional content; pictures to which neutral emotional content was the dominant attribution; pictures that evinced only positive emotional attribution content — one of them which exhibited high attributions of pride (i.e. opposite of shame) and the other which evinced only positive emotion attributions, but that excluded pride. Concerning the emotion labels, we chose to delete labels that were chosen less than 13 times overall (the total number of pictures) from the final measure. Because this test was devised to be a projective test it was important that the final measure contained the least amount of labels given as response options for each picture (without compromising response options) so that responses would be as spontaneous and quick as possible. Thus, the final measured consisted of the 8 selected pictures, each being given as response options only the labels that had been attributed to it by subjects on the pre-test. The final measure was presented to experimental subjects in a similar manner as in the pre-test.

2.10.3. Procedure

Upon arrival at the laboratory, subjects were randomly assigned to either the Shame or the Control condition, with prosocial behavior as a dependent variable. Three subjects

[1] We made sure that subjects who took part in the main experiment did not participate in the pre-test of the pictures

reported suspicions about the veracity of the feedback. However, because all three were in the neutral condition (and remained unaware that it was our intent to measure prosocial behavior as a dependent variable), we chose not to exclude them from the analyses, as we believed their suspicions would not compromise the validity of our results.

Subjects entered the laboratory in groups of up to five and each subject was led to an individual soundproof cubicle where all the experiment's tasks and manipulations took place. In order to conceal the true purposes of the experiment — and because it was important that participants were as unaware as possible of the experiment's purposes, since suspicions could significantly bias the results — we told participants that they would be taking part in a study that had the purpose of investigating the cognitive and emotional abilities most suited for working with children. This cover story seemed particularly suited since measures of attachment orientations and empathy would be collected. Prior to agreeing to take part in the experiment and signing informed consent, subjects were briefly explained the kind of tasks they would be completing and reminded that they could discontinue their participation at any time, although none chose to do so.

Subjects were first asked to fill questionnaires assessing socio-demographic variables, attachment styles, and trait empathy. These questionnaires were presented in a randomized order to control for order effects. After completing the questionnaires, subjects viewed a 2 minute slideshow comprised of 10 neutral images taken from IAPS (Lang, Bradley & Cuthbert, 2008), which served as a resting period before the emotion induction. Because all measures and manipulations were administered in a single session, we introduced this resting period in an attempt to mitigate the effects that filling questionnaires about attachment orientations and empathy could have on subsequent tasks and manipulations. After the slideshow and before the shame induction, subjects' baseline emotional states were measured using the SAM scale and the Projective Shame Scale so that they could be compared to scores after the emotion induction.

For the induction of shame, a performance situation with false negative feedback was devised, since failure on performance situations — i.e. a form of ego-/self-esteem-threat — has been established in the literature as a reliable elicitor of shame (e.g. De Hooge et al., 2008; Dickerson & Kemeny, 2004). At this point, subjects in both conditions were told that they would be taking an "*Emotional Abilities Test*" and an "*Intelligence Test*" that measured, respectively their enduring emotional and cognitive abilities. In order to increase threat, they were also told that their scores on these tests were highly predictive of future personal and professional success. The "*Emotional Abilities Test*" consisted of 6 pictures of children in real

emotion situations, taken from a study conducted by Gaspar & Esteves (2012) and subjects were asked to choose from a list of emotions, the one they thought best described the way each child was feeling at the time the picture was taken. Subjects were given a 2-minute time-limit to complete this test. We chose pictures of children for this "test" in order to maintain our cover story. The subsequent "Intelligence Test" consisted of 6 Advanced Raven's Matrixes (Raven, Court & Raven, 1983) that would have to be completed in a 5 minute time-limit. The matrixes chosen to be a part of this test were purposely some of the hardest to solve, so that they would be almost impossible for the average person to successfully complete in the given time limit and thus increase stress and ego-threat. In reality, only one out of the 111 participants in this study (in the neutral condition) was able to successfully do so. After completing both tests, subjects were left with a filler task and told that while they did so the experimenter would be correcting their tests in order to let them know about their scores. When the experimenter returned and collected the filler task sheets, she gave subjects feedback about their scores. In the shame condition, subjects were told they had scored 3 correct answers out of 6 in the "Emotional Ability Test" and 2 out of 6 in the "Intelligence Test", and that these scores were below the average scores for their age group and academic level. In the neutral condition, subjects were told they had scored 4 correct answers out of 6 in the "Emotional Ability Test" and 2 out of 6 in the "Intelligence Test" and that these scores were within the average range for their age group and academic level. Note that, although in the neutral condition participants were told they were among average levels, their scores were also relatively low, which, like the De Hooge et al. (2008) study, makes this experiment a conservative test of the effects of shame.

After feedback on their test scores, subjects' emotional states were assessed once more by asking them to fill the SAM and Projective Shame Scales again. Then, subjects' were told that the experiment was over and given their incentive for participation. Telling subjects that the experiment was over, however, was still a part of the experiment as it paved the way for the introduction of the prosocial behavior measure. At this point, the experimenter asked participants if they could please help her out by completing one more task for another unrelated study she was ostensibly conducting and for which she was having some trouble gathering enough data. The experimenter also emphasized that this task was optional and that she understood if they did not have the time to help her, thus providing participants with an escape option, of utmost importance when assessing the behavioral outcomes of shame (De Hooge et al., 2008). If participants consented to "help" the experimenter and complete the final task they were considered to have behaved prosocially. If, on the other hand, they

refused to complete the task, they were considered to have acted non-prosocially. We chose this situation as our measure of prosocial behavior for two reasons. First, the shame literature suggests that shame appears to exert its effects on behavior only when it is endogenous to the situation (De Hooge et al., 2008). Since by the time subjects received performance feedback the only person that was aware of such feedback was the experimenter, our measure of prosocial behavior would have to relate to her in some way. Second, we wished to have a measure of actual behavior, instead of, for example, a hypothetical scenario measure, and one that would be as naturalistic as possible, so as to increase external validity. Since in the context of a laboratory experiment, an experimenter asking for help with another study would be viewed as a rather natural and unsuspecting behavior, we chose this situation as our measure of prosociality. After completing the prosocial task (or deciding not to do so) participants were again thanked and fully debriefed about the true purposes of the experiment. At this point it is worth noting that, because the prosocial behavior measure related to the experimenter, we were especially cautious about the way she acted and presented herself in order to ensure that any biases that could be attributed to the experimenter's behavior or characteristics were minimized as much as possible. Thus, the experimenter who collected the data was always the same female experimenter, who always wore neutral, covered-up clothes to the sessions. Furthermore, we made sure that the subjects in this experiment had no prior contact or knew the experimenter beforehand, so that there would be no effects of previous acquaintanceship and sympathy (or lack thereof) that would affect the choice to "help" her. Also, the experimenter was always strictly neutral in her interactions with subjects, sticking to a pre-established discourse that she kept as similar as possible across participants.

As a final remark, we would like to acknowledge that we took ethical concerns very seriously since, ultimately, the induction of shame may cause intense distress and have great implications for how people view and feel about themselves. Because we were fully aware of such implications, during the final debriefing the experimenter was extremely cautious about ensuring that all participants left the laboratory feeling completely tranquilized, by making sure that they fully understood that the "tests" they had previously completed were false and in no way reflected any of their emotional or cognitive abilities.

2.10.4. Statistical Procedures

We first assessed the effectiveness of the shame induction by examining differences in SAM scores and Pictorial Shame Scale scores before and after test feedback within each

condition, and differences between the two conditions' SAM scores and Pictorial Shame Scale scores, both before and after the induction of shame.

Next, we conducted exploratory factor analysis on IRI scores for the present sample, in order to investigate factor structure and reliability. Then, we proceeded to examine the main hypothesis of this study using a 3-step hierarchical logistic regression with prosocial behavior as a dependent variable. In this analysis we controlled for the effects of relevant socio-demographic variables and IRI subscales.

All statistical analysis were conducted using PASW statistical software (v.18; SPSS Inc. Chicago, IL) for $\propto = 0.05$ except for the analysis of the Pictorial Shame Scale, which was conducted using ACTUS2 (Estabrook & Estabrook, 1989), which is both a statistical software and an analysis method. The PSS data required that we computed several analyses of large contingency tables for the uncovering of strong associations between specific pictures and labels for which this tool has been considered ideal (Gaspar & Esteves, 2012).

2.11. Results

2.11.1. Confirmation of the emotion induction

2.11.1.1. Analysis of SAM scale scores. We examined differences between SAM ratings before (t1) and after test feedback (t2) for subjects in each condition. Consistent with the successful induction of shame, we expected that subjects in the shame condition scored significantly higher in t2 arousal, and significantly lower in t2 valence and t2 dominance, when compared to their t1 scores. For the neutral condition, we expected no significant differences between subjects' t1 and t2 SAM scores in the three dimensions. Because K-S tests did not confirm SAM's scores normality in either condition, we conducted non-parametric Wilcoxon paired samples test to examine t1 and t2 differences within each condition. The results are presented in Table 2.11.1.1.1.

Table 2.11.1.1.1.

Wilcoxon Paired-Samples Test for SAM Scores Before and After the Shame Induction

	Z	**Sig. (1-tailed)**
Shame Condition		
Arousal t1 Arousal t2	-3.892	.000*
Valence t1 Valence t2	-4.186	.000*
Dominance t1 Dominance t2	-3.471	.0005*
Neutral Condition		
Arousal t1 Arousal t2	-2.216	.01*
Valence t1 Valence t2	-1.729	.42
Dominance t1 Dominance t2	-0.633	.264

Note. T1 denotes scores before shame induction; T2 denotes scores after shame induction

* $p < 0.05$

For subjects in the shame condition, the analysis revealed significant differences in the expected directions. Specifically, and as evinced by Table 2, participants in the shame condition experienced significant increases in arousal, decreases in valence and decreases in dominance following test feedback, suggesting that the induction of shame was successful. For the neutral condition, results were also mostly in the expected directions, with only one exception. Although there were no significant differences in valence and dominance from before test feedback to after test feedback, as we had hypothesized, subjects in the neutral condition evinced significant increases in arousal after test feedback. Because subjects in both conditions completed the same stressful tests, it could be that these increases in arousal after test feedback are the result of having completed a difficult and stressful task. Although unanticipated, this result may add to our analysis to the extent that it will rule out the effects of undifferentiated arousal and allow us to determine the effects on prosocial behavior uniquely caused by shame.

Additionally, we also sought to understand whether SAM scores differed between the two conditions both before (t1) and after the induction of shame (t2). We hypothesized that there would be no significant differences in t1 SAM scores between subjects in shame versus neutral condition but that there would be significant differences between the two condition's t2 SAM scores. In line with the induction of shame, we hypothesized that subjects in the shame condition would score significantly higher in t2 arousal and significantly lower in t2 valence and t2 dominance when compared with subjects in the neutral condition. To examine these hypotheses we performed independent samples Mann-Whitney tests on SAM t1 scores and SAM t2 scores. The tests revealed that there were only significant differences between the two conditions' t2 Valence scores ($U=1135.5$, $p=0.023$), which were significantly lower in the shame condition than in the neutral condition. No significant differences between the two conditions were found for all other SAM subscales t1 and t2 scores (Arousal t1: $U=1223$, $p=0.080$, Valence t1: $U=1489$, $p=0.89$, Dominance t1: $U=1443.5$, $p=0.675$, Arousal t2: $U=1504.5$, $p=0.964$, Dominance t2: $U=1255.5$, $p=0.117$). These results provide only partial support to our hypothesis. As we expected, subjects did not evince significant differences in t1 SAM scores. Nevertheless, after the shame induction, subjects' emotional states only differed in terms of valence, with subjects in the shame condition scoring significantly lower in this dimension than subjects in the neutral condition. Although these results are also consistent with the induction of shame (which is an emotion that obviously leads people towards a more negative emotional state when compared with neutral conditions), taken alone, they do not provide full support to the successful induction of this emotion. However, when

coupled with the highly significant increases in arousal and highly significant decreases in valence and dominance from before to after test feedback found in the previous analysis, they provide good support for the assumption that shame was in fact induced. Not withstanding, we must stress that the analysis of SAM scores alone, even if our hypotheses were fully met, cannot allow for a definite conclusion that shame was indeed induced. Although increases in arousal and decreases in valence and dominance are correlates of this emotion (Wicker et al., 1983), they do not assess shame specifically. For this reason, interpretations of any subsequent results as being caused by shame should always be made with caution.

