Cognitive and Affective Processes

In Judgments of Morality

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Cognitive and Affective Processes in Judgments of Morality

On my way across campus one morning I came upon two lovers kissing goodbye. It was a beautiful fall day and the scene was rather touching. Upon the conclusion of their brief encounter, as the man turned in my direction, I couldn’t help but notice that he was two or three decades older than his apparent girlfriend. I felt a wave of moral reprehension sweep over me. In thinking about the observed situation however, I could find no good rationale for my initial reaction. I had experienced a case of moral dumbfounding as described by Jon Haidt (2001) in his theoretical article aptly titled “The Emotional Dog and It’s Rational Tail”. My thesis regarding moral judgment aligns with Haidt’s, that moral judgment is more about intuition that about reasoning, and that reasoning in this domain is more about justification and persuasion than anything else. In leading through a discussion of Haidt’s ideas, this review will cover some history of moral psychology and an examination of some recent theoretical views that touch upon some suggested directions for the future of the field.

Why should psychology concern itself with moral judgment? Humans spend a great deal of time and energy reasoning about themselves and other humans. Reasoning and language are after all, the hallmarks of our species, and much of it is dedicated to judgments of right and wrong regarding the behaviors and choices of others and ourselves. This is the domain of morality. In the field of moral psychology, although Kohlberg’s (1969, 1984) moral development theory is still prominently taught as the dominant paradigm, there is evidence that Kohlberg was perhaps deeply mistaken (see Haidt, 2003; Krebs & Denton, 2005). Kohlberg’s methods involved presenting moral dilemmas to participants and probing them regarding their moral reasoning. Kohlberg was not interested in the judgments themselves, but the mental process through which they were reached. Yet in the natural social realm there is evidence that people often do not
know why they feel the way they do about such judgments, and are prone to make up reasons when insight is lacking (Haidt, 2003, Henriches 2002, Nisbett & Wilson, 1977).

While most current moral psychology theorists believe that both intuition and rationality play important roles in moral judgment (i.e., Haidt, 2001, 2003; Pizarro & Bloom, 2003), they differ strongly on the relative roles of each. Pizarro & Bloom view intuition as fueling rationalist moral decisions, whereas Haidt sees intuition as the driving force, with rationality serving a subsidiary justificatory social influence role. The debate is an interesting one, and the subject reaches deep into the nature of human reasoning. Before weighing in on the issue, we should examine some history in the field of moral psychology. The history is primarily a rationalist one that no longer seems adequate in light of recent theoretical developments.

Cognitive Developmental Models of Morality

Kohlberg’s cognitive developmental model of morality (1969, 1984) may be the most widely referred to theory of moral psychology, yet as mentioned previously and to be discussed at length, it may be deeply mistaken (Haidt, 2003). Kohlberg’s work was based on earlier developmental work by Piaget (1965/1932). Piaget focused on naturalistic observations of children playing and interviews with children regarding some simple moral scenarios (Krebs & Denton, 2005). Piaget found that conceptualizations of morality for very young children (less than 10 or 11 years old; Crain, 1985) were in terms of parental or authoritative rules, whereas those of older children were based more on cooperation. He saw this as coupled strongly with the environmental influences and experiences that children of these ages shared. Piaget observed that the experiences of young children were dominated by their powerful authoritative parents and teachers, whereas older children’s experiences were dominated by egalitarian relationships with peers. Furthermore, as in the remainder of his famous work, he saw children as going through
phases of development in general and with regard to their moral reasoning specifically.

While Piaget saw developmental phases, he stopped short of referring to distinct stages of moral development. Kohlberg expanded upon Piaget’s early work with longitudinal studies of young men, using scenarios involving moral dilemmas. A typical moral dilemma used by Kohlberg is the story of Heinz, a poor man who must decide whether or not to steal an overpriced drug to save his dying spouse (1958). In looking for the deep cognitive structures of moral reasoning, Kohlberg analyzed interview responses to a series of structured questions probing for the basis of the participant’s moral decisions. Kohlberg’s main findings were that not only were there phases of moral development, but that there were three levels of distinct reasoning structures further divisible into six distinct stages of moral development (1969, 1984). Problems were associated with the sixth and highest stage of reasoning, and later revisions include only five stages, the latter stage perhaps branching into distinct yet equally sophisticated versions (Colby & Kohlberg, 1987; see also, Krebs & Denton, 2005). Table 1 briefly summarizes the stages. The basic tenets of Kohlberg’s theory were that there was an invariant sequence in the acquisition of moral reasoning sophistication, and that judgment was organized such that reasoning was performed in a coherent system described by the current stage of development (Kohlberg, 1969, 1984; Krebs, Denton, Vermeulen, Carpendale, & Bush, 1991).

In analyzing the responses to his probing questions on moral reasoning, Kohlberg developed a rather impressive 900 page manual for interpretation of participant statements utilizing a 17 step procedure (Krebs & Denton, 2005). While such an elaborate system of scoring is in itself suspect (vulnerable to confirmatory bias), critique of Kohlberg’s methods and findings need not rely on such a nebulous argument. Krebs and Denton critique Kohlberg’s approach at length in their review after “two decades of research” on the paradigm (2005, p. 629).
Table 1. Kohlberg’s Stages of Moral Development

<table>
<thead>
<tr>
<th>Level</th>
<th>Stage</th>
<th>Description of Moral Basis of Reasoning</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Obedience and punishment orientation. Powerful authorities hand down fixed sets of rules which must be obeyed.</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Individualism and exchange. There is not just one right view, different individuals may have different viewpoints.</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Good interpersonal relationships, accord and conformity. Morality is more than simple deals, people should live up to the expectations of family and community.</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>Maintaining the social order. Concern for society as a whole. Law and order.</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>Social contracts and individual rights. Considering the rights and values a society should uphold. Society as a social contract “freely entered upon”.</td>
</tr>
<tr>
<td>6</td>
<td>b</td>
<td>Universal principles. Principled conscience. Conceptions of justice (e.g., I. Kant, M. L. King, M. Gandhi).</td>
</tr>
</tbody>
</table>

*Extracted and adapted from Crain’s (1985) interpretation of original material from Kohlberg (1969, 1984). The model was later reduced to 5 stages because stage 6 was questionable. For discussion of these higher stages of reasoning see Kohlberg (1973) and also Colby & Kohlberg (1987).*

In critiquing Kohlberg’s cognitive model of stages of moral development, Krebs and Denton (2005) point out that there is evidence that the reasoning behind moral judgments is not as consistent as Kohlberg’s original stage and sequence model would predict. Kohlberg concluded that reasoning organized as “structures of the whole” would be coherently centered on one of the stages or perhaps two adjacent stages during phases of stage integration. In the Kolbergian model, higher stage reasoning structures would displace lower stages, and “each new (logical or moral) stage is a new structure which includes elements of earlier structures but transforms them in such a way as to represent a more stable and extensive equilibrium” (Kohlberg, 1973, p. 632). Kohlberg’s thesis therefore was that people advance through stages of moral reasoning development in a fixed sequence, each stage being a necessary but insufficient condition for the next stage (1973, p. 632). Once a person has arrived at a higher stage of reasoning, they would not regress to lower forms of thinking according to this model. That people may be, at any point
in time, somewhat in-between adjacent stages and perform some reasoning at either stage was allowable under their theory.

