An Integrative Model of Moral Reasoning and Moral Intuition: Implications for Moral Education

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Abstract

This article discusses integrative moral psychology, including moral intuition and moral deliberation, to explain the mechanisms of actual moral behaviors. To this end, we briefly review current models in the field of moral psychology dealing with moral intuition and moral reasoning, after which we present an integrative model based on these earlier ones. Our model focuses on a moral intuitive process, a process of reflection on initial emotional responses, moral reasoning, and moral introspection. We critically examine and discuss recent research from the rapidly growing fields of neuroscience and the natural sciences to strengthen and support this model. In closing, we explore the educational implications of our model and possible educational methods to promote moral development.

Key words: moral intuition, moral reasoning, moral introspection, neuroscience, moral psychology, moral education

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Ⅰ. Introduction

Among those who study moral philosophy and psychology, the relationship between moral reasoning, moral intuition and moral judgment has become one of the most controversial issues. Haidt's influential piece on emotion and reason in moral judgment, "The Emotional Dog and its Rational Tail: A Social Intuitionist Approach to Moral judgment" (2001) has profoundly affected the field of moral psychology, introducing with the concept of "moral intuition." Before Haidt, Kohlberg's theory of moral development and a neo-Kohlbergian approach to moral functioning have consistently proposed that reasoning is the main process in moral judgment (Kohlberg, 1981, 1984; Rest, Bebeau, & Volker, 1986; Rest et al., 1999; Thoma, 2006). However, after Haidt's study many scholars began to consider the importance of intuition in moral judgment. Many moral philosophers and moral psychologists have debated the priority and importance of moral reasoning and moral intuition, and relationship between the two (Haidt & Bjorklung, 2008a, 2008b; Jacobson, 2008; Narvaez, 2008).

More recently, with the aim of integrating those two types of psychological processes－moral reasoning and moral intuition －several researchers have tried to examine the interactive mechanism between moral intuition, reasoning and judgment. However, few studies have dealt with actual decision-making processes in the real world. For instance, in one of these studies, Musschenga (2009) provides us with a new approach to understanding the relationship between moral intuition and moral reasoning in the context of a review of previous theories, but does not nonetheless explain how actual moral decision-making occurs via the mechanisms of moral intuition and reasoning.

In this article we examine the field of integrative moral psychology, including moral intuition and moral deliberation, to explain the mechanisms of actual moral behaviors. To this end, we first briefly review recent research related to moral intuition and moral reasoning. We then suggest an integrative model of

moral decision-making that considers more concrete processes, before examining our model's educational implications. In what follows, we pose the following question: How can we pursue the moral development of children and adolescents in accordance with our model? In our answer, we discuss this question from a "practical, descriptive" perspective, rather than from a "normative" one, by looking to several scientific discoveries on human moral functioning. In closing, we describe the implications of our results for potential educational methods.

II. The Kohlbergian Model

Historically, the importance of reason in moral functioning has always featured prominently. In the eighteenth century, Immanuel Kant argued that reason is related to the basis of the determination of the will and is essential for principled morality (Kant, 1999). Philosophically speaking, Kant's concept of practical and moral reasoning is related closely to individual or collective practical reasoning about what one morally ought to do (Richardson, 2007). More recently John Rawls has also argued that the reasoning process is an important factor for inducing the concept of justice (Wenar, 2008; Rawls, 2003). These arguments have greatly influenced the Kohlbergian view of moral psychology, which asserts the importance of reasoning and principles in moral judgment (Kohlberg, 1973; Lapsley, 1996).

Basically, the Kohlbergians insist that a moral judgment and its final result－that is, a moral action－is based on deliberation and reasoning. Moreover, moral judgments occur by deliberating and considering various moral principles that derive from the stages of moral development (Kohlberg & Candee, 1984). The Kohlbergian approach to our moral judgment is rooted in time-consuming processes: reasoning and deliberation.

More recently, neo-Kohlbergians have succeeded in modifying this earlier model in response to various objections, adding various other factors. In particular, Rest and his colleagues have put forth a four-component model that consists

of moral sensitivity, moral reasoning, moral motivation and moral character. It is important to note that this model includes not only moral reasoning but also the affective parts of moral functioning (Rest, 1994; Rest et al., 1999; Narvaez & Rest, 1995). This newer model of moral functioning sought to better explain the actual mechanism of moral action than previous models, which focused solely on reasoning.