2.11.1.2. Analysis of Pictorial Shame Scale scores. As mentioned previously, we devised this scale because we wished to measure shame indirectly and without subjects being aware of what was being measured. For that purpose, we devised this scale to serve as a projective measure of shame, based on previous knowledge that people tend to project their own emotional states to others' when others' emotional state is ambiguous (Baumeister, Dale, & Sommer, 1998; Schiffenbauer, 1974). Following this line of reasoning, we expected that by presenting subjects with pictures of a manikin in ambiguous emotional postures and asking them how they thought the depicted person felt, those feeling shame would project their own shame onto the manikin. In order to examine if this had been the case, we first needed to explore whether there had been significant associations between pictures and emotion labels and if so, which specific picture/label emerged as significant. Specific picture/label associations were especially important because they would allow us to investigate whether the pictures that composed this test were in fact ambiguous in emotional content, and thus whether they allowed for projection of subjects' shame. To do so, we conducted an analysis of contingency tables using simulation (ACTUS) 2, which is a software-based simulation method originally developed by Estabrook & Estabrook (1989). We chose this method because it is has been shown to be the most suited for analysis of data in large contingency tables, and also because it provides p values for each specific picture × label association. Our original contingency table comprising all pictures and labels was extremely large ($8_{\text{pictures}} \times 23_{\text{emotion labels}}$), and was divided prior to association analysis into two tables, separated by comprehensively distinct valence labels. The first table consisted of pictures × *negative emotion labels*, while the second table was comprised of pictures × *positive or neutral emotion labels*. Before analyzing associations between labels and pictures, we removed picture 6 from the table of negative labels because this picture had zero counts in negative

labels. From the table of positive labels we removed pictures 2 and 7 because these pictures had zero counts in positive/neutral labels and picture 3 because it had a total of only one count in positive/neutral labels. Also in this table, we removed the labels "*Alegre*" (Happy), "*Confiante*" (Confident), "*Desafiante*" (Defying), "*Disponível*" (Available), "*Orgulhoso*" (Proud) and "*Pensativo*" (Meditative) and "*Surpreendido*" (Surprised) because these labels had only been attributed to one of the pictures. Thus, the analyses of independence were conducted for the resulting tables of $7_{\text{pictures}} \times 9_{\text{ negative emotion labels}}$ and $5_{\text{pictures}} \times 7_{\text{positive/neutral emotion labels}}$.

The analyses revealed that there were highly significant associations between pictures and negative emotion labels (χ^2 (48, N = 1041) = 1022.36, p = .00) and between pictures and positive emotion labels (χ^2 (78, N = 1040) = 3662.02, p = .00). Because these tables are rather large and spurious associations may occur in such large number of tests, we based possible associations between specific pictures and labels on a conservative approach to control type I error, as done by Gaspar & Esteves (2012), running 10000 simulations per cell in ACTUS and accepting only as significant associations: for the table of negative labels, cells in which $p<=.0008$ (Bonferroni's adjustment: the value of p corrected for 56 tests) and for the table of positive labels, cells in which $p<=.001$ (Bonferroni's adjustment: p corrected for 42 tests). Tables 4 and 5 show which specific picture × label associations were significant by displaying the number of times, out of 1000, in which the 10000 ACTUS simulated tables had counts in each cell greater than or equal to the count in the respective cell of the observed table. P-values for each cell are given precisely by this number of times in which the simulated tables were above the observed tables divided by 1000. This means that cells in Tables 4 and 5 that contain zeros represent strong associations between image and label with p = 0. (For a more detailed description of how ACTUS computed significant associations see Gaspar & Esteves (2012)).

Table 2.11.1.2.1.

PSS Table of Negative Labels: Number of Times out of 1000 that the Observed Count Did Not Exceed the Simulated Count — Based on 10000 Simulated Tables

Picture	Amed.	Culp.	Desap.	Desesp.	Emb.	Env.	Frust.	Preoc.	Triste
1	1000	1000	1000	634	1000	1000	1000	1000	1000
2	0*	0*	1000	0*	0*	0*	0*	0*	0*
3	628	0*	1000	0*	0*	3	0*	0*	0*
4	1000	1000	0*	19	641	632	0*	20	1000
5	0*	1000	1000	1000	0*	0*	264	0*	1000
7	0*	0*	1000	0*	0*	0*	0*	1000	0*
8	642	0*	0*	267	83	0*	0*	77	0*

Note: Labels and English translations are as follows: Amed. = Amedrontado (Fearful); Culp. = Culpado (Guilty); Desap. = Desapontado; Desesp. = Desesperado (Desperate); Emb. = Embarassado (Embarrassed); Env. = Envergonhado (Ashamed); Frust. = Frustrado (Frustrated); Preoc. = Preocupado (Worried);
* p <=.001 (Bonferroni's adjustment: value of p corrected for 56 tests)

Table 2.11.1.2.2.

PSS Table of Positive Labels: Number of Times out of 1000 that the Observed Count Did Not Exceed the Simulated Count — Based on 10000 Simulated Tables

Picture	Divertido	Eufórico	Expectante	Extasiado	Neutro	Relaxado	Sereno
1	627	1000	1*	1000	96	0*	0*
4	599	1000	0*	944	3	836	1000
5	1000	1000	0*	741	143	1000	1000
6	222	0*	1000	10	1000	999	1000
8	1000	1000	865	247	18	1000	179

Note: English translations are as follows: Divertido (Amused); Eufórico (Euphoric); Expectante (Expectant); Extasiado (Ecstatic); Neutro (Neutral); Relaxado (Relaxed); Sereno (Serene);
* p < .0008 (Bonferroni's adjustment: value of p corrected for 42 tests)

Regarding the associations between pictures and negative emotion labels, and as can be seen from Table 2.11.1.2.1., there were significant associations were between Picture 2 and all negative labels except "*Disappointed*" ["*Desapontado*"], Picture 3 and the labels "*Guilty*" ["*Culpado*"], "*Desperate*" ["*Desesperado*"], "*Embarrassed*" ["*Embaraçado*"], "*Frustrated*" ["*Frustrado*"], "*Worried*" ["*Preocupado*"] and "*Sad*" ["*Triste*"], Picture 4 and labels "*Disappointed*" and "*Frustrated*", Picture 5 and labels "*Fearful*" ["*Amedrontado*"], "*Embarrassed*", "*Ashamed*" ["*Envergonhado*"] and "*Worried*", Picture 7 and all negative

labels except "*Disappointed*" and "*Worried*" and Picture 8 and labels "*Guilty*", "*Disappointed*", "*Ashamed*", "*Frustrated*" and "*Sad*". An inspection of Table 2.11.1.2.2. reveals that significant associations between pictures and positive emotion labels were found for: Picture 1 and labels "*Expectant*" ["*Expectante*"], "*Relaxed*" ["*Relaxado*"] e "*Serene*" ["Sereno"], Picture 4 and the label "*Expectant*", Picture 5 and the label "*Expectant*" and Picture 6 and the label "*Euphoric*" ["Eufórico"]. The fact that Pictures 4 and 5 evinced significant associations with both positive and negative emotions labels is understandable, since their significant associations with positive labels were with the label "*Expectant*", which can obviously be positively or negatively valenced. Thus, and as it had been our intention when developing this test, pictures that got mainly negative emotion label attributions were in fact highly ambiguous, since they evinced highly significant associations with multiple negative labels (including shame and embarrassment). Contrarily, pictures that got mainly positive emotion label attributions evinced significant associations with a more restricted number of positive emotion labels (in many cases, only one label). The fact that subjects' interpretations of the "positive emotion" pictures were more clear-cut and less dispersed than interpretations of "negative emotion" pictures, is in line with previous studies on facial expressions of emotion that show that positive emotion expressions are easier to interpret, as they begin to be correctly interpreted and encoded earlier in development (for a review see Harris, 2008) and are more quickly and unambiguously interpreted than negative emotional facial expressions (e.g. Hugdahl, Iversen & Johnsen, 1993).

After having confirmed that there were in fact associations between pictures and emotion labels and that "negative emotion" pictures were highly ambiguous, we then proceeded to investigate whether in fact the Pictorial Shame Scale reflected the induction of shame — i.e. whether subjects in the shame condition projected their own shame into the pictures. To do so we examined: 1) differences between subjects' t1 and t2 shame attributions within the shame and neutral conditions and; 2) differences between the two conditions' shame attributions both at t1 and at t2. We expected that: 1) subjects in the shame condition would attribute significantly more shame to the pictures at t2 than at t1; subjects in the neutral condition would not differ in terms of shame attributions from t1 to t2; 2) at t1 there would be no significant differences between the two conditions' shame attributions but at t2 those in the shame condition would make more significantly more shame attributions than those in the neutral condition. Labels were then recoded into a dummy variable Shame content/no shame content. For the first analyses we conducted two related-samples McNemar tests comparing t1 and t2 shame attributions for the shame and neutral condition. We considered the labels

"*Ashamed*" ("*Envergonhado*") and "*Embarassed*" ("*Embaraçado*") together as reflecting shame attributions because, like others, we view embarrassment as a mild form of shame (e.g. Gilbert, 1998; Izard, 1971; Tomkins, 1963). Each subject's emotion label attributions to each of the 8 pictures was entered as shame attribution (1) — i.e. reflecting the fact that the subject had attributed the label "*Ashamed*" or "*Embarassed*" to a given picture — or no shame attribution (0) — i.e. reflecting the fact that the subject had attributed other emotion labels to a given picture. In line with our hypothesis the analysis revealed no significant differences between t1 and t2 shame attributions for subjects in the neutral condition (McNemar $p = .48$; N = 436). However, contrary to our predictions, there were also no significant differences t1 and t2 shame attributions in the shame condition (McNemar $p = .09$; N=440). We then proceeded to investigate whether the two conditions differed from one another in terms of shame attributions, both at t1 and at t2. To do so, we conducted Mann-Whitney independent samples tests on t1 and t2 shame attributions to examine differences between conditions. The test comparing t1 shame attributions of subjects in the shame versus neutral condition revealed no significant differences between the two groups, in line with our predictions ($U=96360$, $p>.05$). A comparison of t2 shame attributions between the two groups, however, also revealed no significant differences, contrary to our expectations ($U=95766$, $p>.05$).

Taken together these results suggest that, contrary to our intentions when developing this scale, there appears to have been no projection of shame onto the pictures. Although SAM scores revealed differences in emotional states suggestive of shame, these differences were not captured by the present scale. This makes it likely that participants' emotion attributions to the pictures were based on phenomena other than projection. One of these processes could have been their own theories about what behavioral postures are indicative of certain emotional states, as is advocated by theory theory. Theory theory and research on this topic suggests that people often interpret others' emotions, behaviors and intentions, not through projection or self-related processes, but rather through their own folk psychological theories about mental processes (e.g. Bazinger & Kuhberger, 2012). This is likely to have been the case in the present study since many of the subjects who took part in the experiment were psychology or other social science students, who could have drawn on their knowledge on psychological mechanisms to attribute emotions to the postures depicted in the pictures.

2.11.2. Empathy scores from IRI's scales

In order to verify IRI's psychometric properties in this sample we performed an Exploratory Factor Analysis with extraction of principal components and direct oblimin

rotation and Kaiser normalization on IRI scores. The first 4 factors explained 49.22% of the variance and the original four-factor structure satisfactorily accommodated the majority of the original items; in the final solution, 5 items were removed due to their low saturations (<=.3): items 9 and 18 from the Emotional Contagion subscale, item 13 from the Personal Distress subscale and items 15 and 25 from the Perspective Taking subscale. A KMO of .725 the Bartlett test (p=0) indicate the good factorability of data. The resulting scale performed satisfactorily on internal consistency with a Cronbach's Alpha of .78.