In questioning Kohlberg’s basic assumptions, Krebs and Denton used alternative moral dilemma scenarios in addition to replicated Kohlbergian scenarios in their studies, and showed that reasoning was not stage consistent to the degree required of Kohlberg’s formulation (Krebs, Denton, Vermeulen, Carpendale, & Bush, 1991). According to Krebs and Denton (2005), it appears that development of moral reasoning may better be characterized as growing in flexibility rather than evolving through distinct stages of moral structures. This finding is based on empirical evidence showing that across different moral dilemmas participants often exhibit stage variability in reasoning that should not be accounted for by Colby and Kohlberg’s (1987) performance versus competence theoretical adjustment. Colby and Kohlberg, while claiming not to make a distinction between performance and compliance in moral reasoning, explained their own observations of relatively small percentages of stage inconsistent reasoning as the difference between competence (ability to reason at a higher stage) and performance (actual reasoning in given circumstances). In Kreb’s and Denton’s studies using alternative dilemmas, participants in ideal performance conditions (2005) responded rather frequently with moral reasoning that extended beyond adjacent stages across dilemmas, violating the key concept of Kohlberg’s stage and sequence theory (Krebs, Vermeulen, Carpendale, & Denton, 1991).

Another problem for Kohlberg’s theory is the disconnect between moral behavior and moral reasoning (Krebs & Denton, 2006). Krebs and Denton reviewed studies showing reasoning to account for only a minor portion of variance in actual moral behavior (2006). In questioning the causal relationship between moral reasoning and behavior, they offer an alternate explanation for the relation between Kohlbergian moral structures and specific moral choices. In this view the
moral reasoning captured in Kohlberg’s methods reflects more on justification for moral positions taken than on moral reasoning towards decisions. As Krebs and Denton point out, this would require a major revision to Kohlberg’s theoretical framework, one that Jon Haidt (2001) endorses fully in his social intuitionist model which shall be examined in detail after Kohlberg’s model is dispensed with.

I agree with much of this criticism of Kohlberg’s framework. The paradigm itself, involving deep probing for the “cognitive structures” of moral reasoning, is plausibly responsible for at least some aspects of the resultant data. The presentation of dilemmas followed by extensive structured interviews does elicit responses of greater sophistication in more mature individuals, but does not necessarily reveal much about the process moral decision making per se. The methodology in moral psychology of using probing questions regarding hypothetical moral dilemmas created to “pull for” (Krebs & Denton, 2005) particular stages of thought is problematic. This method does provide information on the ability (competency) in reasoning at higher levels, but some of the methodological details (scoring only the highest stage related commentary) masks some of the variability in responding and could reveal a stage structure that is not really as staged as it appears (2005). It is not altogether surprising to find that maturity leads to more complex explanations for one’s moral decisions, but the failure to demonstrate that individuals reason within a particular stage of moral structure consistently requires theoretical explanation. Kohlberg’s proposition that individuals may reach a higher stage of development and continue to make judgments based on lower levels as a “performance vs. competence” issue is considered by Krebs and Denton to be “problematic empirically and theoretically” (2005, p. 633), even though it probably reflects on some truth of the matter.

While acknowledging the developmental model’s contribution to the understanding of
maturity of moral reasoning, it is clear that there are many more factors than “moral stage of development” involved in reasoning about moral choices. Context effects have been shown to be important. For example, prison settings tend to pull for low stage moral judgments, as does alcohol consuming situations such as parties and nightclubs (Denton & Krebs, 1990). Some contexts may not elicit the type or strength of moral deliberation that probing interviews about hypothetical dilemmas does. In some (and perhaps most) situations, people may not engage in any type of moral reasoning at all (Krebs & Denton, 2005). Emergency situations may result in actions performed without any such deliberation. In encountered emergencies people seem to react impulsively to the most prominent contextual cues (Zillman, 1983), acting without any apparent deliberation. This begs the question of when and under what circumstances is moral reasoning invoked at all, and at what level or stage? In this sense then, the concept of “moral stages of development”, might be considered merely one more instance of what Ross (1977) referred to as the fundamental attribution error. The myth of “character”, espoused by development of “higher stages of moral reasoning”, once again places too much emphasis on the internal character of individuals at the expense of proper consideration of situational factors (Ross & Nisbett, 1991). So while the cognitive developmental model captures the essence of competency in terms of higher levels of moral reasoning achievement, it simply may not address many of the other interesting aspects of moral reasoning.

Morality would appear to be a domain of emotional reasoning and affective judgments totally ignored by the cognitive developmental approach. This concept is captured eloquently in the subtitle of Straughn’s (1986) “Or How to Reach Stage 6 and Remain a Bastard” (from Arnold, 2000). As one final critique of the Kohlbergian framework, the cognitive emphasis of the developmental model removes emotional decision making from the equation and is therefore
inconsistent with many other models of reasoning. Other theorists are concerned with the “high” and “low” roads of reasoning (i.e., Ledoux, 1996) corresponding to analysis and emotional reaction, respectively. Antonio Damasio’s findings regarding the debilitating effects of loss of emotional responding in frontal system damaged patients, especially in terms of social decision making, do not appear to be addressed by the cold, logical, cognitive developmental rationalist approach. Damasio’s (1994) theory of reasoning is based on emotional appraisal; his somatic marker hypothesis of emotional reasoning far removed from Kohlberg’s strictly cognitive view. Damasio proposes that when reasoning, possible outcomes are considered and each is associated with an associated “somatic marker”, or feeling state. Thus, a conceived negative outcome may be marked by an unpleasant “gut feeling” (Damasio, 1994, p. 173), if the evaluation becomes conscious. This form of emotional reasoning, according to Damasio in his discussion regarding intuition may be operating also at an unconscious level (p. 187). While a full evaluation and discussion of Damasio’s theory is beyond the scope of this treatise, it may be summarized as proposing that much of reasoning is with regard to affective responses to imagined outcomes, and that purposeful rationalist deliberation in isolation cannot account for human decision making. A comprehensive picture of psychological moral decision making must include the role of affect if it is to be consistent with these and many other theoretical views regarding affective reasoning mechanisms, including the fast heuristic reasoning described by Kahneman, Tversky, and others (see Gilovich & Griffin, 2001).

Before moving past Kohlberg, it is only fair to examine some defense of Kohlbergian or neo-Kohlbergian developmental models. In defense of the cognitive developmental approach, Gibbs (2006) offers a rather vehement counter argument against Krebs and Denton’s (2005). The arguments are not compelling. Gibbs appears bent on maintaining the cognitive developmental
model in an almost social constructionist (creating reality with theory) fashion, claiming that “Shifting our emphasis in moral psychology from maturity or adequacy to flexibility or conditional contingencies may be unwise” (2006, p. 668). He speaks of the facilitation of moral development in effecting reductions in antisocial behavior and interventions with at-risk groups (p. 668), a somewhat prescriptive account not only of morality itself, but of the field of moral psychology, one which I cannot endorse with an open scientific mind free of agenda. Revisions to the cognitive developmental model discussed in Gibb’s article are reminiscent of the type used in degenerating Lakatosian research programmes\(^1\). This view has been expressed by at least some prominent cognitive developmentalists, that the cognitive-developmental approach “can no longer be considered a progressive research enterprise” (Walker, Pitts, Hennig, & Matsuba, 1995, p. 373).