Although this more recent model of moral functioning takes in account affective factors, it nonetheless remains focused on moral judgment rooted in moral reasoning (Rest et al., 1999; Thoma, 2006). Of the four components of their model, moral judgment plays a central role in decision-making when an individual encounters a moral dilemma. The three other factors relate to the perception of the situation, the commitment to moral values, and in the persistence of moral behavior. Questions that are more directly related to actual decision-making, such as "What should I do?" or "Between these possible solutions, which one should I choose?", are dominated by moral reasoning rather than by other factors. Also, Rest and his colleagues primarily employ the Defining Issues Test, which was invented to assess the reasoning process, for their psychological studies (Rest, 1994; Rest, Bebeau, & Volker, 1986). Undoubtedly, even the neo-Kohlbergians have focused extensively on the reasoning process in their empirical studies.

These Kohlbergian models of moral functioning have dominated research and thinking in the field of moral psychology for roughly two decades. However, most recently, with the development of scientific and cognitive psychological approaches to human morality, arguments against the Kohlbergian and neo-Kohlbergian models of moral judgment have been proposed. In the next section we briefly review these objections, which emphasize the role of moral intuition.

III. Arguments for Moral Intuition: Haidt et al.

Our understanding of human morality is based partially on

an empiricist version of moral intuitionism (sometimes called "sentimentalism") developed by eighteenth-century British philosophers. They insisted that human morality came from the non-rational part of man−from, for instance, his moral sentiment. Also, they argued that the moral decision-making process is basically unconscious and that it occurs immediately, without a long period of consideration. David Hume (1711-1776), Anthony Ashley Cooper, the earl of Shaftesbury (1621-1683) and Francis Hutcheson (1694-1746) were the major exponents of this philosophical view (Hume, 1990; Cooper, 1990; Hutcheson, 1990; Broadie, 2009). Their arguments conflict with the Kantian approach toward human morality, which instead emphasizes the importance of reason in moral judgment.

Contemporary moral psychologists, such as Sinnott-Armstrong (2008a, 2008b), have recently begun to re-examine moral intuition as it was conceived among earlier moral intuitionists like Hume, Shaftesbury and Hutcheson. Sinnott-Armstrong defines moral intuition as strong and immediate moral beliefs (Sinnott-Armstrong, 2008a). Scholars who focus on moral intuition argue that it is immediately, quickly, or spontaneously initiated and that it directly causes moral judgment (Shweder & Haidt, 1993). They have also argued that this type of social cognitive process is automatic, pre-conscious, implicit and prior to our reasoning or deliberation (Bargh, 1994; Bargh & Chartrand, 1999; Greenwald & Banaji, 1995).

Perhaps the most prominent of this later group of psychologists focusing on the moral-intuitionist view is Haidt. According to him, moral intuition is defined as a psychological process akin to aesthetic judgment: one sees or hears about an event and one instantly feels approval or disapproval (Haidt, 2001). This occurs without any awareness. Haidt proposes a social intuitionist approach to moral judgment that emphasizes the role of an intuitive process in human moral functioning. In his view, actual moral judgment occurs through moral intuition, and moral reasoning usually produces reasons to justify previously made intuitive judgments. Accordingly, he describes the minor role of moral reasoning provocatively as the "rational

tail of the emotional dog" (Haidt, 2001). According to his model, moral judgment occurs through moral intuition in an immediate, unconscious manner, and moral reasoning is merely a supportive process. As we mentioned earlier, however, this model has been to the subject of various counter-arguments. In the next section, we discuss to the ways in which we might integrate these two approaches into a model that accounts for both types of psychological processes in explaining actual moral decision-making. In turn, we explore the educational implications of this integrated approach.

IV. The Integrative Model of Moral Reasoning, Intuition and Feedback

To integrate moral reasoning and intuition into a model explaining the process of moral decision-making, we begin with moral intuition. The existence and process of moral intuition cannot be denied when a person finds him- or herself in an urgent situation that threatens another's life or welfare. This type of situation often appears in the popular press or media. For instance, we can consider the heroic act of Lee Su-hyun at a Tokyo subway station.

