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# New Developments in Understanding Morality: Between Evolutionary Psychology, Developmental Psychology, and Control-Mastery Theory

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The aim of this article is to present an overview of several recently proposed hypotheses about the development of morality and guilt during the evolution of our species and the individual psychic development. The article will show how group selection seems to have favored the development of prosocial motivations, emotions, and skills, which are the basis of “moral” judgments and behaviors, and how the specific experiences of each individual and her/his belonging to a specific culture shape this first moral innate “draft.” We will then review relevant empirical data about the development of guilt in infancy and early childhood from empathic concern and the tendency to feel responsible for other people’s wellbeing, and the temperamental and environmental factors at the basis of adaptive and maladaptive guilt. Finally, we will show the substantial compatibility between these recently developed hypotheses and data and the hypotheses developed by the Control-Mastery theory starting from clinical observation and from the ideas of several psychoanalytic authors.

*Keywords:* morality, group-selection, guilt, control-mastery theory

Recent studies from an evolutionary and moral-psychology perspective (Sober & Wilson, 1998; Tomasello, 2016; D. S. Wilson, 2015; E. O. Wilson, 2012) suggest that the evolution of human morality followed the evolution of complex cooperative skills. Group selection, in fact, has favored the emergence of abilities and emotions that guarantee cohesion within groups and the emergence of individuals who are intuitively and emotionally sensitive to a wide range of “moral principles” (Haidt, 2012).

From an ontogenetical point of view, this moral sensitivity is inborn and connected with relational competencies such as the ability to experience empathic concern for other people, to feel responsible for their wellbeing, to understand the inner state of others, and to display prosocial behaviors (Davidov, Zahn-Waxler, Roth-Hanania, & Knafo, 2013; Zahn-Waxler & Radke-Yarrow, 1990). This moral sensitivity is then shaped by the cultural norms learned within the interpersonal context in which the individual grows up.

Among moral emotions, we will focus primarily on guilt, on its ontogenetic development, on the temperamental and environmental factors affecting its evolution, and on its association with internalizing and externalizing problems when a person feels a maladaptive and exaggerated sense of responsibility for the wellbeing of others in situations that cannot be controlled or repaired.

Finally, we will show how control-mastery theory (CMT; Gazzillo, 2016; Silberschatz, 2005; Weiss, 1986, 1993), a cognitive-dynamic relational theory developed over the last 40 years by the San Francisco Psychotherapy Research Group, is in line with contemporary knowledge about morality and guilt and allows us to better understand several clinical manifestations of unconscious maladaptive guilt and their developmental roots.

## The Evolutionary Basis of Human Morality

In recent decades, research on moral development has been increasingly influenced by an evolutionary perspective (Engelmann & Tomasello, 2018). Numerous studies (e.g., Davidov, Zahn-Waxler, Roth-Hanania, & Knafo, 2013; Hamlin, Wynn, & Bloom, 2010; Svetlova, Nichols, & Brownell, 2010) reveal that from a very young age, human beings show skills, motivations, and emotions that allow them to express “moral” judgments and make morally relevant choices. This suggests that moral functioning can no longer be considered a mere outcome of emotional and cognitive development and of socialization practices, but it is at least partially the result of processes of natural selection.

Cooperation and altruism, and their uniquely human companion known as morality, have long been a mystery for the theory of

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evolution through natural selection (Wilson, 2015). Why would natural selection favor individuals who renounce something for themselves in order to help another individual?

Cooperation patterns occur in nature in two fundamental forms: mutual collaboration and altruistic help (particularly where there is no immediate reciprocity between individuals). If, from an evolutionary perspective, *mutualism* can be explained by the fact that all the cooperating individuals get an immediate benefit from it, the case is different for *altruistic help*, whose evolution has been at the center of a heated debate since the second half of the last century. The neo-Darwinian hypotheses formulated in those years, which considered the gene as the only selection unit on which natural selection operates, reduced altruism into a subtle form of disguised selfishness. According to the theory of kin selection or inclusive fitness formulated by Hamilton (1963), for example, individuals of the same species would be more or less inclined to help each other according to their kinship coefficient. An individual would behave altruistically toward kin because this favors the transmission of his or her own genetic heritage to future generations. This theory, however, cannot adequately explain cooperation among nonrelatives. Another classic hypothesis for explaining expressions of altruism without immediate reciprocity among nonrelatives (Trivers, 1971) is that the individual helps his fellow because he expects to be repaid later in time so that in the long run both can benefit from this exchange. However, this conceptualization poses two problems: (a) the problem of the motivation of the first altruistic act and (b) the problem of defection, because there is no direct or necessary contingency between altruistic behaviors. In other words, the reciprocity of the “tit for tat” cannot function if there is not some form of “social contract” between the individuals that obliges them reciprocally: The altruistic action of the first actor would be based on a blind optimism, whereas the second actor, who benefits from the altruistic act, would have a very high incentive to defect before and without reciprocating. Without a “contract”, therefore, reciprocity does not have enough rational or emotional power to motivate altruistic behavior.

Starting in the 1970s, the hypothesis of a multilevel natural selection, already proposed by Darwin (1871), has been widely reconsidered. Biologists such as George Price (Harman, 2010), David Sloan Wilson (1975) and Michael Wade (Arnold & Wade, 1984) have begun to accumulate empirical evidence supporting the existence of group selection processes and to propose mathematical models that formalize it.<sup>1</sup> According to the multilevel selection theory (Wilson, 2015), the process of natural selection can act on multiple levels of the biological hierarchy, that is, on any entity exhibiting some degree of heritable variation (genes, organisms, populations). In a multigroup population, selection within the group favors traits that increase the relative fitness of the individuals who exhibit them; between-group selection, on the contrary, favors the traits that increase the group’s relative fitness while placing the individual who displays them in a disadvantaged relative fitness condition within her/his group. In this sense, cooperative behaviors that involve a cost to the individual who performs them but benefit the group would guarantee a competitive advantage to the group to which that individual belongs compared to other groups.

