INTERACTION AND ITS FAILURES:
AN APPROACH THROUGH EMBARRASSMENT AND SHAME[*]

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ABSTRACT. The present study is a theoretical and methodological proposal rooted in the field of social developmental psychology and describes three objectives. First, it aims to show how transgressive situations are conducive to study of social norms governing interactions. Second, the similarities and differences between two emotions, namely shame and embarrassment, are outlined in order to better understand how their respective measures can highlight social norms in interactions. Third, we illustrate our proposal to study social norms through emotional reactions by presenting an ongoing experiment, that examines how children may react to a power situation.

Key words: social norm; transgression; embarrassment; shame; power situations; mixed-gender interactions; children

1. Studying the contours of interactions through transgressions of social norms

1.1. Social norms: definitions and functions

The term *interaction* refers to *"reciprocal influence that participants have on each other's actions when they are in physical presence"* (Goffman, 1967). Far

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from being random or arbitrary, an interaction is guided by *social norms* or *conventions*, namely, rules of socially valued behaviors or attitudes a given context (e.g., ways of speaking, dressing, using artifacts, etc.). Social norms play not only a *descriptive* role (i.e., as mere reflections of what is done, of what is taken for granted) but also a *prescriptive* one, as "compass for action", by encouraging certain socially desirable behaviors and attitudes while discouraging others. Social norms invite group members to coordinate and to display their commitment to the group, and thus they aim to reduce interpersonal conflicts and facilitate a cooperative functioning (Rakoczy & Schmidt, 2013, 2016).

The ability to assimilate and enforce social norms emerges at an early age, not only when norms are perceived as legitimate and emanating from an already established social group, but also when they are perceived as new and arbitrary. For instance, Abrams and Rutland (2008) observed that children aged 9 to 11 judged peers (i.e., ingroup members) who deviate from group norms more negatively than outgroup deviants, and preferred outgroup children who condemn deviance over ingroup members who do it ("black sheep effect"). Moreover, when 3-year-olds were taught the rules of a new game and then watched a puppet playing the game without following the rules, they taught the puppet the right way to play (Rakoczy et al., 2008, 2009; Schmidt et al., 2011, 2012). Thus, even very young children are not merely passive targets of social norms, but they actively contribute to enforcing them.

1.2. Sanctions for transgressions

In everyday interactions, the behavioral guidance of norms is performed by social sanctions emanating from the other interactants. Sanctioning a deviant behavior allows one to: 1) show adherence to norms, in order to build a positive public image, and 2) reinforce the predictability and the controllability of conducts, thus stabilizing coordination and promoting cooperation (Rakoczy & Schmidt, 2013). These other interactants sanctions take the form of verbal and/or non-verbal behaviors: some sanctions are *positive* and approving, rewarding the exemplary compliance of normative behaviors (e.g., smiling, explicit or tacit acquiescence, etc.), while other sanctions are negative and disavowing, punishing the infraction in response to deviant behavior (e.g., admonishment, angry looks, etc.) (Goffman, 1967).

However, these two types of sanctions are not equally salient. For instance, in a Western country, a woman wearing a skirt and mascara is unlikely to elicit any particular reaction and is perceived as *normal*, while a man dressed in the same way is likely to elicit some negative and noticeable reactions (e.g., surprise, distrust,

outright hostility…). Similarly, positive sanctions in the course of an interaction can be considered as "bonuses" for adherence to social norms: they relentlessly support the course of the exchanges underpinning a fluid and predictable "expressive order" (Goffman, 1967), but go unnoticed. In the example above, compliance with a gendered dress code may sometimes elicit polite assent, but most of the time, this assent is completely invisible. Conversely, the reactions of disapproval that follow the transgression of a norm are salient, even voluntarily amplified to appear as conspicuous. Bystanders may blame the counter-normative behavior, express skepticism through mimicry, disappointment or disgust, to ostensibly disassociate themselves from the author, etc. These visible marks of disapproval are intended to deter the transgressor from reoffending and any witnesses from committing an infraction in turn. In this sense, the negative sanctions that follow deviant behavior contribute to informal social control (Chekroun, 2008).