2.11.3. Attachment, shame and prosocial behavior

2.11.3.1. ***Demographics.*** In order to test our study's main hypothesis, we first explored possible associations between prosocial behavior and the demographic variables of age, gender, nationality, academics and place of upbringing, so that any significant relationships could be controlled for in subsequent analyses. Spearman correlations revealed only a significant positive association between the subjects' age and prosocial behavior (Table 1), which was later entered as a predictor in the main regression analysis.

Table 2.11.3.1.1.

Associations Between Demographic Variables and Prosocial Behavior

	Age	Gender	Nationality	Academics	Rural/Urban
Prosocial Behavior	.201*	0.009	0.07	0.139	-0.12

* $p < 0.05$

2.11.3.2. Overall correlations. Next, we explored overall associations among attachment, empathy subscales and prosocial behavior. The results are presented in Table 3.

Table 2.11.3.2.1.

Correlations Among Attachment Dimensions, IRI subscales and Prosocial Behavior

	Attachment		IRI				Prosocial
	Anxiety	Avoidance	FS	EC	PD	PT	
Anxiety	-	-0.035	0.172	.279**	.290**	-.227*	0.075
Avoidance	-	-	-0.051	-.265**	-0.063	-0.151	0.125
FS	-	-	-	0.176	0.176	.191*	0.125
EC	-	-	-	-	0.146	0.162	-0.108
PD	-	-	-	-	-	-0.172	0.045
PT	-	-	-	-	-	-	0.064
Prosocial	-	-	-	-	-	-	-

Note. **p<.01; *p<.05

Attachment anxiety was positively associated with emotional contagion and personal distress and significantly negatively associated with perspective taking. Attachment avoidance evinced only a significant negative association with emotional contagion. These results are in line with the findings reviewed above regarding the relationships of attachment and empathy (Mikulincer & Shaver, 2007). Additionally, a significant positive association was found between the IRI Fantasy Scale and IRI Perspective Taking Scale, similarly to the findings of Davis (1980). Other IRI subscale intercorrelations, although not significant, also go in the same directions as those reported by Davis (1980). No significant associations with prosocial behavior were found for attachment and empathy dimensions.

2.11.3.3. Regression Analysis. In spite of the absence of correlations between the independent variables and Prosocial behavior in the previous correlation analyses, we decided to go through with the regression analysis because interactive effects could occur. So, in order to examine the effects of anxiety, avoidance, shame and their interactions on prosocial behavior we conducted a 3-step hierarchical logistic regression with prosocial behavior as a dependent variable. Because we wished to control for relevant demographic variables and empathy dimensions, we introduced age (which we previously found to be significantly correlated with prosocial behavior) in the first step and scores in the emotional contagion and perspective taking IRI subscales in the second step. We chose to include only these two IRI subscales because they are the most relevant in predicting helping in a non-emergency

situation (Bierhoff, 2002), as is the case of the present study. In the third step we introduced our main variables: anxiety, avoidance, condition and the two-way interactions between each of the attachment dimensions and condition. Condition was entered as a dummy variable comparing the shame (1) and neutral (-1) conditions and attachment anxiety, avoidance, empathic concern and perspective taking were entered as Z-scores so as to reduce multicollinearity. Prosocial behavior was entered as helping the experimenter (1) and not helping the experimenter (0). All the assumptions for the use of logistic regression were verified according to the procedures outlined by Field (2009).

The results of the regression analysis yielded no significant effects for any of the entered predictors: $\beta = .23$, $p = .56$ for age, $\beta = -.64$, $p = .11$ for Emotional Contagion, $\beta = .67$, $p = .054$ for Perspective Taking, $\beta = -.77$, $p = .31$ for Condition, $\beta = .71$, $p = .2$ for Anxiety, $\beta = 1.02$, $p = .12$ for Avoidance, $\beta = .16$, $p = .82$ for Anxiety × Condition and $\beta = -.76$, $p = .36$ for Avoidance × Condition (all p's > .05). Thus, contrary to our hypotheses, neither attachment scores, nor shame nor their interactions exerted any significant effects on prosocial behavior. Furthermore, no significant effects on prosocial behavior were found for the control variables of age, empathic concern or perspective taking scores, contrary to previous findings (Bierhoff, 2002).

2.12. Discussion

Although shame is portrayed by several studies as conductive to withdrawal motivations and behaviors, many studies suggest that it can also promote increased prosocial behaviors towards others, and that the extent to which it does so may be dependent on individual differences on attachment anxiety and avoidance. In this study we sought to investigate whether attachment individual differences interacted with shame to predict prosocial behavior in the form of interpersonal helping towards an experimenter. Although the induction of shame appears to have been successful, we have found no effects of shame, attachment dimensions or trait empathy — our control variable — on prosocial behavior. These results are rather surprising because there is evidence in the literature suggesting that these variables relate to prosocial behavior in important ways (e.g. Mikulincer & Shaver, 2007; Bierhoff, 2002; De Hooge et al., 2008). In this study, however, although participants' attachment and empathy scores differed, as well as the experimental conditions they were placed in, there was very little behavioral variability — a staggering majority of subjects (98 out of 111) agreed to help the experimenter —, which suggests that prosocial behavior may have been, in some cases, the result of other situational variables that were not included in this study.

One such variable might be experimenter effects. Research on this topic shows that the experimenter can, by him/herself, function as a "stimulus object", an independent variable that affects subjects' behavioral choices (McGuigan, 1963). In fact, the experimenter effects can even be strong to the point of overshadowing the contribution of the variables that the experiment intended to investigate in the first place (Nichols & Maner, 2008; Orne, 1962; Venkatesan, 1967). Although experimenter effects can take many forms, we believe that one such form, experimenter authority, may be of importance in explaining the present results. Conceivably, many subjects in this experiment may have chosen to behave prosocially not because they were intrinsically motivated to do so — or, for that matter, because it was their usual way of behaving — but rather because they saw conformity to the experimenter's request for help as a social obligation when in the presence of an authority figure and in the context of a psychological experiment. In reality, when a subject agrees to take part in a laboratory experiment, he or she is also implicitly agreeing to take part in a special form of social interaction with an experimenter, one in which both interveners' mutual role expectations and obligations are well defined and widely understood (Riecken, 1962; Orne, 1962). Namely, the experimenter occupies a role of authority and control, by providing the participant with instructions about what to do, when to do it and how, and the latter is

expected to follow such instructions without inquiring as to their purpose (Zizzo, 2008; Orne, 1962). Research shows that this verticality in the experimenter-subject relationship can, by itself, exert pressures on participants to behave in certain ways — called *social experimental demand effects* (Zizzo, 2008) —, being one of those pressures that of consistently acquiescing to the experimenter's requests, regardless of one's eagerness to do so (Orne, 1962). At this point, it is important to note that we sought to control for the effects of experimenter authority on participants' decisions to behave prosocially towards her by introducing her request for help, ostensibly, after the experiment was over and at a time where subjects had already received their incentive for participation. We expected that by doing so, subjects would understand that at the time of her request the experimenter-subject vertical relationship was no longer in force (as well as their role as subjects), and that it was simply a situation of one person asking another for help. However, it may be that even after the experiment was "over", participants continued to construe both the experimenter as a figure of authority and their role as that of an experimental subject, in which case attending to her request was still viewed as a social obligation.

Also, some subjects' decisions to provide help may have been motivated by similarities with the experimenter, both in terms of personal characteristics and personal experience. Research on experimenter effects shows that another way in which experimenters may exert effects subjects' behaviors is through their personal characteristics (Nichols & Maner, 2008). For example, research conducted by a faculty experimenter tends to produce different performance levels in subjects when compared to research conducted by a graduate student experimenter (Birney, 1958). Some of these effects may be eliminated by having experimenters behaving neutrally and keep their interactions with participants as similar as possible, something we devoted special attention to in the present study. However, it is unavoidable that, as individuals, experimenters will always display personal characteristics that cannot be hidden from subjects, such as size, ethnicity or age. These characteristics can, by themselves, elicit responses from participants apart from what experimenters say or do. Of importance to the present results, some of these visible experimenter characteristics may have led subjects to conceive of the experimenter as their similar. Research on compliance and prosocial behavior shows that when potential helpers perceive similarities in terms of personal characteristics between themselves and the target of help (such as age, birthdate or shared group membership and social identity) they are significantly more likely to behave prosocially (Cialdini & Goldstein, 2004; Dovidio, 1984; McCullough & Tabak, 2010). In the case of the present study, the fact that the experimenter's age was visibly very close to that of

a large number of participants in this study and that, like many subjects, she was a student working towards completion of her degree, may have exerted an effect in choices to behave prosocially towards her.

Additionally, similarities in terms of personal experience might have been a powerful motivator for choosing the option to help. When requested for help, many subjects spontaneously reported that they were personally aware of how difficult it often was to garner all the necessary data for an experiment, either because they had themselves conducted some research and faced those same difficulties or had a close friend who had. More importantly, many reported that this "*I've been there too*" feeling was what motivated them to stay longer to help her, despite having important appointments to attend to — e.g. some were late for classes, work or meetings with friends/family. These spontaneous comments lead us to believe that, for many, the decision to help by performing the additional task was motivated essentially by the fact that they had also experienced similar needs in the past. This is consistent with previous research showing that having had prior similar experiences with a need increases empathy and prosocial behavior for a target currently experiencing that need (Batson et al., 1996).

Furthermore, as part of a research-focused culture, college students and employees in a research organization like ISCTE-IUL are likely to possess high regard for the aims of science and experimentation, which may have also been an important motivator behind the choice to agree to take part in an additional experimental task. In fact, organizational culture — the pattern of shared assumptions, norms and values that define a normative order within any organization — has been shown to act in increasing behavioral consistence, leading people within an organization to respond in consort and in accordance with the organization's norms and values (Cooper & Whithey, 2009). In line with this, Orne (1962) has argued that although people are led to take part in psychological experiments for many reasons (e.g. fulfilling course requirements, needing money or hoping to alter their personal adjustment for the better), over and above these many motives, college students tend to share the belief that experimentation is an important endeavor and thus that any discomfort they may endure is justified by the ultimate purpose of serving the progression of scientific knowledge. In a series of quasi-experiments, Orne (1962) documented how research subjects will often persist in rather boring and tiring tasks for hours if requested to do so, with very little signs of hostility. He explained this as being in part due to the fact that experimental subjects believe their discomfort will ultimately have an important contribution (Orne, 1962). Thus, it is also conceivable that many of the present study's subjects agreed to help the experimenter with

one more final task because the task was ostensibly a part of another scientific experiment and they believed that their contribution was important for the advance of science.

2.13. Conclusion, limitations and future directions

To sum up, it appears that a number of situational factors, possibly in addition to shame, attachment and empathy, may have explained the large adherence to prosocial behavior we observed in the present study. This is a very serious limitation because we were left uninformed about what caused subjects to chose the option to help. However, it also provides an important warning to researchers investigating the behavioral consequences of shame. As has been argued by many theorists, personal characteristics and emotions often become rather weak predictors of behavior when other situational variables exert strong pressures for people to behave in certain ways – the so-called strong situations (Bem & Allen, 1974; Cooper & Withey, 2009; Davis-Blake & Pfeffer, 1989). In strong situations, like the experimental setting, behavior is mostly guided by socially imposed norms of appropriate behavior, which tend to override the effects of individual differences or other weaker co-occuring situational variables (Cooper & Withey, 2009). Arguably, people are often faced with such strong situations during their daily lives, as is the case of, for example, most organizational settings (Davis-Blake & Pfeffer, 1989). Thus, future research examining the behavioral effects of shame should seek to control for these situational effects by, in addition to assessing actual or imagined behavior following shame, also tapping into the underlying motivations that lead people to engage in those behaviors. Previous research has been shown that the behaviors elicited by shame may be motivated by protection or enhancement of self image (De Hooge et al., 2011). Thus, perhaps devising measures that include these two kinds of motivations along with motivations to conform to norms of socially appropriate behavior would allow us to gain a better understanding of whether observed shame-induced behaviors are in fact due to shame or rather are the result of other co-occurring situational pressures.