However, the cost paid by the unselfish individual is not truly a cost if one considers that interdependence is the essence of the social life of all cognitively and socially complex organisms. If the

survival of each member of the group depends on the survival of his social group (e.g., because any individual needs others in order to be protected and helped) then it is in her/his interest to keep alive each member of the group. Therefore, the chance of carrying out an altruistic action is influenced by the importance for the unselfish agent that the beneficiary of his altruistic action is alive and in good health for future interactions. From this perspective, an altruistic behavior is not motivated by the expectation of reciprocity, as supposed by the classical hypothesis of reciprocity, because individuals are already repaid for their altruistic actions in terms of group benefits. This interdependence perspective has the advantage of integrating mutualism and reciprocity thereby providing a sounder ground for explaining the motivation behind altruistic behaviors.

Presumably, throughout its history, the human species has encountered adaptive conditions that have made group selection a relevant evolutionary force, shifting the balance of human sociability from competition to cooperation and transforming the strategic cooperation of great apes into genuine human morality. These adaptive conditions have been promoted by socioecological changes that made human beings necessarily interdependent and cooperation an inescapable necessity for survival and reproduction. Within this context, *individuals who recognized their interdependence with others and behaved according to a cooperative rationality had an adaptive advantage*. The evolution of morality, therefore, concerns the set of proximal psychological mechanisms (cognitive, sociomotivational, and self-regulating processes) that support new species-specific forms of interaction and social organization (Tomasello, 2016).

However, such an explanation is still incomplete because it does not solve the problem of free riders; cooperators have an adaptive advantage only if they are surrounded by other cooperators. Once the members of one species have chosen the path of cooperation, they can actively try to push their conspecifics to cooperate. Through the *choice of the partners*, the cooperators simply avoid interacting with those who do not cooperate; through the *control of the partner*, the cooperators try to make sure that their partners cooperate. To control the partner, human beings have evolved more punitive moral sentiments, such as resentment and indignation, based on anger, disgust and contempt, toward those who do not cooperate, and have implemented broader systems of social control (Boehm, 1999). This has resulted in a process of *social selection* (West-Eberhard, 1979), which favors the characteristics of good cooperators and selects against the characteristics of those who cheat.

A first step toward the evolution of cooperation was probably made by our ancestors about half a million years ago in Africa (Tomasello, 2016), when selective pressures induced by climate change led to a drastic reduction of foods that individuals could obtain in a solitary way. Forced interdependence seems to have favored the increase in caring actions toward nonrelatives of one’s own group (Tomasello, 2016). The skills and emotions linked to caring for offspring, in whose evolution parental selection (Hamilton, 1963) may have played a fundamental role, were co-opted at

<sup>1</sup> The first paper that strongly supported the concept of group selection as a substitute of kin selection and gave mathematical support to this proposal was Nowak, Tarnita, and Wilson (2010).

that point for the protection and care of nonrelatives. Moreover, changed ecological conditions favored the selection of skills and motivations for collaborative activities (cooperative foraging). According to Tomasello (2016), the key adaptation that made these new forms of social interaction possible was *joint intentionality*, that is, the social-cognitive ability to pursue joint goals based on joint commitments to collaborate. According to this theory, the cognitive intuition of the self-other equivalence, which emerged as a product of the evolution of joint intentionality, paved the way for forms of social interactions structured by a sense of equality and allowed the emergence of a sense of fairness in resource allocation. The sense of mutual respect and fairness derived from a new type of cooperative rationality in which each one recognized his or her dependence on a collaborating partner, to the point of partially giving up the control over her/his own actions in favor of the plural self-regulatory “we” agent created by the joint commitment to cooperate. Early human beings did not submit to the plural “we” agent for strategic or selfish reasons alone. This “we” agent had a moral force because both collaborating partners considered it legitimate because both had created it for self-regulatory purposes in order to ensure the success of the joint venture. Moreover, each partner considered the other as equivalent to him/herself and equally worthy and thus deserving of the partnership. The internalization of this process of joint self-regulation where “We > I” translates into a sense of responsibility toward the partner to act in ways that do not arouse resentment in her/him and guilt in themselves. From this perspective, guilt does not express the fear of punishment but the conviction that the punishment is deserved for having violated shared moral standards.

To sum up, during this first phase of the evolution of cooperation (Engelmann & Tomasello, 2018; Tomasello, 2016), human beings developed a moral psychology for face-to-face dyadic involvement in collaborative contexts (“second-personal morality”). The forced interdependence and the evolution of joint intentionality favored the emergence of individuals who had an interest in the well-being of their companions and helped them; of individuals who viewed their companions with respect and promoted equal access to resources (second-personal agency); and who felt a sense of responsibility to respect the commitments established with their collaborative partners (joint commitment).

It is very likely that, over the last two million years, even before collaborative foraging became the primary subsistence strategy, the Homo genus had already undergone a process of self-domestication (Hare, Wobber, & Wrangham, 2012; Leach, 2003) and had already developed some biosocial adaptations, such as the emergence of stable pair bonding and cooperative breeding, which in turn favored the evolution of less competitive social interactions between individuals. These adaptations provided emotional and motivational support for the evolution of sophisticated forms of cooperation (Cortina, 2017; Hrdy, 2014).