The integration of norms and peer pressure in cases of deviance has been observed in very young children. The case of gender norms is particularly illustrative since their transgression is judged negatively even by preschoolers. For example, negative reactions to atypical behavior (e.g., refusing to be friends with a boy who wears nail polish) appear as early as age 3 and increase until age 5 (Stoddart & Turiel, 1985; Ruble et al., 2006, 2007). Moreover, social control by peers is itself gendered, since it is greater when: 1) it comes from male witnesses than from female witnesses (boys are often more negative about violations of gender norm than girls who have more egalitarian attitudes), and 2) the transgressor is a boy (e.g., Blakemore, 2003; Ruble, 2006). As in adults, it is likely that negative sanctions such as rejection or teasing are more visible than positive sanctions that reinforce gender-conforming behavior.

2. Embarrassment and shame as observable traces of emotional reactions to a transgression

2.1. Reflexive social emotions as integrated "thermostat" supporting the expressive order of interactions?

Disapproving witnesses often have no particular legitimacy to sanction (Osgood et al., 1996), but take on the temporary role of "Robin Hood" for the situation, becoming temporary vectors of informal social control. While effective in "bringing deviants into heel", these types of negative sanctions require the active intervention of on-the-ground witnesses, making the process costly and relatively uncertain.

Indeed, witnesses may be inhibited or reluctant to act due to fear of retaliation, lack of resources, motivation, cognitive resources, or courage, etc. Moreover, the social control exercised by the witnesses necessarily acts *"downstream"*, once the infraction has been committed. To these *external* sanctions, *internal* sanctions must be added in order to optimize the maintenance of the expressive order. The interactants not only incorporate norms (among others in the form of *habitus*, Bourdieu, 1986), they also internalize *the penalizing potential that could result from their violation.* Thus, people tend not to deviate from the norm to avoid sanctions such as the fear of ridicule, which is quite mild, to social opprobrium, which can be much more harmful.

In addition, psychological and social motivations related to self-presentation, reputational concerns and impression management also encourage people to shape their own public image according to social norms. Indeed, human beings early 1) assume implicitly that their behavior or appearance could be evaluated by others positively or negatively, and 2) have a default preference to elicit positive instead of negative evaluations from others (Botto & Rochat, 2018, 2019). Consequently, they use reputational tactics like conforming to majority opinion (Haun & Tomassello, 2011), or appearing to be cooperative: for example, adults tend to be more generous in public compared to in private (Dana et al., 2007) and children become more altruistic when a third-party observer is watching them (i.e., sharing more resources, being more helpful, stealing less or cheating less; Engelmann et al., 2012; Leimgruber et al., 2012; Piazza et al., 2011; Shinohara et al., 2019, 2021). Both avoiding deviant conducts and building one's positive public image are "upstream" self-regulation that contributes to informal social control, in addition to that exercised by others. Taken together, these mechanisms (i.e. reactive or "downstream" vs. preventive or "upstream", originating from others vs. oneself) ensure an anticipatory filtering of counter-normative behaviors.

Nevertheless, these filtering mechanisms are not always sufficient to prevent certain deviations from occurring. Among internal mechanisms, in addition to *preventive* sanctions, some *reactive* sanctions, acting a posteriori (i.e., once the norm has been transgressed), are also necessary. To be effective, they must act quickly, almost automatically and in a way that is relevant to the situation. Certain emotions may play this "thermostat" role in any potential transgressor, allowing upstream self-regulation. For example, when pairs of 3-, 4- and 5-year-old children were confronted with a norm violation such as inequity in resource distribution, namely they receive either more or less stickers than their social partner, they expressed negative emotions, such as unhappiness (LoBue et al., 2010). Specifically, *reflexive social* emotions such as shame, guilt, pride or embarrassment, participate in early embodied social control (Semin & Papadopoulou, 1990). Indeed, it is well established that these