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APPENDIXES

APPENDIX A – Tables submitted to ACTUS for analysis

Table 1

Table of Pictures × Positive Emotion Labels: Number of Positive Label Attributions per Picture

Picture	Divertido	Eufórico	Expectante	Extasiado	Neutro	Relaxado	Sereno
1	4	0	66	0	17	27	14
4	2	0	39	1	14	3	0
5	0	0	44	2	8	0	0
6	9	167	0	18	0	5	0
8	0	0	1	1	3	0	1

Note. English translations are as follows: Conf. = Confiante (Confident); Desaf. = Desafiante (Defying); Disp. = Disponível (Available); Euf. = Eufórico (Euphoric); Exp. = Expectante (Expectant); Ext. = Extasiado (Ecstatic); Org. = Orgulhoso (Proud); Pens. = Pensativo (Meditative); Relax = Relaxado (Relaxed); Ser = Sereno (Serene)

Table 2

Table of Pictures × Negative Emotion Labels: Number of Negative Label Attributions per Picture

Picture	Amed.	Culp.	Desap.	Desesp.	Emb.	Env.	Frust.	Preoc.	Triste
1	0	0	0	1	0	0	0	0	0
2	16	9	0	16	11	69	17	6	77
3	1	30	0	49	9	5	24	53	16
4	0	0	22	4	1	1	7	4	0
5	57	0	0	0	31	54	2	17	0
7	29	21	0	15	24	47	10	0	73
8	1	21	85	2	3	19	23	3	56

Note. Amed. = Amedrontado (Fearful); Culp. = Culpado (Guilty); Desap. = Desapontado; Desesp. = Desesperado (Desperate); Emb. = Embarassado (Embarrassed); Env. = Envergonhado (Ashamed); Frust. = Frustrado (Frustrated); Preoc. = Preocupado (Worried)

APPENDIX B – Demographic variables' frequency distributions and descriptive statistics

Table 1

Frequency distributions of demographic variables

	N	%
Age		
18-25	89	80.2
26-35	15	13.5
36-52	7	6.3
Total	111	100
Gender		
Female	67	60.4
Male	44	39.6
Total	111	100
Nationality		
Portugal	107	96.4
Cabo Verde	1	0.9
São Tomé e Príncipe	3	2.7
Total	111	100
Academics		
Ens. Secundário	75	67.6
Ens. Superior	29	26.1
Mestrado	7	6.3
Total	111	100
Place of upbringing		
Rural	27	24.3
Urban	84	75.7
Total	111	100

Table 2

Descriptive Statistics - Age

Mean	23.28
Median	21
Std. Deviation	6.538
Range	34
Minimum	18
Maximum	52

APPENDIX C – Main variables' descriptive statistics and frequency distributions

Table 1

Attachment and Empathy Descriptive Statistics

	N	Range	Min.	Max.	Mean	Std. Dev.	Variance
IRI Subscales							
FS	111	27	1	28	16.72	5.469	29.912
EC	111	17	3	20	13.74	3.627	13.158
PD	111	22	1	23	10.04	4.431	19.635
PT	111	17	3	20	14.04	3.316	10.999
RQ Dimensions							
Anxiety	111	19	4	23	12.04	4.07	16.562
Avoidance	111	19	3	22	11.6	3.946	15.569

Note: Attachment dimensions' scores were recoded to facilitate interpretation. Instead of ranging from -12 to 12 they were converted to range from 1 to 25.

Table 2

Prosocial behavior frequency distributions

	Prosocial behavior		Total
	No	Yes	
Neutral condition	8	48	56
Shame condition	5	50	55
Total	13	98	111

APPENDIX D - Outputs for Tests of Assumptions for Logistic Regression

Test of the Linearity of the Logit

Logistic Regression

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	111	100.0
	Missing Cases	0	.0
	Total	111	100.0
Unselected Cases		0	.0
Total		111	100.0

a. If weight is in effect, see classification table for the total

Dependent Variable Encoding

Original Value	Internal Value
Not Prosocial	0
Prosocial	1

Categorical Variables Codings

		Frequency	Parameter coding (1)
Condition	-1	56	1.000
	Shame	55	.000

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted		
			Prosocial		
			Not Prosocial	Prosocial	Percentage Correct
Step 0	Prosocial	Not Prosocial	0	13	.0
		Prosocial	0	98	100.0
	Overall Percentage				88.3

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	2.020	.295	46.834	1	.000	7.538

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Idade	2.190	1	.139
		Anxiety	.698	1	.403
		Avoidance	1.418	1	.234
		Condition(1)	.724	1	.395
		EC	.722	1	.395
		PT	.573	1	.449
		EC by LnEC	.813	1	.367
		LnPT by PT	.531	1	.466
		Idade by LnIdade	2.067	1	.150
		Anxiety by LnAnxiety	.646	1	.421
		Avoidance by LnAvoidance	1.613	1	.204
	Overall Statistics		12.643	11	.317

Iteration History[a],b,c

Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	83.273	1.532
	2	80.237	1.946
	3	80.173	2.018
	4	80.173	2.020
	5	80.173	2.020

a. Constant is included in the model.
b. Initial -2 Log Likelihood: 80.173
c. Estimation terminated at iteration number 5 because pa

Block 1: Method = Enter

Iteration History[a],b,c,d

Iteration		-2 Log likelihood	Coefficients Constant	Idade	Anxiety	Avoidance	Condition(1)	EC	PT	EC by LnEC	LnPT by PT	Idade by LnIdade	Anxiety by LnAnxiety	Avoidance by LnAvoidance
Step 1	1	75.719	-5.511	.636	.326	-.345	-.203	.506	.013	-.164	.012	-.135	-.076	.108
	2	65.850	-11.707	1.466	.574	-1.128	-.448	1.097	-.225	-.351	.099	-.312	-.127	.354
	3	62.969	-15.081	2.085	.894	-2.195	-.631	1.407	-.517	-.451	.201	-.443	-.203	.689
	4	62.483	-15.098	2.245	1.158	-2.997	-.732	1.443	-.630	-.466	.244	-.476	-.272	.940
	5	62.460	-14.742	2.251	1.229	-3.240	-.760	1.434	-.642	-.464	.250	-.477	-.291	1.016
	6	62.460	-14.713	2.251	1.232	-3.255	-.761	1.433	-.642	-.464	.250	-.476	-.292	1.021
	7	62.460	-14.713	2.251	1.232	-3.255	-.761	1.433	-.642	-.464	.250	-.476	-.292	1.021

a. Method: Enter
b. Constant is included in the model.
c. Initial -2 Log Likelihood: 80.173
d. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	17.714	11	.088
	Block	17.714	11	.088
	Model	17.714	11	.088

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	62.460[a]	.148	.287

a. Estimation terminated at iteration number 7 because pa

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9.768	8	.282

Contingency Table for Hosmer and Lemeshow Test

		Prosocial = Not Prosocial		Prosocial = Prosocial		
		Observed	Expected	Observed	Expected	Total
Step 1	1	3	4.845	8	6.155	11
	2	5	2.709	6	8.291	11
	3	3	1.912	8	9.088	11
	4	1	1.329	10	9.671	11
	5	0	.946	11	10.054	11
	6	0	.578	11	10.422	11
	7	0	.326	11	10.674	11
	8	1	.213	10	10.787	11
	9	0	.118	11	10.882	11
	10	0	.024	12	11.976	12

Classification Table[a]

Observed			Predicted		
			Prosocial		
			Not Prosocial	Prosocial	Percentage Correct
Step 1	Prosocial	Not Prosocial	2	11	15.4
		Prosocial	1	97	99.0
	Overall Percentage				89.2

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Idade	2.251	1.953	1.329	1	.249	9.497	.207	436.097
	Anxiety	1.232	1.638	.566	1	.452	3.429	.138	85.040
	Avoidance	-3.255	2.329	1.953	1	.162	.039	.000	3.704
	Condition(1)	-.761	.729	1.091	1	.296	.467	.112	1.949
	EC	1.433	1.582	.820	1	.365	4.190	.188	93.140
	PT	-.642	1.532	.175	1	.675	.526	.026	10.608
	EC by LnEC	-.464	.454	1.045	1	.307	.629	.258	1.531
	LnPT by PT	.250	.447	.312	1	.576	1.284	.534	3.084
	Idade by LnIdade	-.476	.449	1.124	1	.289	.621	.257	1.498
	Anxiety by LnAnxiety	-.292	.474	.378	1	.538	.747	.295	1.892
	Avoidance by LnAvoidance	1.021	.702	2.114	1	.146	2.775	.701	10.981
	Constant	-14.713	16.396	.805	1	.370	.000		

a. Variable(s) entered on step 1: Idade, Anxiety, Avoidance, Condition, EC, PT, EC * LnEC , LnPT * PT , Idade * LnIdade , Anxiety * LnAnxiety , A

Test of Multicollinearity

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	PT, Condition, Avoidance, Anxiety, EC[a]	.	Enter

a. All requested variables entered.
b. Dependent Variable: Prosocial

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Anxiety	.844	1.184
	Avoidance	.934	1.070
	Condition	.988	1.012
	EC	.796	1.256
	PT	.859	1.163

a. Dependent Variable: Prosocial

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	Anxiety	Avoidance	Condition	EC	PT
1	1	4.737	1.000	.00	.00	.00	.00	.00	.00
	2	1.001	2.176	.00	.00	.00	.99	.00	.00
	3	.119	6.302	.00	.12	.54	.01	.07	.00
	4	.093	7.124	.00	.48	.05	.00	.03	.18
	5	.035	11.586	.01	.22	.11	.01	.83	.36
	6	.014	18.317	.99	.18	.29	.00	.07	.46

a. Dependent Variable: Prosocial

APPENDIX E – Informed Consent

Caro participante,

Solicitamos-lhe que participe no presente estudo, realizado no âmbito do Mestrado em Psicologia das Emoções no ISCTE-IUL e intitulado "Competências de Avaliação e Intervenção Junto de Crianças". Este estudo tem como finalidades:

a) avaliar as aptidões emocionais e cognitivas consideradas adequadas ao trabalho de educação e intervenção junto de crianças;
b) desenvolver alguns protocolos e materiais novos para trabalhar junto de crianças com dificuldades emocionais.

A sua participação terá uma duração total de 30 minutos e consistirá no preenchimento de 6 questionários, visualização de um *slideshow*, e realização de duas tarefas compostas por questões emocionais e cognitivas complexas com limite de tempo.

Antes e durante as tarefas, poderá colocar à experimentadora quaisquer questões ou dúvidas que tenha relativamente a qualquer um dos questionários, tarefas ou sobre o estudo em si.

Os dados por si fornecidos são totalmente anónimos e confidenciais, pelo que não existirá qualquer forma de o identificar através dos mesmos. Os seus dados serão apenas utilizados para o presente estudo, não sendo fornecidos a terceiros.

A sua participação apenas será válida se preencher todos os questionários e realizar todas as tarefas até ao fim.

Poderá no entanto, e se assim o desejar, desistir da sua participação a qualquer momento e solicitar ao experimentador que destrua os seus dados na sua presença, sem que disso resulte qualquer prejuízo ou dano para si.

Por favor, leia o seguinte com atenção:

Declaro que fui informado acerca dos objectivos da presente investigação e que estes são claros para mim. Foi-me dada a oportunidade de colocar as questões que considerei necessárias, às quais obtive respostas satisfatórias. Entendi que a minha participação é voluntária e que o meu anonimato será assegurado. Estou ciente de que tenho a liberdade de abandonar o estudo a qualquer altura e solicitar que os meus dados sejam destruídos. Fui também informado de os meus dados serão utilizados apenas para este estudo.

Tendo estes aspectos em conta, declaro que concordo participar no presente estudo.