According to Tomasello (2016), about 150,000 years ago a second phase in the evolution of cooperation was favored by the emergence of cultural groups organized in tribes that competed with other similar groups. In support of the new interdependent ways of living of these cultural groups, a new group-mindedness emerged, a “collective morality” based on conformity to cultural norms and practices and capable of promoting cooperation in the broader social context. Individuals conformed to the norms created by their group to guarantee its functioning and not just for imme-

diately prudential reasons, such as threats to reputation, punishments, or ostracism. These norms were considered legitimate because every member identified with her/his culture and therefore assumed a sort of co-authorship of these norms. Moreover, these cultural norms were considered objective and impartial, so that every person not only had to respect these norms but also had to make others respect them. In this second phase of the history of cooperation and human morality, the evolutionary process that played a decisive role in the creation of highly organized and strongly egalitarian communities (Boehm, 1999) was probably cultural group selection (Bowles & Gintis, 2011; Richerson & Boyd, 2005). Selfishness, fueled by nonprosocial motivations, was contained by a “groupish overlay” (Haidt, 2012) that favored the emergence of abilities, motivations and formal systems of norms and institutions that guaranteed cohesion and cooperation within the groups.

The moral psychologist Jonathan Haidt (2012) hypothesized that human moral psychology evolved in response to challenges posed by living within groups. He suggested that the selective pressures acting at a group level favored the emergence of individuals who were intuitively and emotionally sensitive not only to harm and iniquity, but to a wide range of “moral principles” (Haidt, 2012). Haidt identified at least six “moral foundations,” that is, principles on which we base our intuitive and emotional moral judgments:

1. Principle of care/harm: Based on the ability to feel empathy for the suffering of others and the desire to repair, this principle leads people to feel that actions aimed at benefitting other people in distress, motivated by feelings of compassion, care and benevolence, are “right,” and to feel that behaviors displaying cruelty or indifference to others who are suffering or needy are “wrong.”
2. Principle of loyalty/betrayal: This principle is expressed by feelings of commonality shared by people belonging to the same group. This principle generates a sense of shared responsibility with respect to individual destinies and commitment to the aims of the group and is the basis of the moral condemnation of those who betray their group and its values.
3. Principle of fairness/cheating: We see this principle in action in our judgments on the merits of different people in accessing the resources produced with a collaborative effort. This principle is the basis of the resentment that people experience when someone benefits from a greater share of resources than other members of their group, especially when the effort of the benefiting individual is smaller than the effort of others.
4. Principle of authority/subversion: It is the basis of assessments elicited by acts of obedience or disobedience toward authorities perceived as legitimate. The factors triggering a negative moral evaluation based on this principle are all those behaviors aimed at denying the hierarchical order that is considered legitimate or that are viewed as subversive toward institutions or values perceived as a guarantee of group stability.

5. Principle of liberty/oppression: It is the basis of rebellion and condemnation toward individuals who are perceived as trying to arbitrarily subjugate and limit the freedom of other people and leads people to join their forces against the oppressors.
6. Principle of sanctity/degradation: It is the basis of the feeling that one's body has an immaterial value which renders it sacred. The activation of this principle leads people to show reverence toward things they consider sacred, and to react with disgust and to keep themselves at a safe distance from things they consider dirty, degrading and contaminated. It is worth noting that this principle clarifies how disgust—which is a primary emotion originally elicited by noxious foods, substances, diseases, and animals—is secondarily coopted by the human moral assessment system; this is the reason why, for example, the smell of flatulence can make moral judgment harsher whereas the smell of flowers more lenient (Pizarro, Inbar, & Helion, 2011; Schnall, Haidt, Clore, & Jordan, 2008).

So, according to Haidt's model, an individual is predisposed to react intuitively and emotionally to various situations perceived as morally relevant, but the relevance and specific articulations of each of the principles identified by Haidt are shaped by life events, by the relational context in which each person grows, and by the culture one belongs to.

### Ontogenesis of Morality

As mentioned at the beginning of this article, numerous studies suggest that human beings are naturally endowed with a moral sense (Bloom, 2013). Indeed, starting from 3 months of age, humans seem able to distinguish prosocial behaviors (helping, comforting, distributing goods fairly) from antisocial behaviors (hindering, hurting, distributing goods unfairly), and show a preference for the former over the latter (Buon et al., 2014; Burns & Sommerville, 2014; Hamlin, 2015; Hamlin et al., 2010; Scola, Holvoet, Arciszewski, & Picard, 2015). Although it is not clear whether the evaluations underlying these preferences can be considered isomorphic to moral judgments of older children and adults, a series of indicators makes it possible to think that the evaluations on which children base their preference are grounded in the moral aspects of the actions of the others (Margoni & Surian, 2018). First, infants' sociomoral preferences are expressed only in social contexts featuring agents, and not inanimate objects (Hamlin & Wynn, 2011). Second, children seem to express these moral preferences not only in situations in which they are directly influenced by prosocial or antisocial behaviors of others, but also when the "victim" is a third party, which rules out the influence of considerations related to personal interest. Third, children's evaluations are based on the agents' intentions and desires rather than on the outcomes of their actions (Woo, Steckler, Le, & Hamlin, 2017). Finally, these evaluations are associated with the expectation that prosocial or antisocial actions are rewarded and punished differently (Meristo & Surian, 2013, 2014). Moreover, it seems that children, in addition to generating sociomoral evaluations of actions by people around them, are also able to attribute moral traits to others (Surian, Ueno, Itakura, & Meristo, 2018). Overall, these studies suggest that, from their first year of life, human

beings participate in social relationships with a set of skills that allows them to interpret actions and choices in "moral" terms, and that moral judgment is based on an intuitive and emotional evaluation of people involved in morally relevant situations.

It is likely that this early moral sensitivity is rooted in the ability to experience empathic concern<sup>2</sup> for another individual showing signs of distress or difficulty. This emotional experience, already observable in the first year of life (Davidov et al., 2013), reflects our fundamental social nature, is an expression of the care and play/cooperation motivational systems and can be observed also in other social species (Ben-Ami Bartal, Decety, & Manson, 2011; de Waal, 2008).