> *"In January 2001, a South Korean student named Lee Su-hyun was waiting for the subway in Tokyo when a Japanese man fell on the tracks. Lee and another Japanese man jumped onto the rails in an attempt to get him out of the way before an oncoming train reached the station. Sadly, they were unsuccessful and all three men were killed."* (Soh, 2008)

Lee and the other man drew upon an intuitive process that emerged in response to the urgency of seeing another human in a life-threatening situation. Although this decision resulted in the death of all three men, it highlights the difference between intuition and reasoning. If they had relied solely on deliberative moral decision-making, they would not have been able to

respond immediately. Instead, they would have undergone a process requiring greater deliberation and thus time. However, as the situation in the subway shows, time was of the essence and intuition forced them to make a quick decision.

In fact, neuroscientific studies on human brain processes show the ways in which these intuitive processes are performed. A recent fMRI study done by Young et al. (2007) demonstrated that people can make faster decisions when they are faced with an "intentional harm condition." These reaction times were much faster than those experienced during "neutral situations" or under an "attempted harm condition." The effects of these experiments on reaction-time differences show us under what kinds of moral dilemmas our moral intuitive processes are immediately activated. We can interpret such results in the following fashion: if people face a situation with clear and consistent information that indicates that victims are threatened by dangerous, harmful conditions, they can then make a moral decision faster using intuitive processes. With this in mind, we argue that the intuitive process initiates the moral decision-making process, especially in urgent situations involving another's welfare. These moral intuition processes resemble those described by Haidt (2001).

However, such an intuitive process cannot solely be applied to moral decision-making in all situations. Sunstein (2008) argues that the existence of plural and conflicting accounts of the foundations of morality makes this type of intuitive, immediate process insufficient for assessing complex situations. Also, Narvaez (2008), in objecting to Haidt and his intuitive model, argues that actual, daily moral decision-making usually includes a consideration of the moral principles of a person and that it can be connected to "practical wisdom" rather than to simple intuitive processes. This type of counter-argument highlights for us the fact that, in many situations, especially complex situations involving conflicting values, we cannot solely rely on moral intuition to make a decision, because doing so can potentially lead to errors.

Additionally, Musschenga (2009) has argued that moral

intuition lacks reliability and that we have no determinate way in which to trust our intuitive moral judgments. As a result, he insists that deliberate reasoning should work in conjunction with the intuitive process to make up for the weaknesses of moral intuition. His argument is convincing, offering an integrated view of decision-making, unlike earlier studies, which focused on only one side of moral decision-making.

Musschenga thus offers a useful theoretical framework on the ways in which to integrate moral intuition with moral reasoning. In what follows, we apply this model to actual, practical moral decision-making processes. We also ask how moral reasoning, a slower process, might cooperate with the intuitive process in our model. In order to show the necessity of this model, we begin by examining earlier models that have solely emphasized moral intuition while neglecting the value of moral reasoning. We do not behave solely as the result of an intuitive process, even if moral intuition has influenced a concrete behavioral decision. Although scholars argue correctly that intuition "orders" us, they ignore the possibility that there is still a chance to deny intuitive commands. This can be demonstrated through reference to several neuroscientific electroencephalographic experiments, conducted by neuropsychologists who are interested in the possibility of human free will in the decision-making process.

One such an experiment, conducted by Libet (1999), seems to confirm the existence of free will and its ability to intervene in unconscious decision-making. In Libet's experiment, we make an unconscious decision 550ms (milliseconds) before an actual behavior occurs. However, 300ms after the unconscious decision, we can employ consciousness as a mean of preventing our behaviors. People are capable of stopping their decisions for 100-150ms by employing consciousness and free will. During these 100-150ms, Libet argues that we can change our mind not to follow, or to "veto," the unconscious decision. Haggard and Libet (2001) conclude that while free will does not appear to initiate a voluntary process, it could still act as a control agent. Ramachandran (1998) has also commented on this experimental

result that "our conscious minds may not have free will but rather 'free won't'."

From these studies we can conclude that a person can make conscious decisions. Thus, while earlier scholars have offered nuanced arguments about decision-making, they tend to agree on a number of key points, from "we can deny our unconscious decisions with our consciousness" to "we can make conscious decisions voluntarily." All of those scholars have argued that our conscious process exists and that the process can affect previously made unconscious decisions (Dennett, 2003). Gazzaniga (2006) cautions, however, that these ideas are based on a form of neuroscientific determinism, which views the brain as automatic. Such ideas cannot explain everything. We should therefore keep in mind other factors, such as social choice, interactions, moral values, and free-will (Champagne & Curley, 2005; Schilbach et al., 2006; Haggard, 2008).