Gibbs (2006) acknowledges the problem of observed stage inconsistencies, yet minimizes it’s importance to the neo-Kohlbergian developmental model of morality. By referring to various revisions to the original theory (e.g., Nucci, Rest, Turiel) including his own, he attempts to defuse the arguments made by Krebs and Denton. Gibbs responds to Krebs & Denton’s (2005)

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\(^1\) Imre Lakatos (1977) clarified and extended the philosophy of science of Sir Karl Popper (1963). Lakatos extended Popper’s methodological falsificationism to cover sequences or sets of theories, realizing that no theory can be considered in isolation. Lakatos addressed the need to deal with theories in terms of their auxiliary assumptions. If an observation contradicted a theory (and associated assumptions), either the theory or the assumptions could be modified to account for the otherwise falsifying instance of observation. A good example is the prediction of and subsequent finding of the planet Pluto, which was based on the failure of Newton’s theory on gravitation to account for Neptune’s orbit. In this case, the assumption that “there was nothing else out there” had to be modified to include an additional planetary mass. The modification of the assumption led to a gain in knowledge (additional empirical content). According to Lakatos and his version of sophisticated falsificationism, a research programme can be either productive or degenerating. Productive programmes and their associated theoretical basis continue to add empirical content, that is the modifications often required of the theories or auxiliary assumptions add new information about the world. In contrast, in a degenerating research programme, ad hoc hypotheses or assumptions are added in order to retain the theory (save it from refutation) but do not result in any added empirical content. Degenerating programmes are characterized by modifications to theory or assumptions which are mere “linguistic tricks”, and do not allow for the prediction of any novel facts. It is my suggestion that cognitive developmental model adherents (i.e., Gibbs) are revising Kohlberg’s theory in such a manner as a degenerating research programme, pushing away falsification without adding any useful empirical content. Furthermore, new theories are now proposed as rivals to the Kohlbergian cognitive developmental model which cannot co-exist in the same theoretical framework.
claim that moral development plays only a minor role in actual moral behavior by citing studies showing a consistent .30 correlation between Kohlberg test scores and measures of moral behavior. Acknowledging that this accounts for a mere 9% of the variance in behavior, Gibbs refers to the relationship as substantial. By many social psychology standards, given the enormous complexities of behavioral prediction, .30 is a substantial correlation. But demonstrating a mild correlation between two variables does not weigh in on the causal issue. As Krebs & Denton (2006) point out in their rebuttal, the studies cited by Gibbs are strictly correlational and do not show any causal connection between moral reasoning and moral behavior, leaving this important question open to further empirical inquiry.

Regarding the evidence that moral reasoning competence (achieved stage of cognitive moral structure development ability) is correlated with moral behavior, Gibbs (inappropriately in my opinion) refers to the extent of the correlation as arising from anti-social behavior of delinquents and conduct disordered individuals as a strength of his position. In an apparent appeal for the need for social moral development, Gibbs refers to the adverse effects of anti-social behavior on society as indicative of the meaningfulness of the .30 correlation. It is after all, the morally underdeveloped individuals that behave inappropriately according to the studies he cites. If the argument is for the improvement of moral reasoning in the mentally ill and anti-social elements of society, it is noteworthy as an idealistic goal, however it may not further the understanding of the processes of moral judgment to maintain a narrow cognitive developmental focus on the psychology of morality. Furthermore, other factors are likely to correlate with both low stage moral reasoning and immoral behavior, including low intelligence, low socio-economic status, poor developmental role models.

To summarize my position on the Kohlbergian cognitive developmental model of morality,
this paradigm has gone far in demonstrating that individuals mature in their reasoning abilities along the moral dimension, and delineating some methods for eliciting and categorizing such reasoning. Much has been learned about how people reason morally (e.g., Kohlberg, 1973). Confirmatory instances of staged moral reasoning have been found (e.g., Walker, 1989), but confirmatory instances would not greatly impress Sir Karl Popper. Advances in moral reasoning are certainly associated with cognitive development, though the sort of reasoning elicited using Kohlberg and neo-Kohlbergian methods has not been shown to exert causal influence on moral judgment or decision. Recall that the very nature of Kohlberg’s method was to present dilemmas, obtain judgment, then probe for reasoning behind the judgment. The temporal sequence of this methodology leaves the causal connection issue open to examination. Nonetheless, the information in terms of the nature of moral structures of reasoning gained from this long line of research is substantial, and useful. In his 1973 philosophical discussion of the adequacy of the highest stages of moral reasoning, Kohlberg delineates some important philosophical issues regarding the psychology of morality, and this material is well worth reading. There remains however, much more to investigate regarding the psychology of morality than a theoretical framework limited to cognitive development can uncover. The serious issues regarding inconsistencies in stage characterized reasoning raised by Krebs et al. (1991) requires some acceptable explanation. There is a disconnect between the stages of moral reasoning and behavior. The causal role of moral reasoning remains undetermined, and the cognitive developmental account fails to consider affective processes deemed so important in other related theoretical interpretations of human reasoning.

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2 Popper (1963) in his acclaimed philosophy of science, discusses at length the concept of corroboration of a theory. Repeated instances of confirmatory evidence within the same domain add little to a theoretical systems corroboration. On the other hand, observations that conflict with the theory offer strong evidence against the “conjecture”. 
Kohlberg’s moral reasoning can be characterized as rationalist. The rationalist view, that moral decision or judgment is reached through a logical, reasoned process of mental activity, can be contrasted with the intuitionist view we shall examine after a brief review of a dual process theory of cognition and some concepts tightly coupled with the construct of intuition. The related constructs of affect, intuition, and associative processes will still require some sorting out, but we shall begin by discussing some differences between purely associational processes and propositional processes hypothesized as models of mental processes that consider both affect and rational deliberation.

Dual Process Models of Cognition

Jon Haidt suggested that we should update theories of moral psychology in terms of recent work on dual process models of cognition (2001, 2003, 2004). As Haidt points out (2003), the nineties in psychology was a decade of research on automaticity (e.g., Bargh, 1994; Bargh & Chartrand, 1999), intuitive judgment (e.g., Gilovich & Griffin, 2002), and emotional decision making (e.g., Damasio, 1994; Haidt, 2003). Recent theoretical work in the realm of dual process models is enlightening. A complete discussion of these topics is beyond the scope of this discussion, but an examination of an exemplary theoretical model on dual processes of cognition is worthwhile. By specifying a well formulated theoretical system of cognition, we can clarify some of the vagueness that often plagues discussions of reasoning.

Gawronski and Bodenhausen’s (2006) associative-propositional evaluation (APE) model was inspired by work related to attitude change. Research on attitudes that could be directed towards behavior leads directly into the realm of moral judgment, and therefore this work is very

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3 The reader should be aware that while “affect and cognition” are often discussed as separate, distinct constructs, in considering dual process models of cognition we shall consider both affective and propositional reasoning processes as distinct components of cognition in general. Thus there can be more or less affect-influenced components of cognition, including the (purely affective) associational and (more or less affect-laden) propositional reasoning components described in Gawronski and Bodenhausen’s (2006) APE model of cognition.
applicable to the topic at hand. Moral judgments may be considered highly related to if not synonymous with attitudes toward behavior. As researchers in the social psychology realm of attitude change began getting on the automaticity bandwagon and examining “implicit” attitudes, they noticed that responses interpreted as implicit attitudes did not always agree with explicit (deliberated self report) attitudes. Implicit attitudes are often inferred from such paradigms as subliminal priming and other latency response measures (2006). To illustrate via a concrete example, a person holding a negative view of Volkswagen automobiles may, for instance, respond faster to a relevant negative word (e.g., “ugly” or even “negative”) if it is preceded by a word or picture representing a Volkswagen. Thus an implicit attitude toward Volkswagens can be elicited by tapping the associative network of the mind using latency measures. These implicit attitudes are contrasted with explicit attitudes which are the product of deliberation and self report (overt, calculated responses). In obtaining an explicit attitude, a participant responds to questions such as “Do you like Volkswagens” on perhaps a seven point scale (extremely dislike / extremely like: Volkswagens). Attitude researchers noted that under specific circumstances one or the other attitude could be changed without affecting the other measure. If implicit and explicit attitudes were to represent a single mental construct, the disconnect between implicit and explicit attitudes would require some theoretical explanation (2006). If implicit and explicit attitudes are a unitary construct, then persuasion techniques that are known to elicit changes in explicitly stated attitudes should reflect in changes in (inferred) implicit attitudes, but they do not (e.g., Gawronski & Strack, 2004). Furthermore, some studies have shown that changes can occur in implicit attitudes that do not show up in measures of the explicit attitude (e.g., Olson & Fazio, 2006). It seems plausible that what one infers as either an implicit or explicit “attitude” is perhaps more closely related to the methodology that elicits the response than any real existence
of a unitary construct of “attitudes” in the minds of participants. Gawronski and Bodenhausen’s exposition of associative and propositional processes offers good explanatory power in understanding these otherwise seemingly inconsistent results.