When individuals perceive another person's emotions, they often experience a similar emotion themselves (Decety & Meyer, 2008; Eisenberg, Fabes, & Spinrad, 2006) because of overlapping neural circuits activated when they observe or experience firsthand that emotion (mirror neuron circuits—Decety & Meyer, 2008; Rizzolatti & Craighero, 2005; Singer, 2006). However, empathy evoked by another's distress can give rise to concern for others only if the observer is able to regulate the arousal induced by the other's distress and to remain focused on the other in distress. If the observer becomes overly aroused, the focus of her/his concern shifts from the other to the self, resulting in self-distress (Eisenberg et al., 2006). Unlike self-distress, which motivates seeking comfort for the self (Hoffman, 2000), empathic concern is often accompanied by attempts to cognitively understand the other's state (cognitive empathy) and by prosocial behaviors aimed at alleviating the other's discomfort (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992).

Since the beginning of life, human beings react with suffering to the pain of others, as is evident if one looks at the phenomenon of contagious crying (Dondi, Simion, & Caltran, 1999; Geangu, Benga, Stahl, & Striano, 2010). For instance, 6-month-old babies react to the crying of a peer in an other-focused manner if the causes of distress are not too intense and prolonged (Hay, Nash, & Pedersen, 1981). Moderate levels of affective empathy (indicated by facial expressions, vocalizations, and gestures reflecting concern) and cognitive empathy (attempts to understand the other's distress) in response to maternal and peer distress have also been observed in infants of 8–10 months of age (Roth-Hanania, Davidov, & Zahn-Waxler, 2011). Although affective empathy shows no dramatic change with age (Knafo, Zahn-Waxler, Van Hulle, Robinson, & Rhee, 2008; Roth-Hanania et al., 2011), cognitive empathy and above all prosocial behavior show a substantial increase during the transition to the second year of life. In fact, prosocial behavior becomes more differentiated and better aligned with the needs of the victim (Zahn-Waxler & Radke-Yarrow, 1982; Zahn-Waxler et al., 1992), presumably because it requires a more sophisticated integration of affection, cognition and action. Greater mentalization abilities and knowledge of the world influence the way individuals act when feeling concern (Hay, 2009), allowing the child to make predictions and plans for action, facilitating the use of increasingly sophisticated strategies for helping others in need and integrating moral cognitions and actions (Nicolais, Fazeli-Fariz Hendi, Modesti, & Presaghi, 2017).

<sup>2</sup> Some authors use the terms *affective empathy* and *sympathy* to refer to empathic concern.

There is substantial evidence supporting the hypothesis that early forms of helping are motivated by feelings of concern for the plight of others. In fact, starting at 14 months of age, children spontaneously help individuals in difficulty (Warneken & Tomasello, 2006, 2007) without needing external incentives (Warneken & Tomasello, 2008, 2013). They also help when those benefiting do not know they are being helped (Warneken, 2013) and are equally satisfied when they help someone in need as when they see that person helped by a third party (Hepach, Vaish, & Tomasello, 2012). This suggests that the motivations underlying helping behavior cannot be reduced to strategic or “selfish” considerations. Furthermore, children preferentially help, also at some cost, individuals displaying signs of emotional distress (Nichols, Svetlova, & Brownell, 2009), especially when the needs expressed by them are justified by contingencies (Hepach, Vaish, & Tomasello, 2013). Finally, the level of concern shown by children when they observe a harmed individual is positively correlated with subsequent helping behavior (Vaish, Carpenter, & Tomasello, 2009).

In short, during the second year of life children show a broad range of relational competencies: the cognitive capacity to interpret the physical and psychological states of others, the emotional capacity to affectively experience what others feel, and a repertoire of behaviors that allows them attempt to alleviate the suffering of others (Zahn-Waxler & Radke-Yarrow, 1990).

This does not mean that children will behave altruistically in every situation but that, given this set of capacities and motivations, they have at least the possibility to base their choices and behaviors on nonselfish considerations. Prosocial behaviors in infancy are produced in a flexible way according to the assessment of the different situations and of the characteristics of the other in difficulty (Wynn, Bloom, Jordan, Marshall, & Sheskin, 2018). Helping behaviors are influenced by the past behaviors of the other (prosocial or antisocial; Dunfield & Kuhlmeier, 2010; Vaish, Carpenter, & Tomasello, 2010) and by familiarity (in-group vs. out-group; see, e.g., Kinzler, Shutts, & Correll, 2010; Rhodes & Chalik, 2013). However, only around the fifth year of life a sensitivity to potential external rewards for cooperative behavior emerges along with the first signs of more strategic forms of helping and sharing (e.g., to improve one’s own reputation; Engelmann, Herrmann, & Tomasello, 2012; Engelmann, Over, Herrmann, & Tomasello, 2013) or to benefit from acts of reciprocity (Warneken & Sebastián-Enesco, 2015).

Although the ability to act altruistically on the basis of a sympathetic interest for the well-being of others is shared to some degree our nearest great ape relatives, the ability to act fairly and to expect that also others will act with a sense of equity toward us is distinctive of our species (Tomasello, 2016). Toddlers as young as 15 months prefer fair to unfair sharers (Burns & Sommerville, 2014), and by 9–10 months they expect others to distribute resources equitably to third parties (Ziv & Sommerville, 2017) and for fair and unfair agents to be differently rewarded and punished (Meristo & Surian, 2013, 2014). By 18–24 months infants are willing to share equitably resources obtained through a collaborative effort (Ulber, Hamann, & Tomasello, 2015), but only with those who have contributed to producing them (Melis, Altrichter, & Tomasello, 2013).