As a result, we can conclude that actual human behavior does not rely exclusively upon intuitive processes and that both conscious and unconscious processes are involved in moral decision-making. A very short period of time between the end of the intuitive process and the behavioral result makes it impossible to stop the connection through the process of deliberate reasoning. Therefore, we need to explore an alternative route to stop the connection. According to Zajonc (1980), hot, affective reactions occur prior to and much faster than cold, reasoning processes. Recent studies on the human brain point out that the direct thalamic pathway, where emotional processes occur, is much faster than the cortical pathway. But the thalamic pathway cannot process the same type of complex information as the cortical pathway (LeDoux, 1995; 1996). Moreover, the emotional process in the human brain seems to block intuitive, immediate responses toward problematic situations. Because such processes are faster than reasoning processes, they offer a possible explanation of those couple of hundreds of milliseconds of "free will."

Working from Libet's study (1999), Haggard and Libet (2001) have argued that, in the "chasm" between the completion of an

intuitive process and the occurrence of a resultant behavior, we can pause and prevent an inappropriate behavior from beginning. This raises the question of just what kind of mechanism operates in the chasm. Through common sense, we can easily catalogue a range of feelings, like questioning, hesitation and doubt that check our behavior. In fact, Haidt (2003) suggests that several self-conscious emotions, such as shame, embarrassment and guilt, can be related to moral functioning, offering checks to people's dispositions. In addition, one ought to consider common sense and its mechanism from a more philosophical and psychological perspective.

Greene and his colleagues have provided neuroscientific evidence proving that some emotional responses alert us to the "inappropriateness" of previous, instant responses in particular situations, thus delaying final decision-making (Greene et al., 2001). If these types of emotions occur at the "conscious hundreds-of-milliseconds moment," then we start to see that there are several problems with an intuitively made judgment. At that moment, we can "veto" the immediate response and prevent the occurrence of a behavioral result. We can then activate our cortical pathway – moral reasoning – for reflection and evaluation, in order to find another response.

By what standard, then, can we evaluate these emotional responses? To answer this question, we can turn to Aristotle. He argues that "righteous indignation," as a point of equilibrium between envy and spite, is the pain or distress we feel at the misfortunes of others (Aristotle, 2007; Striker, 1996). If we face emergent situations that may severely threaten another's life or welfare, we make an intuitive judgment to undertake some action to solve the problem. Then, if our emotional response at the moment is coherent with our intuitive judgment, in this case righteous indignation, we can or are compelled to act on our judgment to affect the emergent situation. In other words, in this case, we may feel a sense of duty or obligation to act. If we failed to act immediately on this judgment, then we would not be able to save others in a similar situation, in which time is of the essence. On the other hand, for a case in which our

emotional response leads us to hesitate, instead of leading to a sense of obligation (Westermarck, 2009), we may veto our previously made judgment and begin a reasoning process.

At this point we encounter another mechanism, moral reasoning. As mentioned earlier, this mechanism is slower than the intuitive or emotional pathway. It occurs in the most evolved, slower parts of the human brain, such as the prefrontal cortex, and farther away from the most primitive parts that operate more quickly, such as the limbic system (Damasio, 1998; Waltz et al., 1999; Sherwood, 2010). Basically, in the social intuitionist model, Haidt (2001) proposes that our reasoning merely supports the results of moral intuition. However, Pizzaro and Bloom (2003) have argued that deliberation or reasoning can modify or override the result of the intuitive process. Also, Greene et al. (2004) have shown that if we confront difficult and complex moral dilemmas, the anterior cingulate cortex and the dorsolateral prefrontal cortex, which are involved in abstract cognitive processes, are more active than when we deal with easy problems.

In addition, some proponents of such an integrative model have argued for the importance of moral reasoning in moral judgment. Guthrie and his colleagues (2009) have suggested that an important component of good judgment is the ability to know when we can, or must, rely on intuitive processes and when we should override them through reasoning and deliberation. Musschenga (2009) comes to a similar conclusion, arguing that good judgment requires educated intuition and insight, both of which allow us to override and modify intuitive processes by deliberation.