reflexive social emotions motivate strategies to avoid rejection and facilitate relational appeasement and social cohesion (e.g., Chobhthaigh & Wilson, 2015; Miller, 1996; Muris & Meesters, 2014). Children acquire these emotions later than basic emotions (happiness, fear, sadness, anger, surprise, disgust) which exist from the first year of life (e.g., Colonnesi et al., 2010; Lewis et al., 1992; Tangney & Dearing, 2002). Their development goes hand in hand with the acquisition of social norms, in a double movement. It is because children assimilate social norms that they are gradually able to evaluate their own behavior as deviant or not, and thus become capable of feeling shame or embarrassment when they transgress (or pride when their conduct is noticeably exemplar or conforms to the norm perceived as important). Moreover, it is also because shame and embarrassment are unpleasant that children internalize norms effectively. In line with the image proposed by Harris (2006), just as physical pain warns the organism of a threat to its physical integrity, shame and embarrassment are a kind of "social warning" that allows the maintenance of the individual's "social integrity". In addition, their display after violating a norm communicates the transgressor's knowledge of the violated norm and a submissive apology to appease others (Keltner, 1995; Tangney et al., 1996). In short, these painful emotions prevent deviance (upstream, with the avoidance of transgressions) or minimize it (downstream, with reparative behaviors and the message of "repentance" for one's conduct expressed via the simple manifestation of one's emotion).

2.2. Indicators of shame and embarrassment, emotions typical of public norm transgressions

When violating a norm, transgressors may react emotionally either to the violation itself or the sanctions from witnesses. Their emotional responses encompass a variety of observable states, ranging from simple clumsiness to an inability to express oneself. Among reflexive social emotions, embarrassment and shame are of particular interest for four reasons.

First, they always occur in front of a real or imaginary audience (e.g., Cova, 2019; Miller, 1996; Smith et al., 2002). Second, they result from a norm transgression. In the case of embarrassment, the infringed norm is a social convention: there is a discrepancy between the real image that one gives by one's conduct and a status or a role that one is supposed to assume (for example, arriving in disguise at a party where no one else is, using familiar terms when talking to one's superior). In the case of shame, a shortcoming contravenes a personal standard often associated with a real or projected status, that is damaged or lost (e.g., failing through incompetence in an oral presentation that is important to us) or a norm underpinned by moral values (e.g., allowing someone to be punished instead of oneself, laughing with

others at someone who is absent) (Lewis, 2008; Maire et al., 2019). Third, they are associated with an evaluation of the Self, either in its central aspects for shame, or in more peripheral ones for embarrassment. Since norms are incorporated, their violation could elicit emotional states related to self-evaluation and to the (in)adequacy to the ongoing interaction. Finally, these two emotions are not only felt, but they are also expressed. Their expression serves a communicative purpose, as they signal to others and adherence to group social and/or moral norms.

A key issue for interactants is to identify expressions of shame and embarrassment. Verbally, they are often exemplified by silence and show few typical manifestations, only some negative self-evaluations (e.g., "I'm no good at this" for shame), in contrast to positive self-evaluations for pride (e.g., "aah!", "I did it!") (Alessandri & Lewis, 1993, 1996; Edelman & Hampson, 1981; Lewis et al., 1992). In speech, embarrassment can be identified by paraverbal cues such as stuttering, an unusually low- or high-pitched voice, quavering or slurred speech, nervous laughter or giggling. Finally, shame and embarrassment share certain non-verbal displays: blushing, blanching, blinking, sweating, lowering of the eyes, gaze aversion, attempts to hide face bowing of the head, tremor of the hand and hesitating or vacillating movement (Botto & Rochat, 2018; Goffman, 1955, 1956; Keltner, 1995; Ogien, 2019; Rochat, 2009; Stipek et al., 1992; Tracy et al., 2009). However, embarrassment is characterized in adults by a dynamic and orderly 5-second sequence of downward gaze, head movement and a non-Duchenne, nervous, coy or silly smile, as well as increased body motion (Edelman & Hampson, 1981; Keltner, 1995). Nervous laughter and hands covering the mouth have been observed in young children (Buss et al., 1979). Shame, on the other hand, has a static and non-smiling display, with, in children, body collapsed, corners of the mouth downward, lower lip tucked between teeth, eyes lowered with gaze downward or askance, withdrawal from task situation (in contrast to pride, which is defined as erect posture with shoulders back and head up, smile, eyes directed at others, points at outcome or applauds; Alessandri & Lewis, 1993, 1996; Ferguson et al., 1991; Lewis et al., 1992). The main similarities and differences between shame and embarrassment are summarized in Table 1.