In addition to moral judgments based on merit (Sloane, Baillargeon, & Premack, 2012; Surian & Franchin, 2017), 3-year-olds show more punitive moral attitudes, such as resentment or indig-

nation toward unfair individuals (Warneken, Lohse, Melis, & Tomasello, 2011). They also manifest other moral attitudes—expressed in interpersonal judgments of responsibility, obligation, commitment, trust, and duty—by which they try to ensure that those with whom they interact continue to respond fairly to their actions (Gräfenhain, Behne, Carpenter, & Tomasello, 2009; Hamann, Warneken, & Tomasello, 2012). According to Tomasello (2016; Engelmann & Tomasello, 2018), it is precisely the involvement of normative concepts such as *ought* and *owe*, which constitutes the key characteristic that distinguishes moral intentions and expectations from merely prosocial ones. In fact, although prosocial behavior is an altruistic act performed freely and is not in a strict sense accompanied by a sense of obligation, a truly moral action stems from a sense of internal obligation. The moral agent feels that the other deserves to be treated in a specific way and that it would be wrong not to do that. The agent knows that if s/he fails to treat the other as s/he deserves, the other will condemn the agent for this, and the agent will condemn her/himself through the experience of guilt.

As we have seen, prosocial motivations to help and share with others appear early and are not distinctive of our species. Toward the end of the second year of life, young children (and not other primates) develop a dyadic morality that regulates actions in face-to-face interactions with collaborative agents—a *second-person morality*, characterized by the understanding of the joint commitment established with collaborative partners as a supraindividual entity that regulates their behavior independently from their personal wants and desires.<sup>3</sup> Only from 3 years of age onward, when they perceive themselves as members of a group (Dunham, Baron, & Banaji, 2008), do young children begin to develop a *collective morality* (i.e., they recognize social norms as agent-independent behavioral standards shared by their cultural group; Riedl, Jensen, Call, & Tomasello, 2015; Rossano, Rakoczy, & Tomasello, 2011).

In short, according to Tomasello (2016; Engelmann & Tomasello, 2018), the ontogenesis of moral development is characterized by two steps that are similar to those hypothesized for its phylogenesis, and the development of a “collective” morality is only the last step of a moral pathway that starts much earlier.

Cultural norms do not create morality, they simply shape it. They make morality “collective” (Tomasello, 2016) by elaborating creative definitions of what constitutes a moral violation under particular circumstances (Schäfer, Haun, & Tomasello, 2015), rendering individuals of each culture more sensitive to some moral problems than to others (Haidt, 2012; Shweder, Much, Mahapatra, & Park, 1997), and defining who is a member of the moral community and who does not belong to it (McLoughlin, Tipper, & Over, 2018).

### Moral Emotions and Ontogenesis of Guilt

Jonathan Haidt defined *moral emotions* as “the emotions that respond to moral violations or that motivate moral behavior”

<sup>3</sup> It is worthy of note that also according to studies by the developmental psychologist Grazyna Kochanska (Kochanska & Aksan, 2006), *moral conscience*—which consists of three interrelated systems (moral emotions, moral cognition, and moral conduct)—appears by the second year of life as an autonomous system of regulation.

(Haidt, 2003; p. 852). Some authors have suggested that there are two big families of moral emotions: (a) the self-conscious family, which contains shame, embarrassment, and guilt, and (b) the other-condemning family, which contains contempt, anger, and disgust (Haidt, 2003; Izard, 1977). As we have already seen, group selection has given humans a motivation to cooperate with others who have cooperated as well and a motivation to avoid or punish those who cheat them or tried to cheat them in the past (Haidt, 2003, 2012; Trivers, 1971).

Guilt, the self-conscious moral emotion par excellence, results from empathic concern for a person in distress combined with a feeling of responsibility for that distress. It is experienced because an action or an omission, real or imagined, is believed to be hurtful for another person or at odds with the individual's own values (Hoffman, 2000). Guilt encourages reparative actions and prosocial behavior (Tangney & Dearing, 2002).

Although the ability to verbalize feelings of guilt is a rather late acquisition—according to Ferguson only by 8 years of age are children able to report relevant events that elicit guilt and shame (Ferguson, Stegge, & Damhuis, 1991)—substantial evidence indicates that these feelings are experienced much earlier (e.g., Kochanska, Casey, & Fukumoto, 1995; Kochanska, Gross, Lin, & Nichols, 2002; Zahn-Waxler & Robinson, 1995). In fact, guilt related behaviors (confessing and repairing) can be observed in the second year of life and can be clearly differentiated from other responses such as shame (Barrett, Zahn-Waxler, & Cole, 1993; Drummond, Hammond, Satlof-Bedrick, Waugh, & Brownell, 2017). Guilt-prone toddlers, unlike shame-prone toddlers, tend to quickly confess what happened and to repair the mishap, and rarely avoid the victim. Moreover, guilt-prone toddlers show a greater propensity to empathize with and help other people who show signs of emotional distress and suffering, even when they are not directly responsible (Drummond et al., 2017; Zahn-Waxler, Radke-Yarrow, & King, 1979; Zahn-Waxler et al., 1992). This suggests that it is not empathy per se that motivates prosocial behavior, but the propensity to feel responsible for the well-being of others (Chapman, Zahn-Waxler, Cooperman, & Iannotti, 1987).

The second year of life is a developmental period in which children are particularly vulnerable to feelings of responsibility for problems they have not caused. Such vulnerability could be a product of the egocentrism typical of infantile psychic functioning, which leads children to confuse situations they contributed to and those in which they were simply bystanders (Zahn-Waxler & Kochanska, 1990). Moreover, 2-year-old children who are more prone to think they had caused distress in others in situations in which they had no role (Zahn-Waxler et al., 1979) showed developmental continuities in this pattern by producing more guilt themes 5 years later in laboratory assessments (Cummings, Holtenbeck, Iannotti, Radke-Yarrow, & Zahn-Waxler, 1986).

Although it is possible to experience guilt as early as the second year of life, when individuals develop this feeling, both in its adaptive and maladaptive forms, is influenced by temperament and environment. Among temperamental traits, fearfulness, has been shown to be the most correlated to the development of guilt: children who are more fearful in unfamiliar and slightly stressful situations experience greater guilt after a transgression and tend to inhibit future transgressions to avoid such unpleasant affective states (Kochanska, 1997a; Kochanska et al., 2002).