Such studies suggest the importance of reasoning: when we face complex problems that seemingly cannot be properly solved solely through an intuitive process, our reasoning process takes over and potentially overrides the intuitive process. Although the reasoning process is much slower than the unconscious, immediate intuitive process, it can nonetheless help us to solve complex problems by forcing us to consider various aspects of a given problem. In fact, psychological and neuroscientific studies

have shown that this process does not simply follow moral intuition, as Haidt has suggested. Instead, it has the ability modify the judgment provided by moral intuition, when the intuitive result produces a negative emotional response. The reasoning process can even directly participate in moral judgment when the problem at hand is highly abstract or sophisticated.
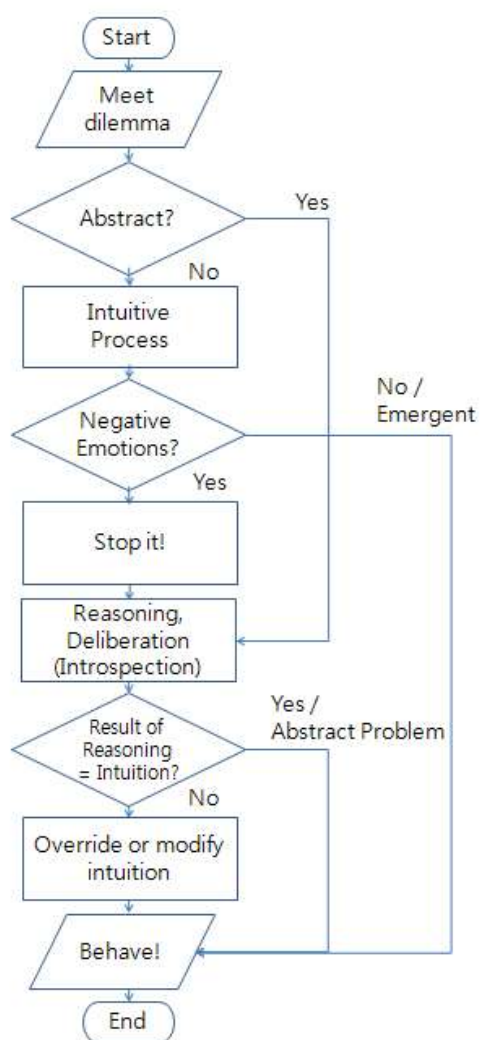

Figure 1. The integrative model of moral reasoning and moral intuition

Our model (see Figure 1) can be summarized as follows. First, if we encounter a difficult situation, our intuitive process is immediately activated. In most situations, this intuitive process will be initiated. However, as Greene et al. (2004) have shown, in situations that are highly abstract and impersonal, our reasoning process can be activated immediately. If the situation is imminent, a great deal of harm to others' lives or welfare can be anticipated, and if few or no emotional obstacles impede the actor, then intuitive judgment will directly result in the agent's behavior. However, if an agent feels "negative emotions" after the intuitive process — within that gap of hundreds of milliseconds — and if the situation is not so imminently harmful, then the intuitive process will not result in a given behavior. In such circumstances, a moral reasoning process is activated to evaluate or adjust the results of the intuitive process. If the dilemma is more abstract and impersonal, the reasoning process can be activated instead of the intuitive process. The reasoning process in turn might confirm or override the conclusion drawn by moral intuition.

To clarify, let's consider a few possible examples. Let's start with a situation in which the immediate moral intuitive process directly causes actual moral behavior. Consider the above-mentioned case, Lee Su-hyun's heroic behavior in Tokyo subway. He recognised the urgency of the situation, and failed to feel any morally negative emotions that would have dissuaded his intuitive decision. As a result, he instantly jumped onto the subway tracks. Sometimes, though, an actor will modify his or her initial intuitive decision as a result of the reasoning process. Think of a simplified case of the Heinz dilemma (Kohlberg, 1981). Would a man, whose wife is near death, steal an unreasonably expensive medicine to save her life? Impulsively and immediately, this man might feel an urge to steal the medicine. That is the result of his intuitive moral judgment. After a while, however, he feels guilty about and moral disgust at his initial, anti-moral decision. Eventually he chooses to follow his own moral standard and modifies his initial decision after the moral reasoning process, deciding not to steal the medicine.