Thus, embarrassment and shame, insofar as they produce observable traces in the interaction which serve to signal to others that one has internalized the social norms, constitute indirect but effective means to study social norms. Since even young children know social norms and are able to express social reflexive emotions, below we propose to examine how they emotionally respond to a violation of a gender norm.

	Shame	Embarrassment	References
Triggers	Public transgression (real or imagined) of a norm...		(Smith et al., 2002)
	...underpinned by (global) moral values or personal standards	...linked to a (local) social convention	
Link with the status in interaction	Associated with a loss of status	Associated with a change in status or with a counter-normative status	
Evaluation...	...of the core self	...of the presentation self	(Miller, 1996; Tangney & Dearing, 2002)
Age	From 3 years	*Primitive embarrassment (sensitive to an audience reaction): from 5 years* *Mature embarrassment (less sensitive to an audience reaction, resulting from a discrepancy between the desired self-image and the effective self-image): from 6 to 10 years?*	(Bennett, 1989; Chobhthaigh & Wilson, 2015; Colonnesi et al., 2010; Lewis et al., 1992; Seidner et al., 1988)
Experience	Self-evaluation ...		(Maire et al., 2019)
	... always negative: depression, regret, feeling of being worthless, incompetent, inferior or powerless	... often negative: feeling of being clumsy, awkward, unsuited to the situation, uncomfortable, unmasked	
Verbal cues	Silence, little/no typical verbal expression *Negative self-evaluation de soi négative (e.g., "I'm no good at this")*	?	(Alessandri & Lewis, 1993, 1996; Buss et al., 1979; Edelman & Hampson, 1981; Ferguson et al., 1991; Lewis et al., 1992)
Paraverbal cues	?	Stuttering, quavering/disturbed speech or breaking of the voice, Unusually low- or high-pitched voice *Nervous laughter and giggling*	(Ferguson et al., 1991; Goffman, 1955; Keltner, 1995; Ogen, 2019; Tracy et al., 2009)
Non-verbal cues	Static display No smile *Body collapsed, corners of the mouth downward/lower lip tucked between teeth, eyes lowered with gaze downward or askance, withdrawal from task situation*	Blushing, blanching, blinking, sweating, lowering of the eyes, gaze aversion, attempts to hide face bowing of the head, tremor of the hand, and hesitating or vacillating movement Dynamic display in an ordered and brief sequence (coy, silly, non-Duchenne smile, head movement) Increased body motion *Nervous laugh and hands covering the mouth*	(Alessandri & Lewis, 1993, 1996; Botto & Rochat, 2018; Buss et al., 1979; Edelman & Hampson, 1981; Ferguson et al., 1991; Goffman, 1955; Keltner, 1995; Lewis et al., 1992; Seidner et al., 1988)
Interpersonal functions	Inhibition of morally undesirable/inappropriate behavior	Communication of adherence to social norms and a desire for appeasement	(Keltner, 1995; Tangney et al., 1996)

Table 1: Summary of similarities and differences regarding triggers, self-evaluation, age, associated experiences, interactional cues (verbal, paraverbal, nonverbal), and interpersonal functions of shame and embarrassment. *Items in italics refer to results obtained in children.*