The Gawronski and Bodenhausen (2006) associative-propositional evaluation model (APE) explains observations regarding explicit and implicit attitude change rather elegantly. The basic components of the theory are those of association and propositional reasoning. The basic assumption of the model regarding the associative store is a long standing and well accepted theoretical description of long-term memory structures (e.g., Anderson, 1983). In such an associative store when nodes (representing semantic concepts, categories, objects, behaviors, etc) are activated, spreading activation causes related nodes to receive an amount of activation proportional to the strength of the associative relationship. In some cases inhibition can spread as well, as when the word “palm” is related to south sea island trees rather than hands (nodes related to “wrist” or “palm reading” may be somewhat inhibited in this example). To illustrate the concepts of association, consider the presentation of a stimulus consisting of the mention of the word “tiger” in conversation. When the concept of “tiger” is activated, the concept of “stripes” will also be activated, especially strongly if a tiger is considered in contextual terms of its appearance (rather than, for example, its diet, or habitat). Such associations are often associated with hedonic tone (see Johnston, 2003), that is they may be either positive or negative affectively and carry emotional content. The concept of “tiger” may very well illicit gut feelings of fear and awe. The proposition that “a tiger is outside the open window” would elicit stronger feelings in most people.

In the APE model simple associations are not evaluated or qualified for truth content (Gawronski & Bodenhausen, 2006). For example, one may feel a particular way about the
association of a minority race even though one may evaluate the association as being false and therefore not acceptable for reasoning or reporting. Laziness may be associated with a particular group coupled with the realization that the association is based on questionable stereotypes rather than objective truth. In the APE model, truth evaluations require propositional reasoning. Some concept X may be simply associated with another concept Y, but the evaluation that X in terms of Y as truth requires syllogistic reasoning of propositions. In the simplest evaluation, this might involve the default proposition evaluation of the association itself, “is the association of X to Y true?”.

Propositional reasoning as defined in the APE model represent syllogistically inferred evaluative judgments derived from propositional content relevant for a given judgment (Gawronski & Bodenhausen, 2006). Propositions of this sort are presumed to be processed in a “reflective system that is superordinate to the associative store”, that is transformations of associative input into propositional format (2006, p. 694). This sounds rather technical, but dispensing with vagueness comes at the cost of technical specificity. As an example, if the association of “Volkswagen” is negative, a simple default proposition “I dislike Volkswagens” may be derived in the reflective system. This simple derived proposition may be expressed as an explicit attitude if other propositions are not invoked, perhaps due to the lack of elaboration due to spontaneity of judgment, or in individuals exhibiting a low need for cognition (i.e., “a low

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4 Kruglanski and Dechesne (2006) propose that both associational and propositional processes are at their heart, associative, and not qualitatively distinct. They consider the association of a given proposition with the concept of truth as an associative evaluative mechanism.

5 As Gawronski and Bodenhausen point out, syllogistic inference need not involve any version of philosophically correct formal logic, but subjective evaluation outcomes only. This is important since people do not appear to reason in terms of formal logic. For some discussion on evolutionary models of syllogistic reasoning see Tooby & Cosmides, 1992.

6 The process of generation of propositions from related associations is a difficult topic, yet promises to be an interesting and challenging one. A simple version of this process would have propositions stored as nodes in an associative framework, although other forms of “derivation” of associative input may be possible as well. Haidt’s (2001) model and Henriques (2003) views suggest that propositional derivations may be motivated not simply by stimulus (contextual) conditions, but by an underlying motivation of rationalization or justification.
dispositional tendency to engage in deliberative analyses”, 2006, p. 695). Different individuals, and the same individuals in different circumstances, exhibit greater or lesser tendencies to engage in such analytical thinking. Perhaps, under contexts facilitative of elaboration, additional propositions such as “German cars are well-made” may also be generated, resulting in a conflict with the default proposition “I dislike Volkswagens”. The conflict (dissonance) may spur further associations until a satisfactory syllogistic inference can be achieved. If a third association is derived, such as “Appearance is important in an automobile”, then the explicit attitude may well be expressed as a dislike. If however, a third proposition “Reliability is most important in an automobile” is derived, the explicit attitude towards Volkswagens may very well differ significantly from that of the original (implicit) associative evaluation. It is important to recall that the associative process outputs are not evaluated for truth content, whereas the propositions are evaluated together to form an explicit judgment. Associative evaluations may not be personally endorsed (2006), whereas propositional judgments represent a reasoned endorsement that may be subject to many influences.

The APE model suggests rather convincingly that the implicit attitudes inferred by social psychologists are driven, as they would be in the latency paradigms used to measure them, directly from the associative store. Thus, if we manipulate the associative network directly, via semantic priming, an effect can be seen in response latency that can reveal the nature of the activated pattern of the associations themselves and the strength and valence of the affect generated. In contrast explicit attitudes are the result of deliberative propositional evaluative judgments, and as such their stability is subject to different and additional influences. It should be noted that the activation pattern of the associative store is in a state of constant temporal flux. All types of perceived or even subliminal stimuli will affect the activation pattern. Furthermore,
there is a recursive element to this flux, namely that propositions derived from activation at some time $T_0$ may influence the activation patterns at some subsequent time $T_1$, resulting in other relevant propositions.

In many instances, the default mode of evaluation may be tied to the initial associative evaluation (“I dislike X”), but invocation of propositional processes (via dissonance, elaboration, or prompting) may alter judgments based on the subjective evaluation of the set of propositions derived (Gawronski & Bodenhausen, 2006). Gawronski and Bodenhausen discuss the different possibilities for resolution of conflicting evaluations. When additional propositions are considered that negate initial, simple associative evaluations, this is termed suppression (Wegner, 1994), or negation (Gilbert, 1991). The resolution of conflicting propositions by derivation of additional propositions that support the initial associative evaluation may be considered rationalization (Festinger, 1957).

The APE model can explain many of the observations regarding persuasion, explicit and implicit attitude differences, and evaluative conditioning results. It is easy to see how contextual situational factors might influence the outcome of explicit attitudes in this respect, without necessarily causing any permanent changes in the associative networks that drive implicit attitude measurements. Thus, for example, contextual information in the form of an audience (sympathetic vs. unsympathetic; or sophisticated vs. unsophisticated) would modify the activation patterns of the associational network in ways that would enable the reflective reasoning system to derive additional propositions that could influence the explicit attitude reported. Such audience effects have been shown to occur in moral judgments, where even the moral developmental stage reflected in the judgments can be affected by such manipulations (Carpendale & Krebs, 1992; Johnson & Hogan, 1981). It is important to remember that in
Kohlbergian methodology, the reports of “moral reasoning” are themselves simply expressed endorsements of judgments based on syllogistic reasoning (reasoning about one’s reasoning perhaps, but certainly captured post hoc).

The APE model is intriguing. Not only does it offer some explanatory power for issues regarding implicit and explicit attitudes, it is consistent with many accepted views in learning and memory. The model not only provides an algorithmic level candidate for describing mental processes, but has some potential in reflecting on the implementation level as well (associative networks of neuronal structures). Where it may fall short as a complete explanation for many psychological phenomenon is in the area of proposition derivation and syllogistic evaluation. The theoretical model appears somewhat vague on these issues; many important questions remain as to how particular propositions might be derived, how they are related to social circumstance, situational factors, and perhaps even unconscious motives. As we shall see, the intuitionist model of moral reasoning to be introduced in the following section seems to imply some motivated process of proposition relevance criteria and derivation that the APE model does not address. Dual process models, whether they refer to intuition and analytic thought, associative and rule based inference (Sloman, 2002), affect and cognition, or associations and propositions, promise to be useful in our discussion of moral judgment.