Regarding the role of environmental factors, studies that have investigated the effect of parental disciplinary styles (Dienstbier, 1984; Hoffman, 1983) suggest that strategies based on inductive methods and that de-emphasize power assertion are associated with greater expressions of adaptive guilt because they lead children to reflect on the harmful consequences of their actions on others. On the other hand, a power-assertive parental discipline undermines the development of adaptive guilt and fosters a superficial conformity to standards of conduct which hinders the development of autonomous regulation (Kochanska et al., 2002). The effect of love withdrawal is more controversial. This disciplinary strategy seems positively associated with some components of children's moral functioning, such as guilt, self-criticism and reparation (Zahn-Waxler et al., 1979); however, it also gives rise to a qualitatively different type of guilt (Hoffman, 1970) based on more primitive and extreme fears (Zahn-Waxler & Chapman, 1982).

In addition to disciplinary styles, the development of guilt has also been associated with constructs such as parental warmth, maternal sensitivity, committed compliance, and mutually responsive orientation—a construct used by Kochanska (1997b) to describe a cooperative relationship, connoted by mutual responsiveness and infused with positive emotions. All these aspects of the relationship have been associated with the development of moral consciousness and guilt in children (Hoffman, 1983; Kochanska, Forman, Aksan, & Dunbar, 2005).

The development of adaptive guilt is favored by positive and mutually rewarding interpersonal experiences. Although an adaptive sense of guilt, reflecting levels of arousal and responsibility appropriate to circumstances, is associated with altruistic, achievement-oriented, and healthy behaviors and with socioemotional competencies useful for the construction of harmonious relationships, maladaptive, or pathological guilt affects adaptation negatively and is associated with poor mental health (Bybee & Quiles, 1998). For children to develop an adaptive and realistic sense of guilt, it is necessary that they experience a moderate level of arousal following a transgression. An excessive activation induced by disciplinary styles that elicit excessive fear, such as love withdrawal and power assertion, seems to interfere with the child's understanding of the transgression and prevents the child from paying attention to, and reflecting on, the consequences of his or her actions on others. Moreover, exposure to highly conflictual relational environments and maternal depression represents a risk factor that predisposes to the development of maladaptive guilt patterns associated with excessive involvement and excessive assumption of responsibility for the problems of others, and the development of a less conscious, explicit, and action-oriented type of guilt (Cummings, Zahn-Waxler, & Radke-Yarrow, 1981; Zahn-Waxler, Kochanska, Krupnick, & McKnew, 1990).

Individuals inclined to experience chronic feelings of guilt seem to be at greater risk of developing internalizing problems, such as anxiety, depression and eating disorders, as well as to exhibit hostility and symptoms of externalizing disorders. Moreover, chronically guilty individuals are more likely to exhibit self-punitive responses to guilt-producing events and to engage in ruminations and self-destructive behaviors. And in some circumstances, transgressions of moral and social rules could be themselves driven by guilt and give rise to self-sabotaging behaviors, as suggested by clinical evidence (e.g., Freud, 1916). Maladaptive

guilt seems to arise from painful situations the person feels responsible for and that cannot be controlled or repaired, such as the death or chronic unhappiness of significant others (Bybee & Quiles, 1998; O'Connor, Berry, Weiss, & Gilbert, 2002; Zahn-Waxler & Kochanska, 1990).

### Guilt According to Control-Mastery Theory

In our opinion, the psychodynamic model that is most consistent with, and that in many ways anticipated our contemporary knowledges on morality and guilt, is control-mastery theory (CMT; Gazzillo, 2016; Weiss, 1986, 1993). According to CMT, guilt is not caused by perverse or aggressive desires, as claimed by many classical psychoanalytic models (Freud, 1929; Klein, 1948), but by the potentially harmful consequences that the subject believes he or she has caused to relevant others and relationships in the pursuit of her/his goals. So, although Freudian and Kleinian psychoanalysis starts from the assumption that guilt is inextricably connected to fantasies, actions or omissions that are expressions of an aggressive drive, according to CMT the link between guilt and aggressivity is not necessary: to feel guilty, it is enough that a person believes that he hurt a loved person by pursuing one of her/his goals.

This difference, together with the overarching role given by CMT to adaptation to reality—in particular, the reality of the interpersonal world—and to prosocial motivations such as attachment and care, reflects, and has anticipated, a paradigmatic change in the conceptualization of human motivations. Contemporary hypotheses and findings of affective neuroscience, cognitive, moral, developmental, and dynamic psychology (see, e.g., Lichtenberg, Lachmann, & Fosshage, 2011; Liotti, 2005; Liotti, Fassone, & Monticelli, 2017; Panksepp & Biven, 2012) share the idea of the existence of a series of affective-motivational systems, evolutionarily founded but environmentally labile, that humans have in common with other mammals, which regulate precise sequences of behavior and emotions with an adaptive value and which are shaped by the specific adaptations environment, learnings, and higher-order cognitive processes. Among these basic social emotional-motivational systems, all primary and relatively independent even if reciprocally interacting, we find panic-grief/attachment, care, seeking-expectancy/exploration/assertiveness, play/cooperation/affiliation, fear/self-defense from dangers, and lust/sexuality. According to this perspective rage, one of these primary human emotions, is the basis for the development of behaviors and strategies necessary to survive. According to the neuroscientific findings of Jaak Panksepp (Panksepp & Biven, 2012), in fact, rage is a primary emotion that humans share with mammals and is experienced toward others who are competing for resources. *Rage* is a reaction to the fact or the belief that the satisfaction of one's needs and goals is hindered. It can stem from a variety of circumstances: “when people and animals are excessively hungry, thirsty, or sexually frustrated, and they do not have access to satisfactions, rage is likely to set in . . . [rage] readily arises when our social desires are thwarted” (Panksepp & Biven, 2012, p. 150). Far from being a source of satisfaction, feeling and expressing rage is intrinsically unpleasant—in fact, the stimulation of the brain areas associated with the rage affective system is avoided by animals.