Such a hypothetical example shows that an initial intuitive decision, which causes negative emotions, can be modified by the reasoning process. Finally, sometimes people initially activate their reasoning processes rather than intuitive processes. For instance, when a teacher attempts to establish behavioral standards in her classroom in advance of the beginning of a semester, she will consider abstract, general moral norms such as "Do not lie" or "Serve the public good," which may be derived from Kantian or utilitarian theories. In such a process, hardly would such a teacher start with the moral intuition. She follows instead the processes of deliberation and reasoning. In the next section, we explore the implications of this model for education. We consider how to promote the proper moral development of people in accordance with our model.

Ⅴ. Educational Implications of Our Model

With this model, we can sketch several educational implications that might help improve overall morality, including individuals' moral intuition, moral emotion, and moral reasoning. First, we need to consider how we might facilitate the development of an intuitive process in moral functioning. The development of moral intuition ought to make an individual act morally in urgent situations, when an immediate response is needed to protect the lives or welfare of others. Educational interventions are one such way to enhance students' moral intuition skills, allowing them, when they encounter a pressing and morally problematic situation, to offer both a proper and immediate response.

Various studies in education have attempted to formulate proper methods that might facilitate intuitive skills. Hogarth (2001) suggests that we can acquire intuitions, which embody tacit or implicit knowledge, by learning processes and by learning from experience. In terms of intuition education, Dreyfus and Dreyfus' (1991) developmental model of ethical expertise suggests that the acquisition of intuitive ethical skills

may imitate the acquisition of practical skills, such as driving a car or playing chess. Dreyfus and Dreyfus also suggest educational methods that might enhance intuitive skills. Nonetheless, they were unable to successfully provide systemized educational models that enhance the domain of moral intuition. As a result, we might benefit from a consideration of more sophisticated educational studies, which are directly related to educational methodology, in searching for models to improve moral intuition.

An expertise approach to moral character appears to be a promising educational model for effectively facilitating the development of moral intuition. Narvaez and her colleagues suggest "four levels of ethical skill instruction" (Narvaez, 2006; Narvaez et. al., 2004; Narvaez & Lapsley, 2005). Their levels involve immersion in examples and opportunities, an attention to facts and skills, practice procedures, and an integration of knowledge and procedure. Based on this model, they suggest an 'expert-in-training pedagogy.' This theory includes a well-structured environment, the simultaneous learning of theory and skills, and focused practice. Its goal is to encourage students to have higher levels of expertise in order to encourage the formation and application of moral intuitions.

In addition, we ought to consider educational intervention in order to improve emotional functioning in morality. As we have suggested in our model, emotional functioning plays a critical role in controlling intuitive reactions. For an educational method to improve such emotional skills, we can turn to work in the field of Social and Emotional Learning (SEL). The field of SEL has emerged from these new understandings of the nature of biology, emotions and intelligence and their relation to success and happiness (Cohen, 1999; Shriver, Schwab-Stone, & DeFalco, 1999). Moreover, many SEL applications have undergone various trials in actual educational situations. As a result, SEL might provide us with an effective and systemized educational methodology with which to develop students' social-emotional skills. We need such skills to understand and to reflect upon our emotional states. Moreover, these skills also enhance our

emotional skills, allowing us cope with our emotional states. Again, as suggested above, skilled emotional reflection is necessary for us to determine whether or not to follow an intuitive process. SEL might just be a reliable way to enhance such necessary skills.

Simply put, SEL is a process that helps youths to develop fundamental skills for an effective life, teaching them how to handle themselves, their relationships, and their work effectively and ethically. It includes recognizing and managing emotions, developing care and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively and ethically (CASEL, 2010a). According to the proponents of SEL, social and emotional competencies are necessary for desirable moral outcomes. Therefore, we ought to create the sort of atmosphere that can teach and scaffold social and emotional competences (CASEL, 2010b; Elias et al., 2008).

Given that we want to focus on emotions that are directly related to "morals," of the various educational methodologies in SEL we can direct our attention to self-awareness, self-regulation and self-reflection skills. These include pausing and considering our feelings, i.e., cueing self-monitoring (Elias et al., 1997). These educational interventions, according to our model, can thus force us to consider our emotional responses (e.g., shame, embarrassment, and guilt), when we encounter immediate moral intuitions.