(Participante)

Data: ___/___/_____

Caso necessite de algum esclarecimento adicional ou deseje ser informado acerca dos resultados deste estudo poderá contactar os responsáveis pelo mesmo através do e-mail: intervencaocriancasiscte@gmail.com

Muito obrigado pela sua colaboração!

APPENDIX F: Socio-demographic Questionnaire

Idade: _____

Sexo: _____ Feminino

_____ Masculino

Nacionalidade:

___ Portuguesa

___ Brasileira

___ Moçambicana

___ Cabo-verdiana

___ Guineense

___ S. Tomense

___ Angolana

___ Outra. Qual? _____

Habilitações académicas:

___ 1º ciclo ou equivalente (4 anos)

___ 2º ciclo ou equivalente (6 anos)

___ 3º ciclo ou equivalente (9 anos)

___ Ensino secundário ou equivalente (11/12 anos)

___ Ensino superior (Licenciatura)

___ Mestrado

___ Doutoramento

Em que tipo de área cresceu?

___ Rural

___ Urbana

APPENDIX G – Relationship Questionnaire (Bartholomew & Horowitz, 1991) – Portuguese version (Moreira, 2006)

Em baixo encontra as descrições de quatro estilos de relacionamento que as pessoas frequentemente referem. Leia cada descrição e faça um círculo em torno do número que corresponde **ao grau em que cada uma delas corresponde ao seu estilo geral de relacionamento**. Assinale apenas um nível para cada descrição.

Depois, faça um círculo em torno da letra correspondente ao **estilo que melhor o descreve**, ou que se aproxima mais do seu modo habitual de ser em relações próximas. Assinale apenas uma das letras.

Marque todas as suas respostas dentro do rectângulo em baixo.

A. *É fácil para mim tornar-me emocionalmente próximo das outras pessoas. Sinto-me confortável ao apoiar-me nos outros e deixar que eles se apoiem em mim. Não me preocupo com o ficar sozinho ou os outros não me aceitarem.*

B. *Sinto-me desconfortável ao tornar-me próximo dos outros. Quero ter relações emocionalmente próximas, mas acho difícil confiar nos outros inteiramente ou apoiar-me neles. Receio ser magoado se me aproximar demasiado dos outros.*

C. *Quero ser completamente íntimo com os outros no aspecto emocional, mas muitas vezes sinto que os outros são relutantes em se tornarem tão próximos como eu gostaria. Sinto-me desconfortável sem relações próximas, mas por vezes preocupo-me por os outros não me valorizarem tanto como eu os valorizo.*

D. *Sinto-me confortável sem relações emocionais próximas. É muito importante para mim sentir-me independente e auto-suficiente, e prefiro não depender dos outros e que os outros não dependam de mim.*

	Não tem nada a ver comigo			**Tem algo a ver comigo**			**Tem muito a ver comigo**
Estilo A	1	2	3	4	5	6	7
Estilo B	1	2	3	4	5	6	7
Estilo C	1	2	3	4	5	6	7
Estilo D	1	2	3	4	5	6	7

APPENDIX H – Interpersonal Reactivity Index (IRI; Davis, 1980) – Portuguese version (Gaspar et al., unpublished manuscript)

As frases seguintes pretendem avaliar os seus pensamentos e sentimentos numa variedade de situações. Para cada item, pense **até que ponto cada um o descreve**, escolhendo a letra apropriada da seguinte escala.

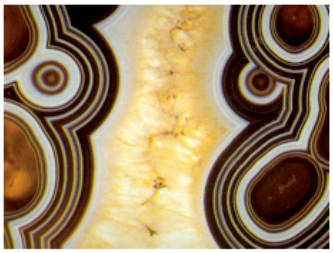
A	**B**	**C**	**D**	**E**
Não me descreve bem				Descreve-me bem

Após ter decidido a sua resposta, marque com um X a letra que melhor reflecte a opinião que tem a seu propósito, em frente a cada frase. **LEIA CUIDADOSAMENTE CADA ITEM ANTES DE RESPONDER**. Responda da forma mais honesta possível.

1. Sonho e fantasio, com alguma regularidade, sobre coisas que me poderão suceder.	A	B	C	D	E
2. Tenho, com frequência, sentimentos de preocupação e de carinho por pessoas menos afortunadas que eu.	A	B	C	D	E
3. Por vezes, sinto dificuldade em ver as coisas a partir da perspectiva dos outros.	A	B	C	D	E
4. Por vezes, não sinto muita pena das outras pessoas quando estas estão a ter problemas.	A	B	C	D	E
5. Num romance, na realidade, envolvo-me nos sentimentos das personagens.	A	B	C	D	E
6. Em situações de emergência, sinto-me, com facilidade apreensivo e desconfortável.	A	B	C	D	E
7. Sou habitualmente objectivo quando assisto a um filme ou a uma peça e, em geral, não fico completamente absorvido pelo filme.	A	B	C	D	E
8. Tento ter em conta as perspectivas de todas as pessoas numa discussão antes de tomar uma decisão.	A	B	C	D	E
9. Quando vejo que alguém está a ser explorado, sinto-me de certo modo protector em relação a essa pessoa.	A	B	C	D	E
10. Quando estou numa situação muito emocional, sinto, por vezes, uma sensação de impotência.	A	B	C	D	E

11. Por vezes, procuro compreender melhor os meus amigos imaginando como as coisas são vistas pela sua perspectiva.	A	B	C	D	E
12. Ficar extremamente envolvido num bom livro é algo extremamente raro para mim.	A	B	C	D	E
13. Quando vejo alguém ficar magoado tenho tendência para permanecer calmo.	A	B	C	D	E
14. Os infortúnios das outras pessoas geralmente não me perturbam muito.	A	B	C	D	E
15. Se tiver a certeza de que tenho razão acerca de algo, não perco muito tempo a ouvir os argumentos de outras pessoas.	A	B	C	D	E
16. Após assistir a uma peça ou um filme, já senti como se eu fosse uma das personagens.	A	B	C	D	E
17. Estar numa situação emocional tensa assusta-me.	A	B	C	D	E
18. Quando vejo alguém ser tratado injustamente, por vezes não sinto muita pena dessa pessoa.	A	B	C	D	E
19. Sou habitualmente muito eficaz a lidar com emergências.	A	B	C	D	E
20. Fico, com frequência, sensibilizado por coisas que vejo acontecer.	A	B	C	D	E
21. Acredito que haja dois lados para cada questão e procuro olhar para ambos.	A	B	C	D	E
22. Descrever-me-ia como uma pessoa de “coração-mole”.	A	B	C	D	E
23. Quando assisto a um bom filme, consigo facilmente colocar-me no lugar da personagem principal.	A	B	C	D	E
24. Tenho tendência para perder o controlo em situações de emergência.	A	B	C	D	E
25. Quando estou aborrecido com alguém, procuro habitualmente colocar-me no seu lugar.	A	B	C	D	E
26. Quando estou a ler uma história ou um romance interessante, imagino como me sentiria se os eventos tivessem acontecido comigo.	A	B	C	D	E
27. Quando vejo alguém numa emergência a precisar desesperadamente de ajuda descontrolo-me.	A	B	C	D	E
28. Antes de criticar alguém, procuro imaginar a forma como <u>eu</u> me sentiria se estivesse no seu lugar.	A	B	C	D	E

APPENDIX I – Neutral IAPS pictures used for the slideshow (Lang, Bradley & Cuthbert, 2008)







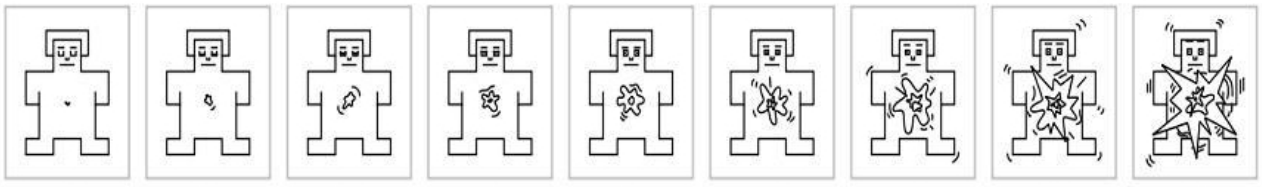



APPENDIX J – Self-Assessment Manikin (SAM; Bradley & Lang, 1994)

Por favor assinale, para cada uma das três escalas, o número correspondente à imagem que melhor corresponde à **forma como se sente neste preciso momento.**

A primeira escala corresponde à Activação Emocional.

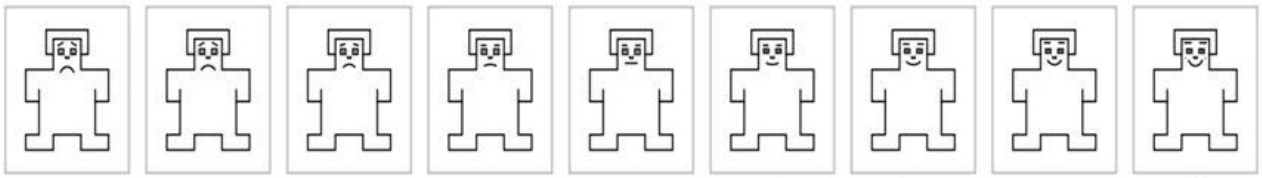
Se se sente bastante calmo, pode indicá-lo fazendo um círculo em torno do número correspondente à figura da esquerda (1). O extremo oposto da escala (9) indicará que se sente bastante estimulado ou activado. Em alternativa, pode indicar a forma como se sente através de níveis intermédios, entre 1 e 9.



1 2 3 4 5 6 7 8 9

A segunda escala corresponde à Valência Emocional.

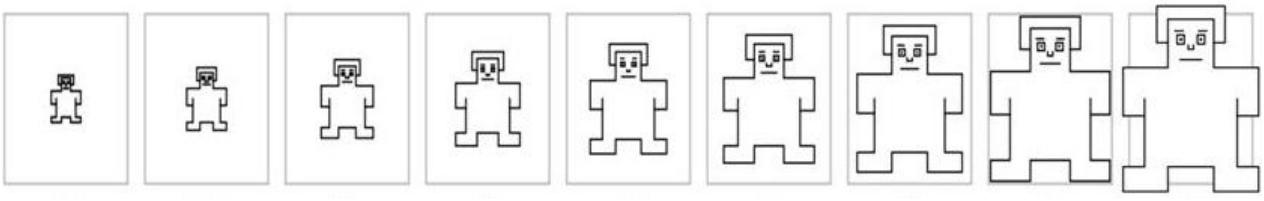
Se o seu estado emocional neste momento é de bastante desprazer ou desagrado, poderá indicá-lo fazendo um círculo em torno do número correspondente à figura da esquerda (1). Se, por outro lado, o seu estado emocional é de bastante prazer ou agrado, poderá indicá-lo escolhendo o extremo oposto da escala – a figura da direita (9). Tal como na escala anterior, pode indicar a forma como se sente através de níveis intermédios, escolhendo qualquer número compreendido entre 1 e 9.



1 2 3 4 5 6 7 8 9

A terceira escala corresponde à Submissão - Dominância Emocional.

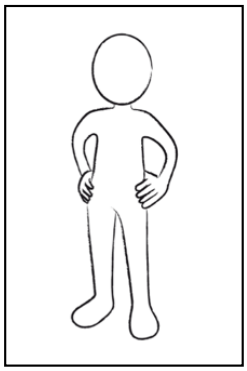
Se se sentir bastante submisso, dominado ou sem controlo, poderá indicá-lo fazendo um círculo em torno do número correspondente à figura da esquerda (1). Se, por contraste, se sente bastante dominador, controlado ou poderoso poderá indicá-lo escolhendo o extremo oposto da escala (9). Poderá também indicar a forma como se sente nesta dimensão escolhendo qualquer número compreendido entre 1 e 9.