3. Empirical proposal

3.1. Asymmetrical situations as highly normed situations useful to study the emotional reactions of a transgressor?

Although norms permeate social life from its inception, their influence on behavior varies according to context. Asymmetrical situations, in which an individual has power over another, may be good candidates to study norms transgressions, for at least three reasons. First, this type of interactions is often associated with highly codified communication rules, which make deviations from the norm very salient. Second, power relations often carry high stakes because they are often related to symbolic, economic or identity-related issues. As a result, actors may be particularly motivated to ensure that exchanges run smoothly, and therefore the sanctions for failure may be more marked than in egalitarian interactions. Third, power relations involve a verticality that engages social self-evaluation. A person's social image is gauged 1) as a dominant or subordinate individual, and 2) as a representative of one's own social group whose status varies within the social space (cf. "ingroup self", Pinto & Marques, 2008). Such a public negative self-evaluation is at the heart of the reflexive social emotions mentioned above.

In sum, since power asymmetrical interactions provide an example of easily detectable, heavily sanctionable and potentially emotionally charged transgressions, they appear as an opportune context to identity some traces of embarrassment and shame, as reflections of internalized social control and incorporation of norms.

3.2. Ongoing study

Here we present the experimental design of an ongoing study with 8-9 year old children, which is part of a larger project investigating how the conceptualization of gender hierarchies emerge in childhood. People typically view the gender distinction as a status distinction (Carli & Eagly, 2001), and by preschool age, children are already aware of male power (Charafeddine et al., 2020). In a cultural context imbued with a gender norm associating power with masculinity, one can ask about children's readiness to identify with the dominant or subordinate character, not only in situations where the interaction conforms to the norm (M>F) but also when it contravenes the norm (F>M). Children's reactions may be an indicator of the degree to which the male power norm permeates the construction of their social self. We therefore seek to investigate the social reflexive emotions that arise in these situations.

In this work in progress, the experiment consists of presenting children with an image of two characters interacting, one in a posture of dominance (head up, pointing the finger like someone giving an order) and the other in a posture of subordination (head down, contrite posture, see Figure 1). Children are first asked to identify with one of the two characters, by associating their own picture with the chosen character (i.e., dominant or subordinate). Then, they are shown the face of the other character, revealing their gender. The resulting power interaction can be either mixed (F-M) or unmixed (F-F, M-M), and either normative (M>F) or counter-normative (F>M). A hidden camera films the children as they discover the gender of the other character in the image, in order to capture any possible facial, gestural and vocal emotional expressions. Based on the respective indicators identified above (Table 1), these different expressions will be rated using the Facereader software. Children are also asked to indicate, on illustrated scales, their level of embarrassment, shame, surprise, pride and fear immediately after the discovery of the other character's gender.
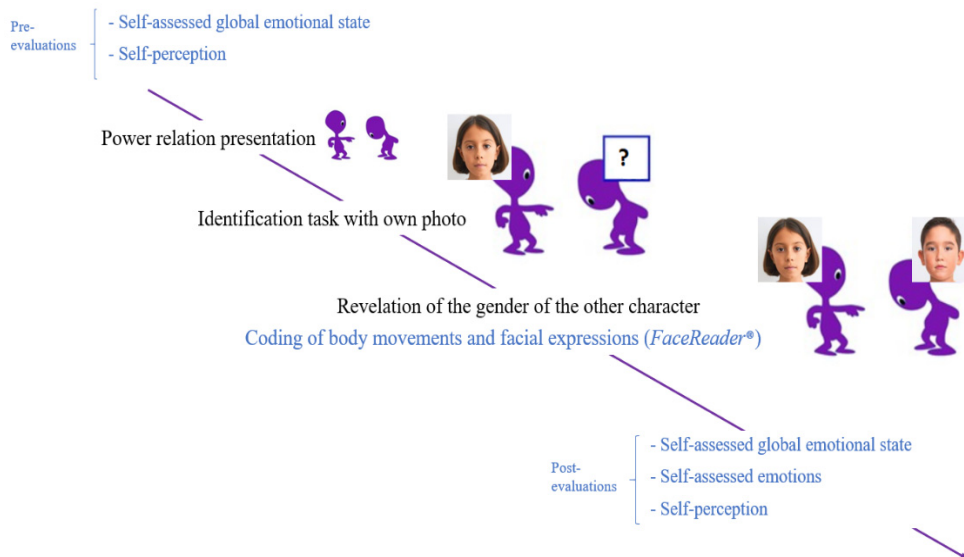
Figure 1: Time course of the study (NB: in the example, the participant is a girl, the interaction is mixed and the situation is counter-normative since the participant has been associated with the dominant character).