Another interesting perspective on human basic motivations comes from the studies of Giovanni Liotti (2005; Liotti et al., 2017; Migone & Liotti, 1998) that, from a cognitive-evolutionary perspective, proposes a hierarchy of motivations that corresponds to the different phases of the *Homo sapiens* evolution. According to Liotti, the emotion of rage is connected to several different motivational systems that give life to different types of behavior. For example, the aggressiveness directed against members of the same species (among the mammals) or of the same group (among humans), that is mediated by a rank system, which excludes the killing of the adversary; the aggressiveness mediated by the predatory and defense systems, which are mostly directed toward out-group members or other species and have the purpose of defending themselves and own group or to find the food necessary for survival. All these authors agree that these primary affective-motivational systems are then shaped by the specific developmental environment of each person, by her/his primary relationships and by the systems of beliefs, norms, and values s/he develops.

In line with these findings, and differently from classical psychoanalysis, CMT stresses how humans are intrinsically—and since the beginning—prosocial creatures whose overarching motivation is to adapt to reality and who become rageful and aggressive when believe that their healthy and pleasurable goals are unfairly obstructed by other people. Moreover, CMT stresses how some manifestations of rage or aggressive actions may be the result of compliances or identifications with inadequate parents or relatives (Foreman, 2018). In other words, a child may learn if, when and how to be aggressive by identifying her/himself with an aggressive parent, or because s/he believes that being aggressive may make a parent feel better than her/himself, more alive, may encourage her/him to interact with the child and so forth. These CMT concepts may also be useful for explaining the specific expressions of relevant moral manifestations such as judgmental/punitive attitude toward others.

From this perspective, CMT, even if born from American ego psychology, is more in line with the hypotheses of British relational theorists like Winnicott (1958, 1963) and Fairbairn (1952), of attachment researchers (Cassidy & Shaver, 2018), of self-psychologists (Bacal & Newman, 1989), and of contemporary relational and intersubjective theorists (see, e.g., Mitchell, 2000; Stolorow & Atwood, 2002) than with classical Freudian and Kleinian psychoanalysis. All these authors, in fact, hypothesize a basically relational orientation in human psyche, abandon the hypothesis of a death instinct and give a central role to real experiences in psychic development and change. However, unlike most of these authors, CMT gives more importance to patients' conscious and unconscious beliefs and hypothesizes the universality of certain kinds of guilt (Weiss, 1993, pp. 79–80). Finally, in line with contemporary infant researchers (see, e.g., Stern, 1985), CMT stress how children, far from being narcissistic and incapable of differentiating the self from the mother and of being interested in external reality, are since the beginning intrinsically interested in developing and testing hypotheses about how the world works (see Silberschatz, 2005, pp. 224–230).

According to CMT, children experience guilt in response to behaviors, attitudes, or intentions they believe may hurt another person important for them, which is why they may feel guilty for any motivation, emotion, thought, or behavior if, on the basis of their real experiences, they infer that because of it they hurt a loved

one or put at risk the relationship with her/him. Weiss (1993, p. 30) wrote,

[The child] assumes the ways his parents treat him are the ways he should be treated. . . . My formulations and reconstructions from adult analyses support the idea that whether a child becomes guilty to his parents depends mainly on how his parents react to him. He does not develop feelings of guilt about his hostility to his parents unless he infers from observations, or is told by parents, that by being hostile to them he hurts them. On the other hand, the child who is not hostile to his parents may become guilty to them if they complain that he is upsetting them. Moreover, since the child tends to take responsibility for his parents' behavior, he may, even if not hostile, becoming guilty to them if they are unhappy, withdrawn, or rejecting.

So, according to CMT, guilt derives from prosocial motivations such as attachment and care, is fueled by fear, and is shaped by the beliefs of each person (for empirical data, see Gazzillo et al., 2018). And it is in relationships with significant others that children develop their beliefs about reality and morality. In fact, human beings are predisposed to adapt to their environment, especially the interpersonal one, and to do this they need to construct reliable knowledge about themselves, others, and the "moral" rules that guide interpersonal relationships. This knowledge, which CMT defines in terms *beliefs* (Weiss, 1997), may be implicit or explicit, store the contingencies detected in the relationship with the environment ("If I do this, that will happen") and allow to move within own world, especially the interpersonal one, feeling safe.

When shock or stress traumas arise, children are highly motivated to understand why the trauma occurred in order to avoid its reoccurrence. However, influenced by their egocentrism, lack of experience and cognitive and emotional immaturity, children can develop beliefs that associate the pursuit of healthy, pleasant and realistic goals with a situation of internal danger (guilt or shame) or external danger (suffering, estrangement, loss of loved ones). These beliefs are called *pathogenic* because they give rise to inhibition, suffering, and symptoms.

Maladaptive guilt (Bush, 2005; Friedman, 1985; O'Connor, Berry, Weiss, Bush, & Sampson, 1997) derives from pathogenic beliefs and acts as a powerful factor giving rise to and supporting the maintenance of inhibitions, symptoms, dysfunctional behaviors and affects, which represent ways in which the child attempts to prevent traumatic situations from occurring again, and to avoid or atone for the unconscious guilt generated by the feeling of having hurt loved ones by pursuing developmentally appropriate goals. Concern for the suffering of others and the feeling of responsibility for that suffering, when associated with pathogenic beliefs, can be also the basis of pathological altruism which may result in a variety of behaviors that are not necessarily moral even though they originate from prosocial motivations (Gazzillo et al., 2017; Gazzillo et al., 2018; O'Connor, Berry, Lewis, & Stiver, 2011).