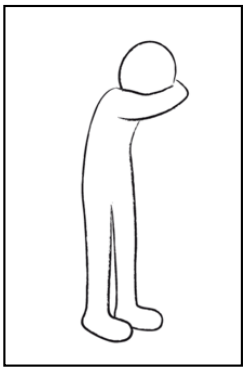
1 2 3 4 5 6 7 8 9

APPENDIX K – Pictorial Shame Scale (PSS) pictures

Picture 1

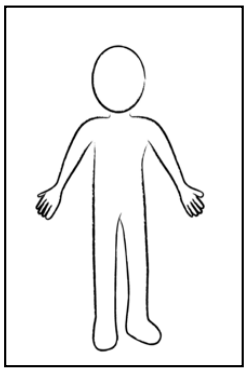


Picture 2

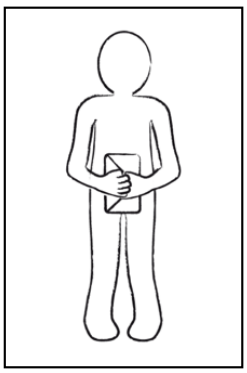


Picture 3

Picture 4

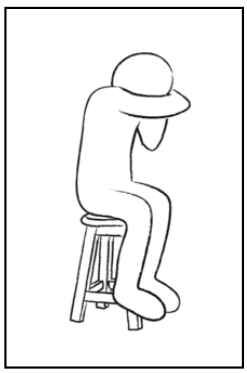


Picture 5

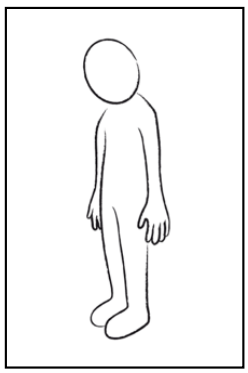


Picture 6

Picture 7



Picture 8



APPENDIX L – Pictorial Shame Scale answer sheet

Imagem 1

- ☐ Alegre
- ☐ Surpreendido
- ☐ Orgulhoso
- ☐ Expectante
- ☐ Relaxado
- ☐ Desafiante
- ☐ Divertido
- ☐ Sereno
- ☐ Desesperado
- ☐ Neutro
- ☐ Confiante

Imagem 2

- ☐ Triste
- ☐ Envergonhado
- ☐ Culpado
- ☐ Amedrontado
- ☐ Desesperado
- ☐ Frustrado
- ☐ Alegre
- ☐ Embaraçado
- ☐ Preocupado

Imagem 3

- ☐ Sereno
- ☐ Culpado
- ☐ Embaraçado
- ☐ Preocupado
- ☐ Amedrontado
- ☐ Pensativo
- ☐ Triste
- ☐ Envergonhado
- ☐ Desesperado
- ☐ Frustrado
- ☐ Divertido

Imagem 4

- [ ] Neutro
- [ ] Surpreendido
- [ ] Frustrado
- [ ] Expectante
- [ ] Preocupado
- [ ] Divertido
- [ ] Desapontado
- [ ] Disponível
- [ ] Embaraçado
- [ ] Sereno
- [ ] Extasiado
- [ ] Envergonhado
- [ ] Relaxado
- [ ] Desesperado
- [ ] Pensativo

Imagem 5

- [ ] Surpreendido
- [ ] Frustrado
- [ ] Envergonhado
- [ ] Preocupado
- [ ] Relaxado
- [ ] Amedrontado
- [ ] Neutro
- [ ] Extasiado
- [ ] Embaraçado
- [ ] Expectante

Imagem 6

- [ ] Eufórico
- [ ] Alegre
- [ ] Relaxado
- [ ] Divertido
- [ ] Extasiado
- [ ] Envergonhado
- [ ] Expectante

Imagem 7

- [ ] Envergonhado
- [ ] Triste
- [ ] Amedrontado
- [ ] Desesperado
- [ ] Frustrado
- [ ] Culpado
- [ ] Embaraçado

Imagem 8

- [ ] Frustrado
- [ ] Triste
- [ ] Neutro
- [ ] Culpado
- [ ] Extasiado
- [ ] Amedrontado
- [ ] Desapontado
- [ ] Embaraçado
- [ ] Desesperado
- [ ] Sereno
- [ ] Envergonhado
- [ ] Relaxado
- [ ] Expectante
- [ ] Preocupado

APPENDIX M – Test used as "Emotional Abilities Test"

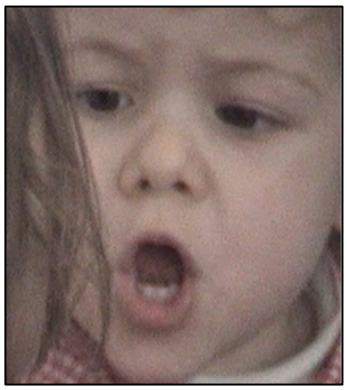
Esta tarefa faz parte de um teste destinado a avaliar a **capacidade de reconhecimento de emoções nos outros.** Esta capacidade é um importante preditor de sucesso, tanto na vida profissional como pessoal.

Instruções:

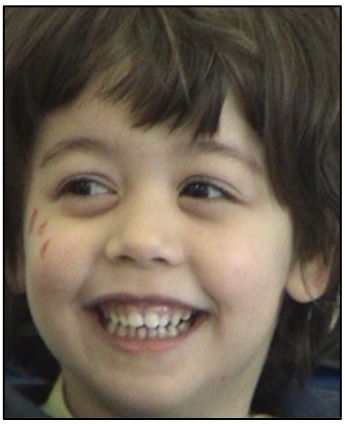
Este teste é composto por 6 imagens retiradas de filmagens de crianças em situações reais, nas quais estas estão a expressar determinadas emoções.

Por favor, assinale com um **X** a emoção que pensa que cada criança está a sentir na imagem correspondente. **Apenas uma das opções apresentadas está correcta**.

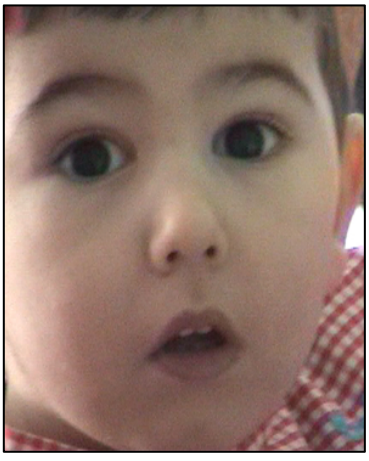
Terá um total de **2 minutos** para responder às 6 imagens que compõem este teste.



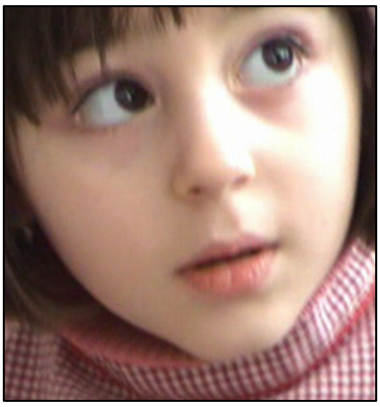
- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo



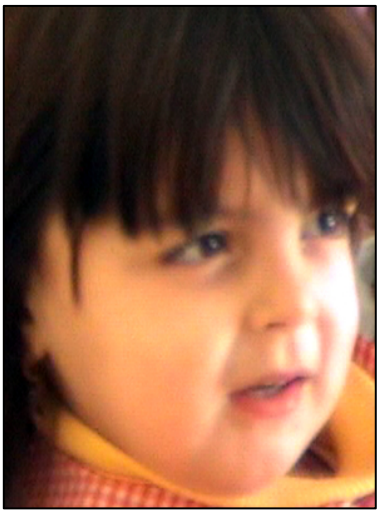
- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo



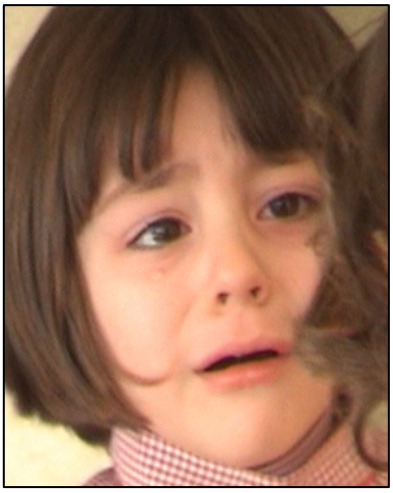
- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo



- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo



- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo



- [ ] Alegria
- [ ] Orgulho
- [ ] Medo
- [ ] Culpa
- [ ] Surpresa
- [ ] Vergonha
- [ ] Tristeza
- [ ] Embaraço
- [ ] Raiva
- [ ] Nojo

APPENDIX N – Test used as "Intelligence Test"

Este é um teste de **inteligência lógica**. A inteligência lógica é a capacidade que cada pessoa tem para raciocinar, por exemplo, com conceitos abstractos ou argumentações complexas. Este tipo de inteligência é um importante preditor do sucesso profissional e académico.

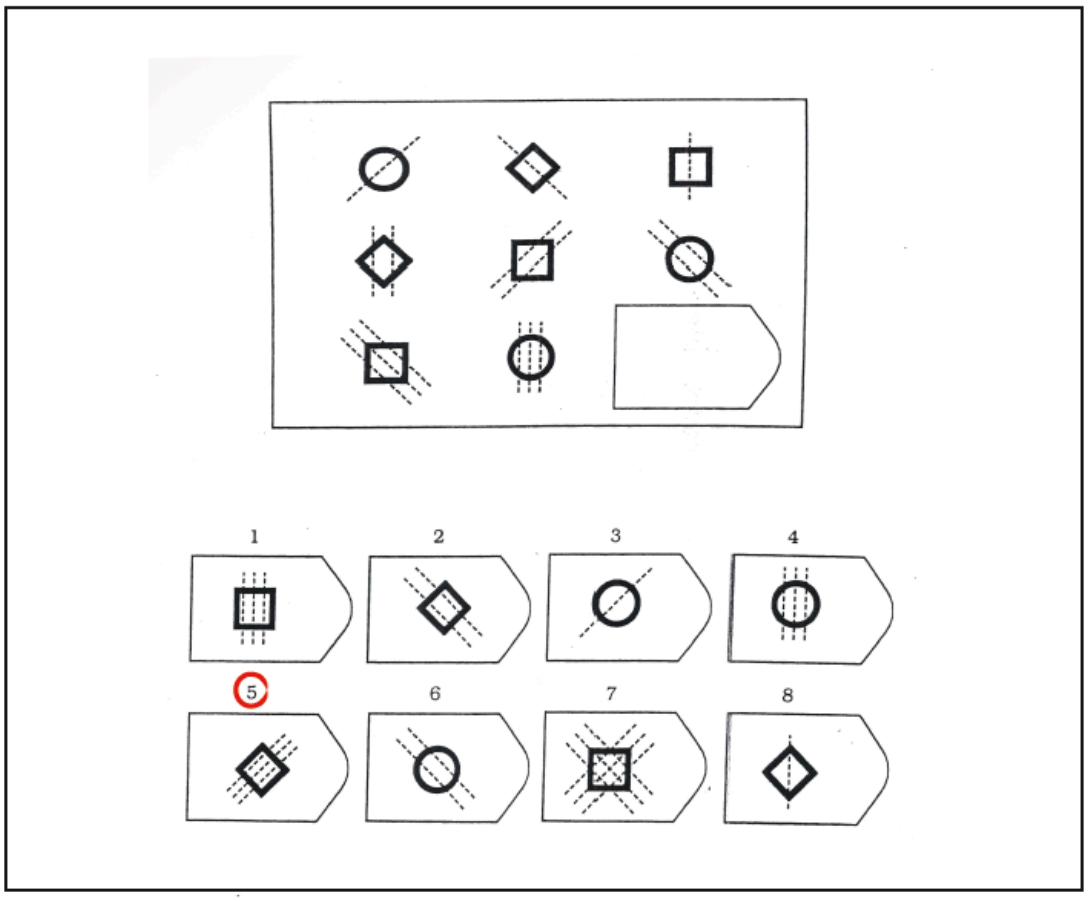
Instruções:

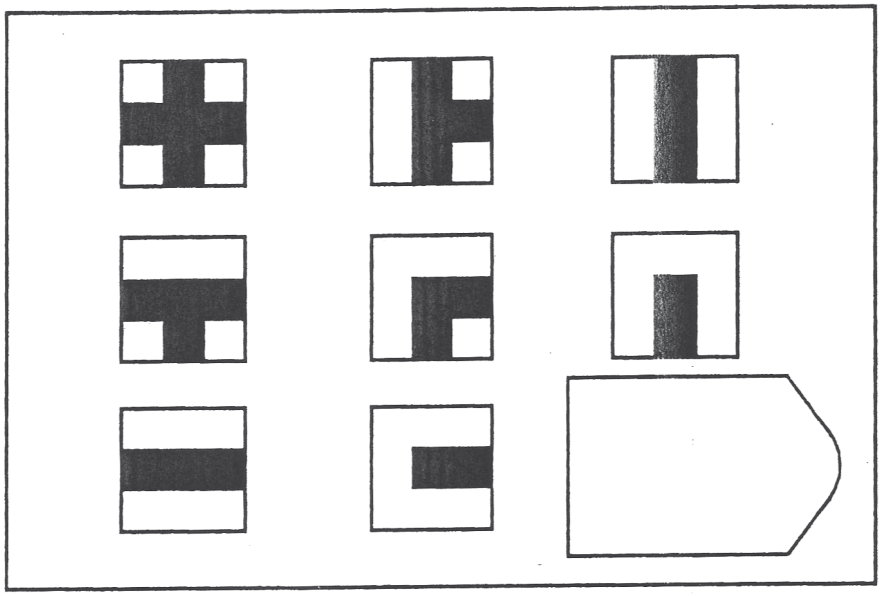
Deve olhar para cada página e **assinalar com um círculo o número da figura que pensa melhor completar a sequência apresentada**.

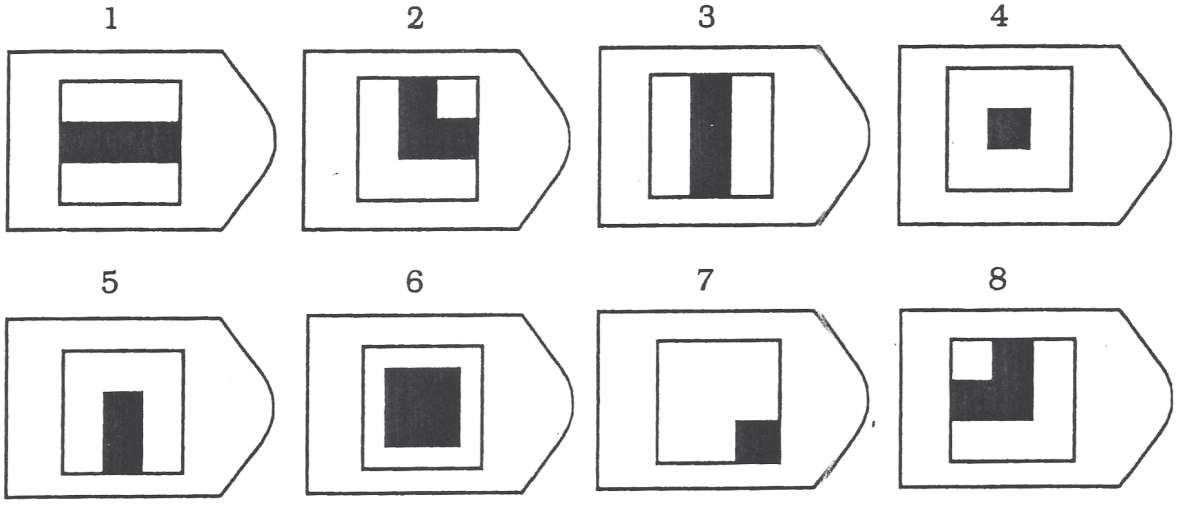
Neste teste existem respostas certas e erradas.

Terá um total de **5 minutos** para responder às **seis sequências** apresentadas.

Exemplo:



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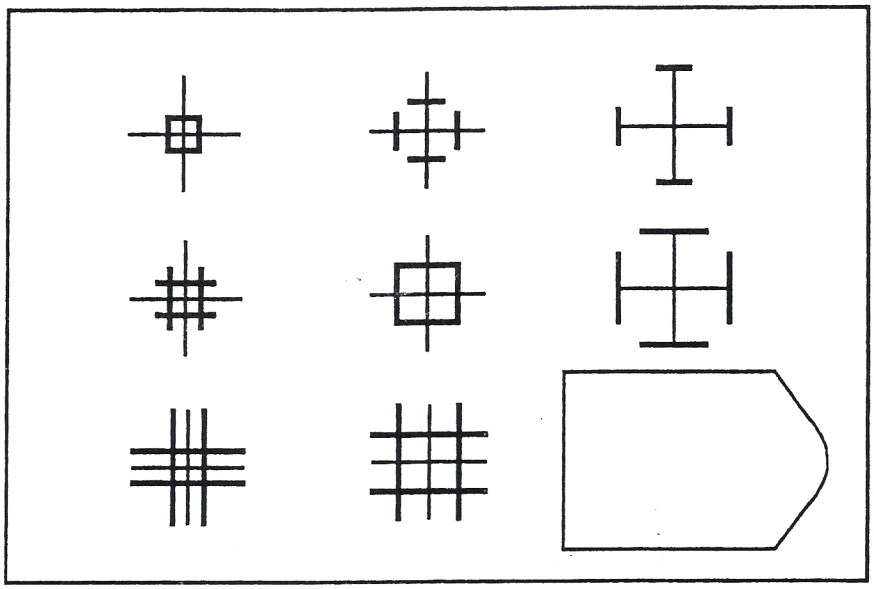

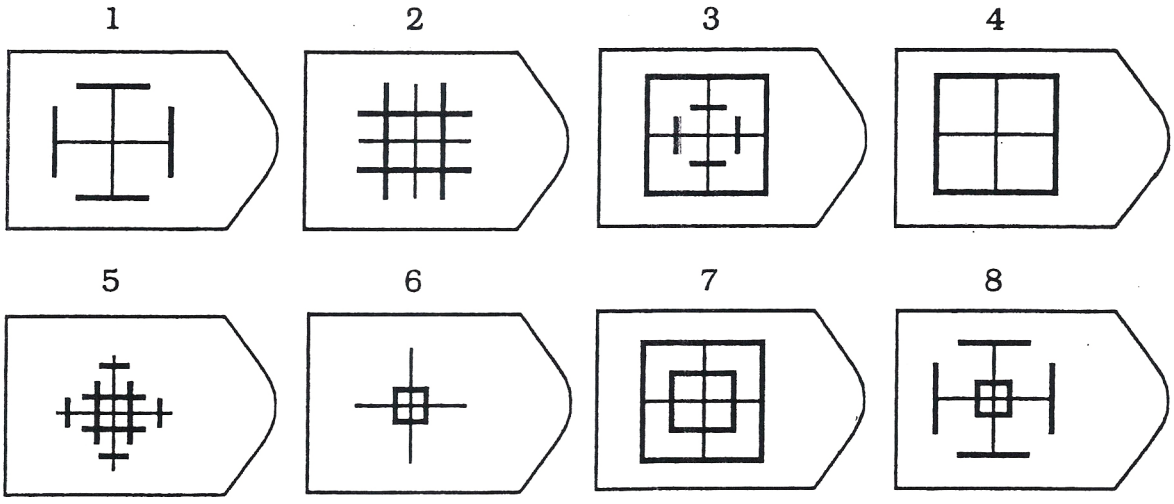
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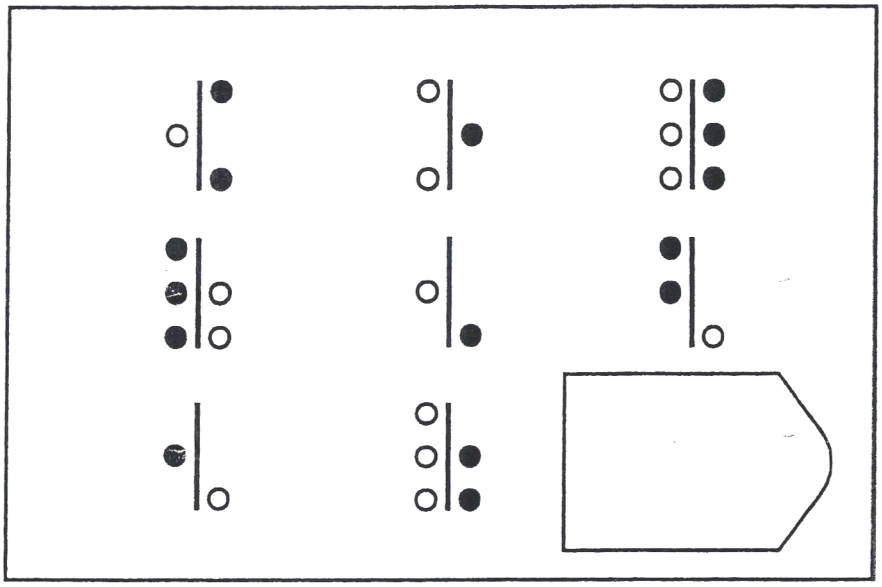

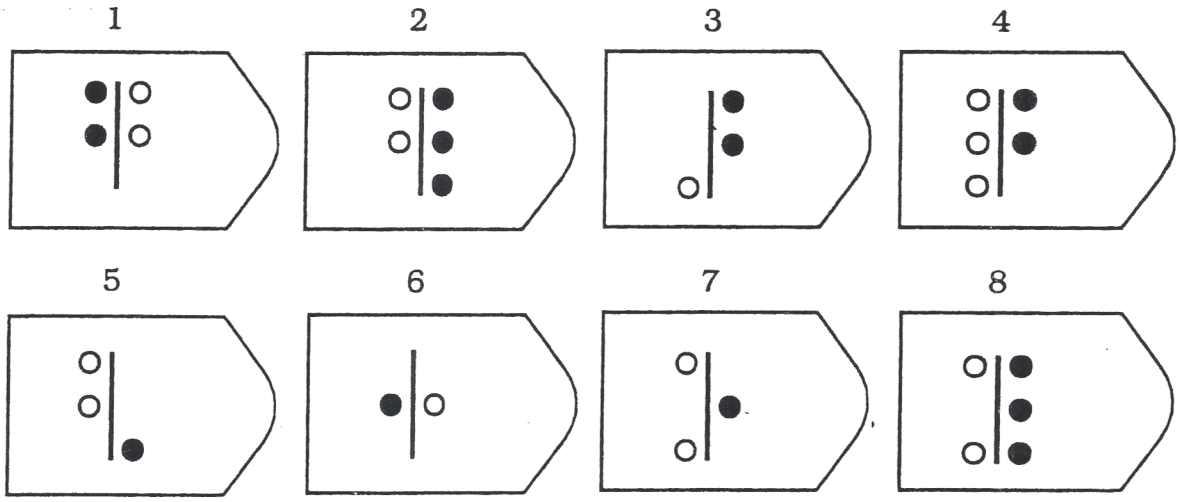
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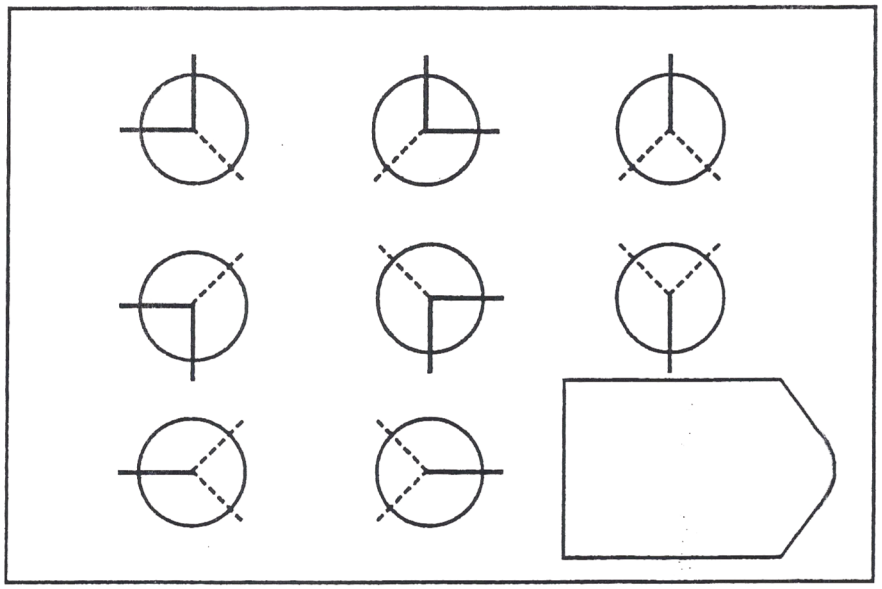