Finally, we should consider how to develop moral reasoning skills. Numerous educational methodologies have attempted to improve moral reasoning skills, following the Kohlberg and the neo-Kohlbergians. This article suggests that traditional educational methodologies, tested and established by moral educators, might be useful in improving one's general moral reasoning ability. Such educational methodologies include moral-dilemma discussions, the just community approach, as well as other strategies (Kohlberg & Hersh, 1977; Higgins, 1995; Snarey & Smuelson, 2008; Hildebrandt & Zan, 2008).

In addition to traditional educational approaches to moral

reasoning, we also consider "moral introspection." Most simply, in psychology, the word "introspection" refers to a process through which each of us can "look within" ourselves to observe and then report on the contents of our thoughts. With introspection, we can examine our own mental images, describe them, and discover what information they contain (Gleitman, Reisberg, & Gross, 2007).

Traditionally, moral psychologists have mainly understood the meaning of moral reasoning and moral judgment as processes with which to make actual behavioral decisions (Rest et al., 1999; Kohlberg, 1973). In our model, however, the ability to reason enables moral introspection, and becomes important, especially in an educational context. Locke (2005, 2009) argued that, without our introspection, we cannot properly perceive and identify the underlying meanings of immediate emotional responses. In such a process, our reasoning ability enables us to monitor our inner states, especially our initial emotional responses, allowing us to properly modify the emotional functions of our minds. As a result, we ought to acknowledge the role of reasoning processes on introspection, and their ways in which such processes enable appropriate coordination among intuition, emotional responses, and reasoning.

Therefore, if we explore the educational implications of moral reasoning from the standpoint of moral introspection, then in our model moral reasoning would mean that a person tries to reflect on the content of his or her intuitive process through deliberative reasoning, even when such reasoning might offer little or no correct or valuable information about how one ought to behave. Furthermore, we should teach the skills of moral reasoning, allowing the individual to consider the appropriateness of moral intuition in accordance with moral principles. In this way, when we are developing students' moral reasoning, we should focus not only on improving their ability to make good moral decisions, but also on their introspective ability to evaluate and monitor the results of immediate intuitive and emotional processes.

As a result of reflection and introspection, a person has the

ability to judge whether or not the result of a given intuition is morally acceptable. This is based on "cognitive dissonance," which acts as a type of emotional motivation to self-correct behaviors and attitudes (Festinger, 1985; Dienstbier et al., 1975). If a person undertakes a behavior that does not coincide with that person's notion of what is right, it may induce cognitive dissonance, which will provide the motivation to correct the previous result. Because we have a "moral self" or a "moral identity," as moral psychologists suggest, our moral understanding will be integrated into our moral self and will then have a closer link between moral motivation and the manifestation of emotion (Blasi, 1984, 1995, 2004). Accordingly, we conclude that the result of an introspective process could produce cognitive dissonance. Finally, this internal dissonance could generate motivations to modify the moral decisions resulting from immediate, intuitive, and emotional processes.

In fact, there are several examples that prove that this deliberative, introspective process can affect the intuitive process. For instance, Selman (1971) has shown that, by role-taking, we can induce a modification to a child's intuitive processes, so that he or she produces a reciprocal form through deliberation and reflection. Also, Haidt (2007), in reference to the idea of a synthesis in moral psychology, has shown that the reflective process may occur after intuitive judgment, modifying its result. Finally, it is our sense that all of these educational interventions should be carefully conducted in an attempt to induce overall moral development in students, including moral intuition, reasoning or deliberation, and actual behavior.

VI. Conclusion

In this paper, we have considered the ways in which one might develop an integrative model of moral functioning that links moral reasoning to moral intuition. To create an appropriate model to explain actual moral behavior, we briefly reviewed several scientific studies, including research in the area

of neurobiology, to examine the psychological basis of our moral functioning. According to our actual pattern of decision-making and behavior, we also considered what types of factors should work depending on each phase in the moral decision- making process. In closing, we discussed the possible educational methodologies that might enhance one's overall moral functioning ability that allows us to engage in actual moral actions.

However, there is no way for this paper to explain in full all of the relevant phenomena and to provide a complete set of educational implications. Further studies should be conducted to unearth a more sophisticated and accurate theoretical framework to explain the concept of moral functioning presented here, and to develop effective methods for moral education that will enhance the overall moral abilities of students — from moral intuition to moral introspection. Because our moral functioning cannot be fully explained by any lone factor — that of intuition or reasoning – an integrative theoretical framework and educational methods based on such a framework should be established. In our view, such questions are a promising area of research for the near future.

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