Association, Affect, and Intuition

Before examining Haidt’s social intuitionist model (2001), it would be wise to attempt a proper definition of “intuition”, in the context of both Damasio’s (1994) somatic marker hypothesis and Gawronski and Bodenhausen’s APE model of cognition. Recall that a there is an ongoing debate about the role of intuition and reasoning in moral judgment. Haidt’s model is based on intuition driving judgment, but others (e.g., Pizarro and Bloom, 2003) maintain the
rationalist view that intuitions may serve as a starting point for deliberative reasoning which drives judgment, and that fast automatic intuitions are developed by prior reasoning (and therefore considered reasoned). What specifically are these researchers arguing about? What do they mean when they refer to an intuition? Let us examine some of the things considered intuitions in their theoretical discussions.

Pizarro and Bloom (2003) acknowledge that many intuitions are products of natural selection such as, for example, the love of our children or the anger with those that cheat us. Thus Pizarro and Bloom consider that biological adaptations may fuel particular intuitions, such as those associated with killing babies. Other intuitions discussed by Pizarro and Bloom seem to align with the more general concept of implicit attitudes. These researchers refer to implicit attitudes as fast and intuitive (2003, p. 195). Therefore, it would appear these constructs (implicit attitudes and intuition) are highly related, if not synonymous in their view. In their claim that intuitions could be products of prior reasoning, these researchers illustrate that, for example, for an individual having thought extensively regarding stem cell research, future responses to this issue could be fast and automatic, (i.e., intuitive). It is not clear if this indicates, in terms of the APE model, that propositions that led to the reasoned judgment regarding stem cell research become strongly associated with the basic concept of “stem cells”, or if the reasoning results in modification of the affect (or, in Damasio’s terms, somatic marker) associated with this construct. Certainly, it would be plausible that prior reasoned propositions in support of (or, in Pizarro & Bloom’s view, causes of) intuitions regarding particular constructs would be strongly associated with the construct and easily derived upon proper activation of the associated node. In order to effect changes in implicit judgments however, the reasoning that led to implicit attitude
shift would result in modification of the associative network surrounding the construct involved.\(^7\)

Haidt (2003) seems to imply that an intuition refers to the affective reaction to an entire activation pattern. In this sense, situational factors that cause viewing of a scenario in a different light would trigger new intuitions regarding the situation (2003). If we think in terms of the APE model, I propose that intuition refers to the affective component derived from the pattern of activation occurring upon reflection upon any stimulus conditions. Intuition can be considered an implicit attitude toward a stimulus object, and such an object might consist of an entire scenario and all the associated affective response. It may be difficult however, to extract an implicit attitude toward a lengthy moral scenario using latency measures commonly used to elicit implicit attitudes (such as subliminal semantic priming paradigms). In the case of an implicit attitude toward an object such as a described scenario, the “affective reaction” may be measured and used to infer intuition.

Damasio’s (1994) description of somatic markers seems to align well with the construct of intuition as relevant to these inquiries. We can consider that an intuition is an accessible “marker” of the affective response to a particular mental state. Intuitions will have both valence, strength, and perhaps emotional color (disgust, fear, joy, sadness) associated with them. Intuitive responses are fast and automatic, and some may not be fully consciously accessible. Intuitions will correspond to associative implicit attitudes, though as mentioned they may not be easily measurable using standard latency measurement techniques.

Having examined the associative-propositional model of cognition put forth by Gawronski & Bodenhausen (2006), and the construct of intuition, we are now prepared to examine both intuitionist and rationalist contributions to moral judgment. This is the debate that introduced the

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\(^7\) Modification of long-term memory structures implies modification of neuronal connectivity, protein synthesis, receptor modification or renumeration, etc.
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topic of this essay. The associational and propositional components discussed in the APE model can be thought of as corresponding with purely affective (i.e., implicit attitude, intuition) and joint affective-cognitive rational components of judgment, respectively (2006). According to Gawronski et al., propositional processes are joint components because the propositions themselves are derived from affectively laden associative stores and then evaluated syllogistically\(^8\). The multiple proposition syllogistic evaluation process is what will be referred to as the rationalist component in our discussion of Haidt’s model of moral judgment.

The Social Intuitionist Model of Moral Reasoning

Jon Haidt suggests that we bring moral psychology into the twenty first century by considering affect, automaticity, and dual process models (2003). Haidt’s social intuitionist model (SIM) places intuition in the drivers seat, with rational thought relegated (mostly) to the role of wagging the intuitionist dog’s tail (2001). In Haidt’s view, moral judgment is driven by intuitions and rationalist thought serves the social purposes of justification, communication, and persuasion. This view is a major departure from Kohlbergian and other rationalist approaches (e.g., Pizarro & Bloom, 2006) which presuppose reason as the determining factor in judgment.

What happens when we leave structured moral dilemmas designed to examine stages of moral reasoning behind and examine moral scenarios which are simply affect laden? Kohlberg’s dilemmas (e.g., Heinz stealing the over-priced medicine to save his wife) force decisions between competing value systems (in this case the law and the lover). A person capable of reasoning at a higher stage of moral reasoning will gain a perspective on the dilemma unavailable to one at a lower stage of reasoning. Haidt and associates examined moral scenarios

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\(^8\) Syllogistic reasoning with relevant propositions as in Gawronski & Bodenhausen’s model may actually involve some form of affective summation process of associated “somatic markers” (Damasio, 1994). For a discussion of the translation of cognitive components into affect see Trafimow & Sheeran (2004). By the term “affectively laden” I am referring to the nature of elicitation of affective response in relation to associational activation patterns.
in which affect plays the major role and discovered a phenomenon he termed “moral
dumbfounding” (2003). Haidt found that people have difficulty describing any reasons why they
shouldn’t have sex with chickens or eat their pet dogs, yet they remain steadfast in their position
on the morality of such acts (Haidt, Koller, & Dias, 1993). I myself found it difficult to discover
any rational reason why an older man shouldn’t date a woman half his age, yet I felt the sting of
negative moral judgment upon viewing the scene I described at the beginning of this essay.

While Haidt’s participants may have been dumfounded by their inability to explain their
moral positions, using the APE model we can see how Haidt supplied propositions that would
counter the rationalistic evaluation of derived propositions regarding these particular types of
moral acts. For example, in his scenario regarding a brother and sister having incestuous sex,
propositions are supplied that negate common “reasons” why this act might be harmful, namely
the use of double birth control, both enjoyed it, no harm was done psychologically, etc (Haidt,
2001). When the syllogistic reasoning is thwarted in this fashion, the associative processes
continue to provide negative affect, and one is left with a feeling, or intuition, that something
must be wrong without an explicable rationalization for the feeling. In moral dumbfounding,
negation is incomplete and rationalization thwarted.

Haidt questions the purely rationalist approaches to moral judgment. In light of dual process
models, such as Gawronski and Bodenhausen’s APE model (2006), there are affective or
intuitional components of judgment that go along with the propositional or rationalistic
processes. It is not as if rationalist approaches necessarily ignore the contribution of affect, even
when they fail to explicitly discuss it. In rationalist models (e.g., Pizarro & Bloom, 2003) affect
may very well drive the derivation of evaluative propositions. What Haidt actually questioned,
and rightly so given the correlational nature of the observed phenomenon (i.e., Kohlberg’s data),
was the causal relationship between the rationalist components and moral choice (both in judgment and behavior). The basic rationalist approach is to presume that deliberative reasoning drives moral choice. The alternate explanation offered by Haidt is that deliberative reasoning of the sort that can be elicited using Kohlbergian methods (or in day to day conversation), represents rationalization (or justification)\textsuperscript{9} for intuitionally driven choice and judgment, rather than causal factors in such judgments.