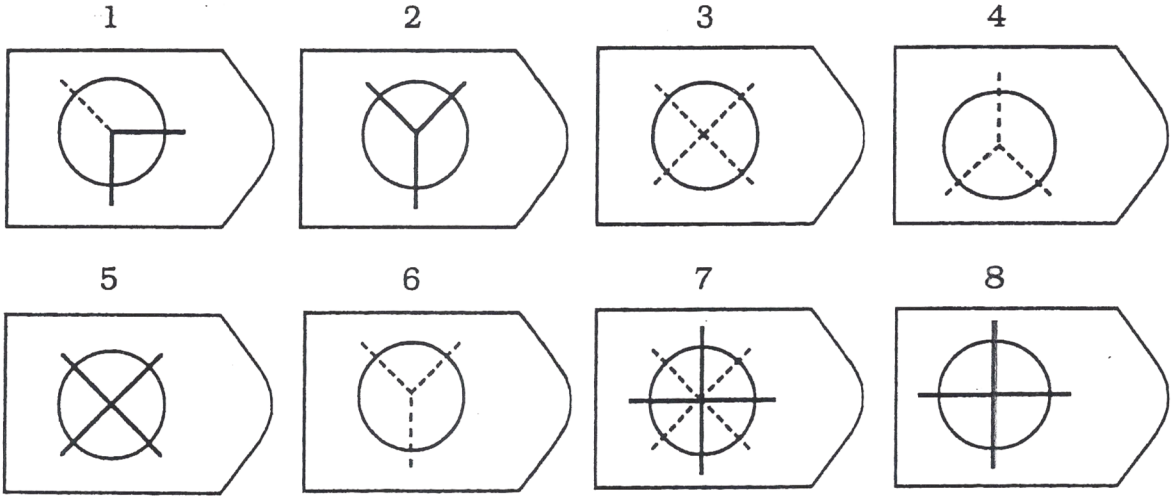
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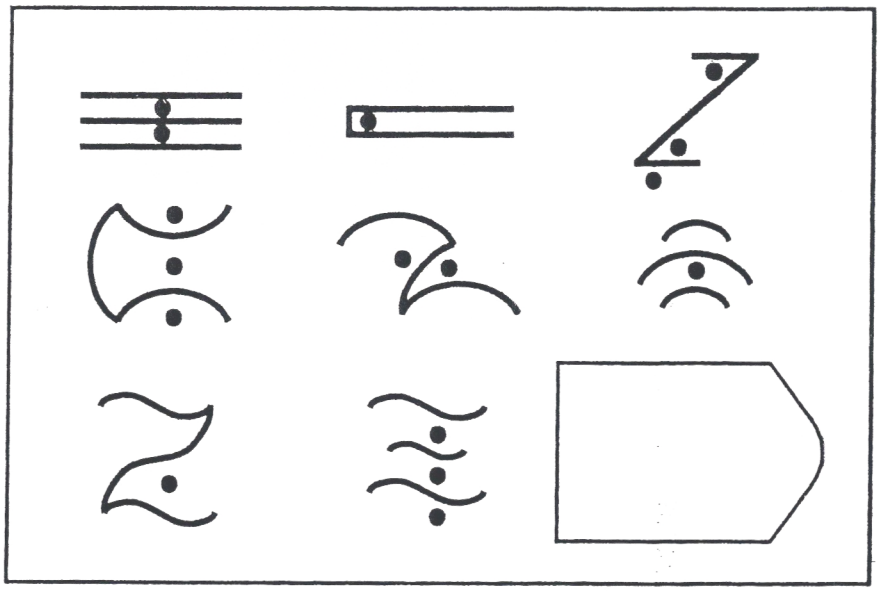

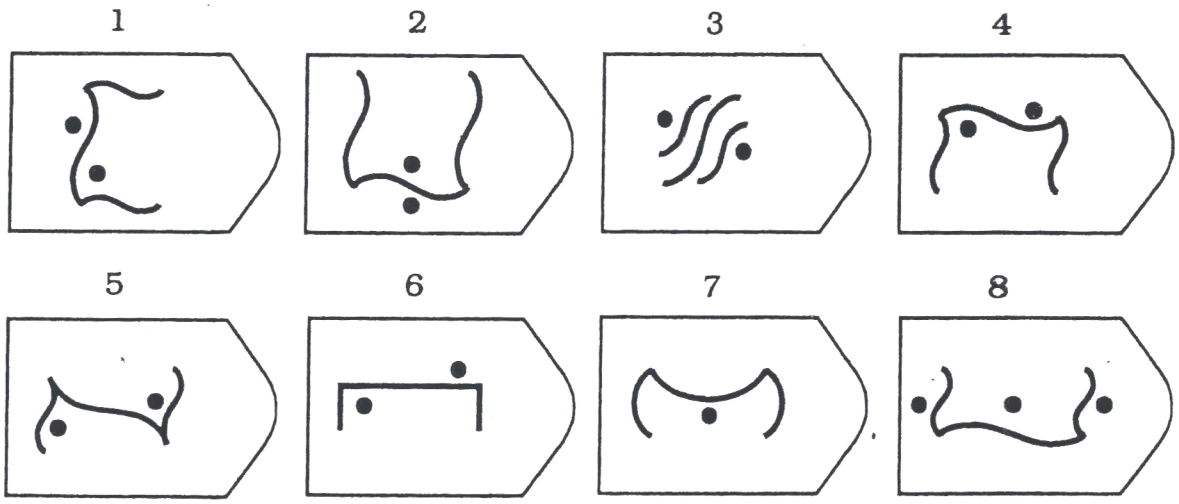
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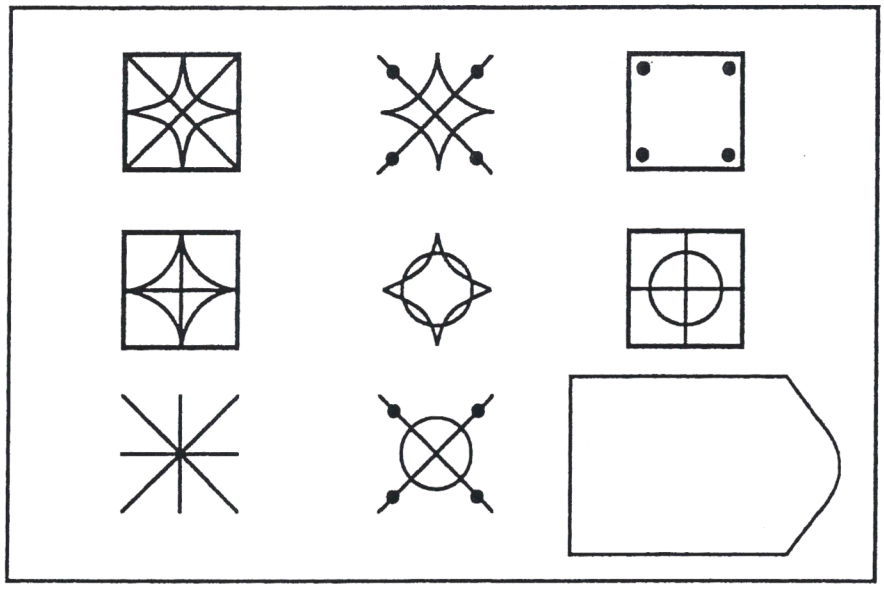

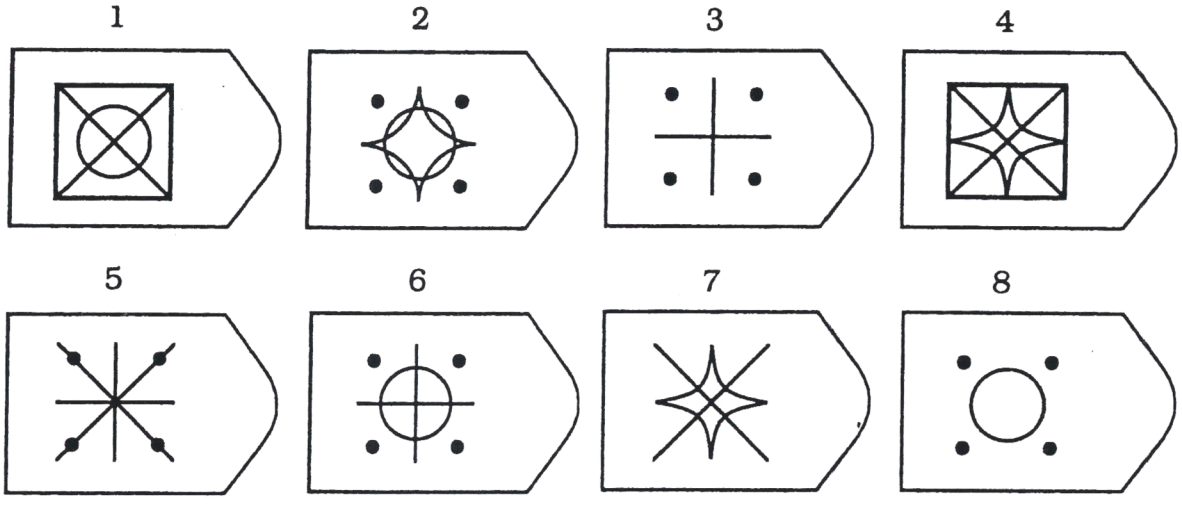
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APPENDIX O – Questionnaire used as prosocial behavior task (from http://www2.fpce.ul.pt/pessoal/jmoreira/Port/Prime.htm)

Idade: _____

Sexo: M ____ F _____

Para cada uma das palavras que se seguem, por favor indique **em que grau é que essas palavras evocam em si imagens mentais**.

Uma palavra pode ser considerada como uma palavra que não evoca imagens mentais se, quando a lê, não lhe ocorrem imagens concretas dessa palavra.

Pode ser considerada como uma palavra que evoca imagens mentais se, quando a lê, lhe ocorrem imagens específicas associadas a essa palavra.

Por exemplo, uma palavra como "procedimento" tenderá a evocar poucas imagens mentais, enquanto que uma palavra como "praia" tenderá a evocar muitas imagens mentais.

Faça essa avaliação utilizando a escala em baixo:

Nada	1	2	3	4	5	6	7	Muito

Para cada palavra, **assinale com um X o número que melhor corresponde à sua opinião**. Não existem respostas certas nem erradas.

	1	2	3	4	5	6	7
desvalorização							
destinatário							
felicidade							
melancolia							
aguarela							
complexado							
distrital							
inferioridade							
obstruir							
terrorismo							
furtar							
oferecer							
fraqueza							
crise							
crítica							

	1	2	3	4	5	6	7
inflamado							
dromedário							
pobre							
humilhação							
descontrolado							
desapego							
hortaliça							
rancor							
paz							
pica							
enxovalhar							
inflamado							
sozinho							
melhor							
marginal							
neutro							
divorciado							
envergonhar							
pantufas							
quilo							
fraquejar							
cadeira							
desabar							
imperfeito							
geometria							
desconforto							
criminalidade							
discórdia							
desmotivado							
pincelar							
atrocidade							
cansado							
concurso							
mal-amado							
cefaleia							
vaidade							