In addition, self-perception (Harter, 1982; Maintier & Alaphilippe, 2006) and general emotional state are assessed before and after this sequence through direct questionnaires. Shyness and competitive behavior are also rated through parental questionnaires (Crozier, 1995; Tassi & Schneider, 1997).

Our main hypothesis is that the counter-normative mixed-gender condition (F>M) will elicit more shame in boys than the same-gender condition (M>M), and more embarrassment in girls than the same-gender condition (F>F). Indeed, boys will consider the F>M interaction as a loss of status, that may elicit shame. In contrast, girls will see it as a discrepancy between their gender and the high status that they endorsed in the interaction, that may create embarrassment (no pride). A secondary hypothesis is that variations in emotional state and self-esteem (i.e., pre- vs. post- evaluations) will be greater in the mixed-gender condition than in the same-gender condition. In addition, shyness is expected to be associated with more shame and embarrassment, particularly in the counter-normative situation, and competitive behavior is expected to be associated with more pride.

3.3. Avenues of discussion and questions in progress

The present paper proposed that everyday transgressions, especially those involving power relations, may be useful for understanding how social norms govern interactions because transgressions often produce observable emotional reactions. However, many questions regarding gender identity and cognitive development remain unanswered.

In the ongoing study as well as in most publications, gender identity is considered as stable, objective and treated as a binary measure (i.e., participants are either boys or girls). However, recent literature indicates that some children might not identify with a binary gender. It suggests that gender identity may also be treated as a subjective and continuous measure, for example by using a continuum ranging from 'feeling totally like a boy' to 'feeling totally like a girl' (Gülgöz et al., 2022). Adding a measure of felt gender identity to our current protocol may be a mean to capture some gender differences in responses to counter-normative situations in a more fine-grained way.

Moreover, will 8-9-year-old children be old enough to have integrated gender norms and hence be sensitive to the proposed counter-normative situation? In addition, comparisons between different age groups would also be useful to see if with age, emotional reactions change. On the one hand, it can be hypothesized that the *experienced* emotions might increase because internalized social control becomes more powerful as social norms are acquired. On the other hand, it can

also be hypothesized that the *expressed* emotions might decrease because the control of emotional expressions develops, thus making it possible to mask them if necessary. Moreover, the asymmetrical situation presented here induces social power via postures related to physical dominance, that are salient aspects of the interaction. But the cues that children use to infer power relations are numerous and go far beyond the physical manifestation of power. Individuals considered as powerful are those who 1) access to or control over resources, 2) achieve their intended goals at the expense of others, 3) control others' outcomes, for example by granting and denying permission, 4) giving others orders, for example to divide labor, and/or 5) setting norms, that may be explicitly stated (e.g., powerful children deciding the rules to a game) or implicitly manifested (e.g., peers imitating powerful children's behaviors or appearance) (Charafeddine et al., 2020; Gülgöz & Gelman, 2017). Thus, could we sketch the same hypotheses by inducing power asymmetry through other power cues, that might be less immediately readable than physical dominance? Finally, we can also ask whether children are aware of their emotional reaction. If so, how do they explain it? Can they invoke i) personality traits vs. gender-specific characteristics, ii) stable vs. temporary explanations, iii) global vs. local, limited to the situation presented?

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