In Haidt’s model, the intuitions drive the rationalization of judgment and behavior, rather than the other way around (Haidt, 2001). This model is anti-rationalist in the descriptive sense, that moral reasoning is rarely the direct cause of moral judgment. Haidt stresses that he is not endorsing this kind of moral reasoning prescriptively. Intuitive based judgments may very well not be the way many moral judgments should be made (2001). With this caveat Haidt’s moral philosophy is made distinct from his psychological inquiry.

Haidt’s (2001) social intuitionist model can be described as follows. Consider a situation and persons A and B. The situation may be an observation or perhaps a discussion regarding someone else. In terms of person A there are six links in the model (refer to figure 1). The eliciting situation invokes person A’s intuition which drives her intuitive judgment (link 1), in turn driving her post hoc reasoning (link 2). A’s reasoning is expressed in verbal expression to person B as reasoned persuasion (link 3). A’s judgment itself is also expressed (perhaps verbally and / or non-verbally) in what Haidt terms the “social persuasion” link (4). Additional minor links are included for reasoned judgment (link 5) and private reflection (link 6). While these last two links allow for some actual causal influence of reasoning in both modifying judgment and intuition, Haidt considers the use of these processes to be the exception rather than the rule, and

\textsuperscript{9} At this point I am not prepared to discuss differences between rationalizations and justifications, but use the terms rather interchangeably. Each as distinct connotations with regard to actual truth, but truth in this context is subjective.
are relegated to minor influences in the overall moral judgment process. Reasoning is not ignored in the intuitionist model, but its role is drastically altered. The intuitionist model represents an alternate explanation for moral reasoning, namely that in most circumstances it is persuasive and justificatory rather than causal.

![Figure 1. Jon Haidt's social intuitionist model (link descriptions added for clarity).](image)

What is the evidence in support of the SIM model’s major departure from traditional rationalist thought on moral judgment? In rationalist approaches, (i.e., Kohlberg 1984; or the social interactionist model of Nucci & Turiel, 1978; Turiel, 1983) people reason about an action
prior to making a judgment on whether or not the action connotes a moral violation. This is the type of reasoning assumed in Kohlberg’s interpretations and defended by Pizarro and Bloom (2003) in their response to Haidt’s model (2001). Moral violations, in the social interactionist models (i.e., Turiel et al.), correspond to actions that might be harmful or lead to injustice (Haidt, 2001). Rules are established that prohibit moral violations. Presumably, rules could carry sophistication and perhaps flexibility representing “higher stages” of moral development. Moral reasoning can be generated both spontaneously and via probing questions regarding judgments, but is it causal? Are moral judgments the product of reasoned thought processes (such as the propositional syllogisms discussed regarding the APE model), or is it the other way around?

In the social interactionist findings, judgments of immorality were correlated with judgments of the harmfulness of behaviors including homosexuality, pornography, and incest (Turiel, Hildebrandt, & Wainryb, 1991). Haidt, in discussing these findings, noted that the correlation they found between immoral judgment and harm does not necessarily imply a causal connection (2001). So the first step in the logical chain leading to the SIM model is that the alternate rationalist approaches have not demonstrated the causal direction in their findings which would support their theories. By using scenarios that were offensive yet not harmful, Haidt, Koller, and Dias (1993) found evidence which they claim in support of their intuitionist interpretation. In these studies, carefully constructed stories explicitly revealing that no harm or injustice was involved nonetheless resulted in moral condemnation of such actions as sibling incest, sex with chickens, or eating one’s pet. By measuring the affective reactions to such hypothetical bizarre behavior, they showed that these reactions were a better predictor of judgments than were any reasonings on the matters (2001). While this sharply contrasts with rationalist views, it must be noted that the stimuli used were very different from those of the traditional cognitive-
developmentalists. Kohlbergian style dilemmas are rich in terms of cognitive conflict which can
elicit much rational (propositional) thought. Haidt’s scenarios eliminate reasoned conclusion
regarding immorality in terms of harm or injustice while being heavily loaded with negative
affect. While Haidt reports the phenomenon of moral dumbfounding in his findings, the
methodology is clearly responsible for the phenomenon. Any reasons that would normally arise
in conjunction with the intuitions aroused by the described behaviors were anticipated and
counteracted within the scenarios themselves. This is not to say the findings are invalid, just to
explain that there are understandable reasons why such intuitions might exist, and the “careful
construction” of the scenarios that provide propositions counter to those that would normally be
derived in defense of the intuition simply thwarted reasoned rationalizations (this of course was
the apparent intent of these methods). What Haidt did demonstrate, is that intuition could
produce judgment that was not justifiable via any rationalization appealing to principles of harm
or injustice. Haidt (2001) goes on to cite the apparent automaticity of moral judgment, motivated
reasoning, post-hoc nature of justification, and the greater covariation of moral action with
intuition than with reason as four problems which the SIM model explains but which remain
problems for the rationalist.

The Social Aspect of Moral Judgment

While the traditional cognitive rationalist approach recognizes the importance of social
interaction in developing higher stages of moral reasoning, and despite the term social
interactionist itself used in some of these models (i.e., Turiel), these theories concentrate on
individual reasoning processes rather than socially dynamic processes. Haidt’s model focuses on
the dynamic social component of moral reasoning (2001). As you may recall from the discussion
of the model, the most important link for actual rational thinking in the SIM model is the
reasoned persuasion link. Haidt sees interpersonal persuasion as the main means of altering the intuitions of others and to some extent the self via rarely exercised self reflection (2003). Haidt’s stated view is that “moral reasoning is usually an ex post facto process used to influence the intuitions (and hence judgments) of others” (2001, p. 814). If this turns out to be the truth, then Haidt proposes that our moral judgment life is driven by a pair of illusions. The first illusion is that our reasons drive our judgments, and the second that our arguments will sway those that differ with our judgments (2001, p. 823). These illusions are consistent with many observations in psychology, including instances of confirmatory bias with retention of the view of objectivity in one’s own judgment (Koehler, Brenner, & Griffin, 2002), and other consequences of naïve realism (e.g., Griffin & Ross, 1991)\(^\text{10}\). In Haidt’s view people often conceive that the world is as they see it whereas they see others as biased and motivated in their views, and as such moral disagreements are often hot topics. The bitterness and futility in arguments about topics such as abortion stems in part from the illusion of reasoned position (2001), that our conclusions regarding morality are reasoned and defendable.

Let us imagine a moral debate regarding the issue of abortion rights in terms of both the Haidt SIM model and the Gawronski and Bodenhausen APE model of reasoning. Person A is pro-choice. This judgment may be driven by an intuition regarding the wrongness and injustice of violating one’s rights. Person B is anti-abortion, with a strong negative intuition about taking the life of an unborn child. Each side, in terms of the APE model, produces many propositions relevant to the topic, when faced with the stimulus of a casual conversation on the matter with a person of opposite indoctrination. In Haidt’s model, the propositions produced as relevant to the intuition are post hoc, that is they are generated in light of the strength and valence of the affective association that the abortion issue raises within them. Person B might derive the

\(^\text{10}\) Naïve realism is the view that our perceptions accurately reflect the objects and events in the world.
propositions that “an unborn child has a soul”, “any killing is wrong”, and perhaps even “this goes against God”, consistent with a belief strongly associated with the intuition itself that life begins at conception (yet another supporting proposition). Person A, in support of the pro-choice intuitions brought forth by the topic, derives propositions such as “a woman has the right to control her own body”, consistent perhaps with another relevant proposition that “life doesn’t begin until birth”. Rarely will either side, despite wrangling on the topic in earnest attempts to sway the other, ever succeed in altering the intuitions of the opponent. Instead, each person increases the strength of their own intuition by considering additional supporting propositions and rejecting contradictory information. Furthermore, each, sensing the illusion of reasoned judgment, will feel that the opponent should rationally consider their arguments. But each side’s propositions regarding their intuitions are derived, according to Haidt, to be consistent with their intuitive position, and each side remains convinced only of their own rationalizations. Issues such as when life begins are not questions that can be answered with any scientific conviction (except perhaps to say that life began at the big bang, when the whole process began), yet each person maintains the truth value of their version. Each person in such a debate derives additional supporting propositions that seem to increase the truth evaluation of their position. Perhaps the abortion issue is one in which few people would switch sides, but the social influence of judgments must be very real, social interaction regarding less volatile (and strongly affective intuitions) might be subject to modification. Some intuitions are learned associations, developmentally acquired, and subject to cultural and peer influence.