CMT, in line with the hypotheses of some American analysts (Asch, 1976; Loewald, 1979; Modell, 1965, 1971; Niederland, 1981), has carried out an in-depth analysis of five types of interpersonal guilt.

1. Survivor guilt, experienced by people who feel that having more success, satisfaction, good fortune, or other positive qualities than important others may hurt them.

2. Separation/disloyalty guilt, which is based on the belief that separating physically or psychologically from loved ones can cause them harm.
3. Omnipotent responsibility guilt is based on the belief that one must, and has the power to, make loved people be happy, so that putting the satisfaction of own needs in the foreground means being selfish.
4. Burdening guilt, which derives from the pathogenic belief that one's emotions and needs are a burden to loved people, and that own problems and fragility cannot be expressed because this would hurt them.
5. Self-hate, which is based on the conviction to be bad, degraded, inadequate and worthless. Unlike the other kinds of guilt, this is a self-accusation for what one is, not for what one has done or could potentially do, and its interpersonal origin derives from the fact that in the presence of ill-treating, neglecting or abusive parents, it is safer for a child to think that he or she deserves the mistreatment he or she suffers rather than feeling dependent on parents who are actually bad (Fairbairn, 1943). Self-hate allows CMT to explain moral emotions like self-disgust and self-contempt (see Izard, 1977). Because of traumatic experiences with abusing or neglecting parents, children may end up blaming themselves and think they deserve the mistreatment. People with self-hate see themselves as something dirty, degrading and contaminated because this is the way they felt seen by their traumatizing caregivers.

The hypotheses on the ontogenesis of guilt proposed by CMT are substantially compatible with the evolutionary and developmental psychology studies reviewed previously. First, CMT connects guilt with the innate prosocial motivations of human beings (attachment and care in primis) and with the need to adapt to the relational environment. Second, CMT proposes etiological hypotheses congruent with the data from studies of developmental psychology on the genesis of maladaptive guilt and highlight the role played by maladaptive guilt in the genesis and maintenance of psychopathology. Finally, four of the five interpersonal kinds of guilt proposed by CMT are congruent with five of the six moral principles identified by Haidt (2012): Survivor guilt can easily be associated with a violation of the fairness/cheating principle; separation/disloyalty guilt with a violation of the loyalty/betrayal principle; omnipotent responsibility guilt with a violation of the care/harm principle. Finally, burdening and self-hate guilt can be associated with the principles of authority/subversion and sanctity/degradation.

Not all unconscious guilt, however, derives from an irrational belief that connects the pursuit of a healthy and adaptive goal to danger for another person. In fact, a person can feel guilty for really hurting another person and then rationalize this guilt and express it in disguised or hidden ways. In such cases, the role of a CMT therapist would be to help the patient become aware of and disprove the belief(s) that made her/him think that being aware of guilty feelings and expressing them in direct and reparative ways would be too dangerous, and to help her/him understand the

origins of the belief(s) which mediated her/his morally reprehensible behavior. And it is not uncommon that the unconscious reasons that motivate morally reprehensible behaviors are in fact “moral.” For example, a man had an affair that ruined his marriage. The man’s son subsequently was unfaithful in his relationship because he felt guilty being more successful in marriage than his father (survivor guilt). Another example is a person who behaves in an exploitative and opportunistic manner out of loyalty with an antisocial subculture to which he belongs (see, e.g., Weiss, 1993, pp. 36–37). Whatever the reasons, according to CMT, the goal of the therapist is to help the patient become aware of pathogenic beliefs and to help the patient disprove them so that healthy and adaptive goals can be pursued (Weiss, 1994).

Currently several tools for the assessment of guilt according to CMT are being empirically validated. With regard to the adult population there is a clinician report rating scale, the Interpersonal Guilt Rating Scale-15 (IGRS-15; Gazzillo et al., 2017) and two self-report rating scales, the Interpersonal Guilt Questionnaire-67 (O’Connor et al., 1997) and the Interpersonal Guilt Rating Scale-15-self report (Gazzillo et al., 2018); there is also a version of IGRS-15 for teenagers, the Interpersonal Guilt Rating Scale-15-ad (De Luca et al., 2017), while a version for children of this same tool is being developed, the Interpersonal Guilt Rating Scale-15-children (Gazzillo et al., 2018).

## Conclusions

Contemporary hypotheses on the phylogenesis of morality and guilt allows us to say that human beings exhibit skills, emotions, and motivations that allow them to make morally relevant choices and actions at a very early age. The early emergence of these emotions and skills paves the way for the hypothesis that morality is, at least partially, innate, the result of group selection process. This first innate “moral draft” is then shaped by the complex interrelation of temperamental and environmental factors, first of all, the relational experiences within a specific family and a certain culture, which determine the multiple trajectories, both adaptive and maladaptive, of moral development and guilt, and the moral concerns relevant for each specific individual. The psychodynamic model most in line with contemporary hypotheses about the development of morality and guilt seems CMT.

## 摘要

本文旨在对近年来提出的几个假设进行一个综述,这些假设是关于在我们的物种进化和个体精神发展过程中的道德和内疚的发展。本文将说明,群体选择如何看起来是有利于发展亲社会的动机、情感和技能的,而这些正是“道德”判断和行为的基础,以及每个个体的特定体验和他/她所属的特定文化是如何塑造着与生俱来的第一份道德“草图”的。我们将从以下方面回顾婴儿期和幼儿期的内疚感发展的相关经验数据:从共情关注、倾向于感到对他人福祉负有责任、以及在适应性的和适应不良的内疚感的基础上的气质性与环境性因素。最后我们将说明,从临床观察和一些精神分析学家的观点来看,最近发展出的这些假设和数据与由控制-掌控理论发展出的假设具有实质的兼容性。

关键词: 道德, 群体选择, 内疚, 控制-掌控理论

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