Many of the day to day moral decisions people face are not of the sort of vehement polarized debate described in the preceding abortion discussion. People with moral issues often converse with friends and family, a form of social interaction in which the reasoned judgments of others
can be influential. For decisions that are not demanding of immediate action, there is time for conflicting intuitions to rise and fall (temporal flux). Of course there is self-selection in choosing with whom to converse with. A young girl debating an abortion might discuss the issue with her friend rather than a nun (or visa versa of course).

Intuition and Evolutionary Functionalism

What is the source of the moral intuitions and their particular valence and strengths? Victor Johnston (2003) describes the important function of hedonic tone in emotional reasoning and discusses not only how such feelings could have evolved in the species, but also develop over the course of an individual’s development. Hedonic tone refers to the pleasurable or painful (positive or negative) qualia of a feeling experience. Nature, in the form of genetic heritance, can only go so far in providing guidance for behavior (Dawkins, 1996). Specific situations change and are unpredictable, but there are environmental regularities which can be seized upon by natural selection. Sweet foods, for instance, are good, perhaps not in Twinkie format, but in apples and other fruits and berries available in ancestral environments. We do not have to learn to like sweet tastes or dislike bitter substances (although the taste itself may develop somewhat). Sex is probably as good for the replication of genes as it feels when fully consummated. But what about other, less natural tendencies for like and dislike? Why is it that we feel good about gaining money and bad about losing it? The answer is that hedonic tone and, in Damasio’s terminology, somatic markers, can be acquired based on experience (Johnston, 2003).

As individuals develop, they learn new associations which can be associated with hedonic tones just as some of the more natural associations are. We probably, as infants, do not consider apples good until we taste them. And as anyone who has ever raised an infant knows, there is a lot of taste testing action. The association of apple slices with sweet (correlated of course with
nourishing in ancestral environments) taste results in the learned association of visual apple stimuli with the inherent goodness felt in their consumption. In this manner, new associations can be created that produce some valence and degree of affective reaction when activated. Associations learned at a young age and over many learning trials will be strong and difficult to modify. In the domain of morality, dispositions towards altruism including empathy, reciprocity, loyalty, and punishment are available for incorporation in our intuitive associations (Haidt, 2001). No doubt many such intuitions are formed in the developmental years under conditions of social interaction with parents, teachers, and peers.

Let us consider a version of one of Haidt’s (2001) moral scenarios. What could be so wrong about eating one’s pet dog (Haidt, Koller, & Dias, 1993)? In some cultures of course, dogs are regularly eaten as a delicacy, so this is not fully a natural intuition, at least not one that cannot be overridden. Of course the dogs they eat may not be their pets. Imagine that your neighbors invite you over one day and you witness them roasting the little Chihuahua puppy that only yesterday you saw playing gleefully with their daughter (picture Paris Hilton here, if it helps). Of course in our carefully constructed scenario the pet died of natural causes, was disease free, left no puppies behind, and was found to be delicious. According to Haidt, people find such acts morally reprehensible and yet show moral dumbfounding in their ability to describe reasoning behind their judgment, especially when common reasons are removed by careful construction of the scenarios. How can this be explained? As psychologists we need not be dumbfounded.

People have some naturally evolved mechanisms that lend themselves to the pet barbecue situation. In certain situations, such as exposure to foul meat or rotten eggs, the noxious nature of the odor represents an evolved disgust mechanism which drives the association (Johnston, 2003). After all, there would be selection pressures associated with such a stable relationship between
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health risks and the detection of such conditions via drifting molecules, resulting in the perception of a “foul” odor and the disgust associated with contemplation of consuming such spoils. As described by Johnston’s evolutionary functionalism, “the sting of death is in the fear, not the physics” (2003). The foulness of the noxious odor is in our minds, not the air. The moral reprehension of eating one’s pet is in the hedonic tone of the associations, not the flavor, harm, or injustice. And so, we can certainly associate the natural feeling of disgust with other things that are also considered inedible. But we need not go to the length of eating our pet dog in order to feel disgust at the thought of eating things outside our culturally accepted traditions. Consider that, although there have been cannibals in this world, it is doubtful that they were consuming their own children. The proximal act of finding disgust in the consumption of one’s offspring would provide an evolutionary advantage, as such acts are directly related to inclusive fitness. Pet dogs are easily associated with, and often treated as if they were, our own children. They are cute, small, and loving, and in contrast, often obedient. Whether they are tasty or not, I leave to future studies. And so, reasons for moral outrage at consuming one’s pet dog (Haidt, 2001) are understandable in terms of the possible links of affective associations. It remains unclear whether or not such acts are simply disgusting or in fact reflect on morality. If the perpetrators were judged worthy of punishment for such acts, rather than simply disgusting, this would reflect more on the moral dimension. It is worth noting that people are punished by societal legal systems for abuse of pets, and this seems to indicate that the negative judgments of such acts would be, in our society at least, deemed immoral in the true sense.

Modifying Intuition Through Social Interaction

The social aspect of the SIM model has some interesting implications and it’s importance in moral judgment cannot be minimized. If associations and their affective components are to be
modified, then learning must take place and the long term memory structures of the associative store modified. One candidate endorsed by Haidt (2001, 2003) for the modification of morality associations is the interaction with others. If a person expresses a particular moral judgment, driven by intuition, to a friend, and receives admonishment or reward, she is likely to learn something about her intuition, namely that it is unacceptable or acceptable to important others in her social sphere. The sting of admonishment provides the punishment that leads to learning. Perhaps the contrary opinion and rationalizations of the friend will affect not only her reasoning regarding the intuition, but perhaps the intuition’s affective tone will be reversed, strengthened, or lessened. This is the social influence link in Haidt’s (2001) model, where “moral judgments are strongly shaped by the judgments of those around them” (p. 828). There is evidence from studies on Japanese children raised in the United States that much of the development of strong moral intuitions occurs at a young age. As cited by Haidt, Minoura (1992) found the sensitive age period to be from 9 to 15 years of age. Once established some moral intuitions may be relatively unaffected by the reasoned persuasion of others. The reasoned persuasion link in the SIM model may very well serve the purpose of justification of one’s actions to others, perhaps not always influencing changes in their intuitions, but influencing judgments directly.

Implications of the Combined APE and SIM Models in Moral Judgment

Where can we go from here? The combination of the associative-propositional evaluation (Gawronski & Bodenhausen, 2006) and social intuitionist models (Haidt, 2001) in the realm of moral reasoning provides a well defined and clearly specified cognitive process for psychological investigations into moral judgment. Reasoning of the sort elicited in the early work of Kohlberg and his cognitive developmental associates can be seen in a new light. Haidt’s SIM predicts that most rationalist reasoning is justificatory in nature, and APE provides a
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framework for the analysis and understanding of the propositions brought forth and evaluated in reasoning.

In considering differential predictions from the rationalist and intuitionists models we can consider the coherence of propositional thought derived during the reasoning process. Rationalist views would predict that the reasoning propositions brought forth in moral debate would form a coherence reminiscent of Kohlberg’s “structures of the whole”. Intuitionist models would permit the derivation of propositions supporting the intuition, but not necessarily forming any rationally coherent argument. Of course, even if the propositions involved in the reasoning were captured in measurement, the “subjective” syllogistic evaluation might be problematic (recall Kohlberg’s 900 page 17 step manual). One could establish a philosophically correct normative outcome to a set of propositions, but human beings do not reason in terms of formal logic. Human beings have been shown to reason “normatively” when syllogisms are framed in terms of standard social contracts for example (Tooby & Cosmides, 1992), but such reasoning is (according to these researchers) biased towards cheater detection rather than any reflection of normative logical reasoning. This challenge notwithstanding, it should be possible to measure the relative coherence of moral judgments. In order to evaluate the coherence and basis of rationalist reasoning on morality we can look to moral philosophy.

While much of moral philosophy is prescriptive in nature, delving into the depths of thought regarding what we should or should not consider moral, the ideas generated in normative ethics may very well reflect systems of justification relevant to psychological inquiries. One illustrative question that comes to mind is this: if the consequentialist view of utilitarianism was not brought forth until Bentham (1748-1842), were citizens prior to this era capable of Kohlbergian stage five moral reasoning? In times where kingdoms ruled the land with declarations of their ruler’s
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will, was moral reasoning stuck at the lowest “law and order” stages?

Some candidates for coherent systems of reasoned principles of morality from philosophy include egoism (whatever is best for my interests), utilitarianism (whatever is best for everyone in the long term), and formal deontological systems (e.g., Immanuel Kant, 1991/1797). Each of these philosophical positions has its own problems, yet each covers some circumstances well. As an example, utilitarianism seems to break down when we consider a society where 99.999% of the population enjoys torturing the remaining members. Furthermore, consequentialism, the view that morality hinges upon the outcome in terms of overall happiness, suffers from an inability to predict the future and therefore govern behavior (and hence the development of rule-utilitarianism). Yet, in terms of the ability to provide persuasive justification for various actions in specific circumstances, each philosophical position has its strengths. The utilitarian view would be quite convenient in food sharing operations, when one was to be the recipient of another’s labor. Returning to our rationalist versus intuitionist debate, Haidt’s model would predict the widespread use and acceptance of varieties of justifications which may not be consistent with each other, but serve their limited purpose of persuasion and justification well in matters almost certainly of uncertainty, and always limited in terms of the processing time of social interactions. Rationalist models on the other hand, might suggest that within individuals reasoning would be consistent and the variance in philosophical position would be greater between individuals.11

Another differential prediction of the rationalist and intuitionist models, in terms of the APE model, deals with the number and composition of reasoning propositions produced. Rationalist reasoning should predict a set of propositions necessary to produce a coherently reasoned decision. Rationalist sets of propositions should include both supporting and contradictory

11 The ideas regarding the use of philosophical positions morality is inspired by Witte (2002).
propositions. Intuitionist models where reason plays the part of rationalization, might produce more propositions than necessary for a reasoned judgment, all supporting of the intuition.\textsuperscript{12} It should be possible to develop methodology which would solicit the propositional reasoning involve in judgments, and manipulate conditions (of disagreement or dissonance perhaps) which would elicit larger number of propositions if the intuitionist model were correct. If reasoning is relegated to the role of rationalization, then rationalizations should be stronger, in terms of number and variety of propositions derived, in some circumstances than others.

There are several distinct fields of social psychology that can be informed by a paradigm investigating moral judgment under these theoretical systems. Much of recent work in trait attribution is highly relevant to the issue of moral judgment. Investigations into the nature of attributions for morally relevant traits such as honesty, loyalty, friendliness, and charitability (Brown, Trafimow, & Gregory, 2004; Chadwick, Bromgard, Bromgard, & Trafimow, in press; Trafimow & Trafimow, 1999) are really investigations into moral judgment. Trait attribution investigations have led naturally (through some wrong turns perhaps) into discoveries regarding the importance of affect in attribution for immoral behaviors (Trafimow, Bromgard, Finlay, & Ketelaar, 2005). Work on facial expression as communication of moral judgment might be revealing, though somewhat beyond the scope of this discussion. Perhaps the most relevant work will be on the nature and impact of justification in social interactions regarding immoral behavior.

Our own recent research involving the effects of justifications on trait attributions has already provided some interesting results when considered in the light of Haidt’s SIM model. Manipulations of justification in trait attribution scenarios has shown substantial effects in reducing negative attribution for immoral acts (i.e., dishonesty, unfriendliness) (Chadwick &

\textsuperscript{12} There is always the possibility of the insertion of “straw-man” propositions into an intuitionists argument.
In these studies justifications of varying strengths were used in scenarios depicting dishonest, disloyal, unfriendly, and uncharitable acts. The interesting aspect is that despite the apparent weakness of some rather generic justifications, they had a positive impact on the trait attributions. Justifications rated independently as “slightly bad” excuses, nonetheless improved negative trait attributions. The effect was similar for both serious immoral acts of “perfect duty” violations (for discussion see Trafimow & Trafimow, 1999) of dishonesty and disloyalty and less serious “imperfect duty” violations such as unfriendliness and uncharitability. What this suggests, is that the social influence channel of Haidt’s model is one that is very sensitive to justification. Furthermore, given the nebulous syllogistic reasoning contributions of justifications of the type studied (e.g., “I came from dysfunctional home”), it would appear that affect (read: intuition) is mostly affected by inclusion of justification statements in trait attribution scenarios, and this indicates that reasoning is not dominant in the process of judgment. While these studies are only a beginning, and certainly not conclusive on these issues, they do provide some credence to the viability of the SIM model.

Let us end by reminding ourselves of a few notable characteristics of our species. Human beings are highly social beings. We are, in many ways, an altruistic species and depend upon each other for survival. Human beings are adept at recognizing individuals as studies in facial recognition as neurologically special, and innate (Farah, Wilson, Drain, & Tanaka, 1998) and even gait perception of biological motion reveal (Loula, Prasad, Harber, & Shiffrar, 2005). If we view social interaction in terms of game theory (i.e., Axelrod, 1980, 1984; see also Dawkins, 1996), individual recognition is clearly important. Players must recognize allies and opponents in the ongoing social game of life. It is quite plausible to consider that a person’s success in life depends mostly on their ability to navigate the social waters. In the realm of social interaction,
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decisions must be made under conditions of uncertainty, but this uncertainty can be reduced if individuals can be recognize and characterized. Morality comes into play as groups of people place both private and public judgments on the behavior of others, and themselves. Judgment of morality beyond the limited cognitive-developmental framework has great potential as an arena of psychological investigation that has the potential for tying together many otherwise diverse and seemingly disconnected theoretical systems in psychology. At the same time, continued studies in morality should reveal much about human social nature.

I close by asking the question which has plagued me from the beginning of this inquiry. Just what is morality after all. Certainly some decisions are clearly of a moral nature, such as whether or not to proceed with stem cell research, approve abortion rights without parental consent, or allow homosexual marriage. Many personal decisions in one’s life will be clearly moral as well. Some choices may not appear to be moral in nature. The purchase of an automobile can be a moral choice, though not one usually recognized as such. There is no moral issue in deciding between a green or red two door economy sedan, but choosing to sacrifice family expenses in exchange for a gas guzzling gold plated sports utility vehicle has moral implications. The moral implications of eating fast food, in terms of the future of one’s health and ability to provide for family, and in terms of deforestation of the Amazon, are very real. Perhaps then, morality extends to all choices which have potential consequences. In looking at morality and moral judgment in this light, understanding the social nature of moral reasoning becomes, in itself, a good moral choice.
References


