The Model and the Measure: an appraisal of the Minnesota approach to moral development

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ABSTRACT This review provides a critical appraisal of two of the more significant contributions of the Minnesota approach to moral development. One contribution is the componential model which describes the four psychological components underlying moral behaviour. Evaluation of this model focuses on the adequacy of its synthesis of disparate processes in moral functioning, its instruments for assessing the four components, and its framework for moral education. A second contribution entails the conceptual and methodological reformulations known as the neo-Kohlbergian approach. Evaluation of this approach focuses on its emphasis on macro-morality, redefinition of post-conventional morality, proposal of three moral schemas and six moral types and assessment of moral judgement with the Defining Issues Test. This review identifies the most valuable contributions of the Minnesota approach, as well as its most telling limitations.

After a full generation of scholarship and practice, the fields of moral psychology and moral education are now emerging from a somewhat tumultuous adolescent period into relative maturity where some stock-taking and consideration of future directions would seem to be developmentally appropriate. This prompts the question: what will be the vision that guides conceptual and empirical scholarship and provides the framework for meaningful interventions? Recently, members of the “Minnesota Group” have initiated a number of significant theoretical and methodological innovations that have clearly been intended to revitalise and redirect work in this area, and it is now timely to provide a critical evaluation of these contributions to the field.

The Minnesota approach to moral development initially piggy-backed on the rising tide of Kohlberg’s (1969) moral stage model. The viability of Kohlberg’s enterprise was hampered considerably by his labour-intensive and subjective Moral Judgment Interview (MJI) and coding system (Colby & Kohlberg, 1987); and so Rest (Rest et al., 1974) developed the Defining Issues Test (DIT) as a multiple-choice alternative to the MJI. The accessibility and easy use of the DIT quickly propelled it to the position of measure-of-choice in the moral development field. Since its introduction in 1974, over 400 published and hundreds of unpublished studies have
been conducted using the DIT (Rest et al., 1999a), involving over half a million participants (Rest et al., 1999). One of the inevitable consequences of a quarter-century of research findings with the DIT is that this accumulated empirical evidence led to conceptual reformulations as well. In recent years we have witnessed a flurry of conceptual and methodological contributions by the Minnesota Group that now warrant scrutiny; and certainly Jim Rest’s death in 1999 prompts an evaluation of his legacy to the psychological study of moral development.

The richness of the theory as it has evolved over the years and the magnitude of the research findings preclude a comprehensive evaluation within the constraints of a journal article, so this review will necessarily be selective. The focus here will be on two different aspects of the approach that I believe are the most significant and hold the greatest promise for the field. First, I will examine the Four Component Model because it is intended as a comprehensive explication of the psychological components of moral functioning; and secondly, I will evaluate the implications of the recently advanced reformulation of Kohlberg’s core ideas, known as the neo-Kohlbergian approach, and in that context I will also discuss the methodological contribution of the measure that has been at the heart of the enterprise—the DIT and its recently delivered offspring, the DIT2. My intent in this commentary is to help identify the most significant and valuable contributions of the Minnesota approach, as well as its most telling limitations.

The Four-Component Model

The componential model was first introduced by Rest in his major review chapter on moral development in the 1983 Handbook of Child Psychology, and heralded as a “major theoretical advance” (Rest, 1986a, p. 179). The problem facing the field (then and now) is that it has been characterised by single-variable theories of moral psychology that are simply untenable in the face of the complexity of moral functioning; and this observation certainly includes those theories that reify moral judgement development. Rest’s model was intended to describe the four psychological processes (with both cognitive and affective elements) that, in complex interaction, contribute to observable moral behaviour. Rest (1984) argued that actual behaviour must be part of what defines morality—reminiscent of Haan’s assertion that “action is nearer to being the litmus test for bona fide morality” (Haan et al., 1985, p. 53)—and that intrapsychic processes that do not have an impact on actual behaviour, although possibly revelatory about psychological functioning, are not morally relevant. Behaviour can be considered moral only through knowing both the observable behaviour and the psychological processes that give rise to it. The componential model stands as a challenge to the traditional tripartite classification of moral functioning into cognitive, affective and behavioural domains; instead it posits that each component involves different kinds of interaction between cognition and affect (Rest, 1986b; Narvaez & Rest, 1995; Bebeau et al., 1999).

The model was intended to synthesise moral psychology as a whole by incorporating under its aegis disparate processes from various theoretical traditions, to advocate a broader conception of moral functioning, to provide an analytical tool for
handling a range of conceptual problems (such as the relations among cognition, affect and behaviour), and to furnish a framework for the implementation and assessment of moral interventions (Rest et al., 1999b). This clearly was an ambitious mandate and Rest believed strongly that this model was comprehensive and adequate to the task. For example, he claimed that “if we had information about all four inner processes for a given subject in a given situation, we would be able to predict behavior” (1984, p. 29).

The four psychological components underlying moral action are held to be: (a) moral sensitivity; (b) moral judgement; (c) moral motivation; and (d) moral character. Moral sensitivity entails interpretation of the situation, awareness of the relevant moral factors and implications, comprehension of how various possible actions would affect the different parties involved, empathy and role-taking, construction of alternate scenarios and understanding of one’s own intuitions and emotional reactions. The moral judgement component entails deliberation regarding the various considerations relevant to different courses of action and making a judgement regarding which of the available actions would be most morally justifiable. The process of justification involves determining what the moral ideal is and integrating shared moral norms and individual moral principles. Moral motivation entails prioritising moral values over other competing values and concerns, making a commitment to the moral course of action and taking responsibility for the outcome. Moral character refers to the implementation skills and strategies that support the moral choice and include the characterological dispositions that foster effective action (courage, persistence, self-control, and so on).

Moral failure can be a consequence of a deficiency in any component: being blind to the moral issues in a situation, being unable to formulate a morally defensible decision, failing to accord priority to moral concerns, or being unable or unwilling to implement action. Although there is an obvious logical sequence to these four components, there is no set temporal or linear order. Naturalistic moral functioning is not necessarily logical, deliberate or linear; there are many complex feedback loops and interactions. For example, moral judgements may affect moral sensitivity, and moral action may engender rationalisations or changes in internalised values.

So what are we to make of the componential model? Does it provide us with a comprehensive synthesis of the psychological processes in moral functioning? Does it offer a conceptual framework for moral education? Does it set out the means by which to assess these various components?

Moral Sensitivity

The field’s predilection for “canned” hypothetical dilemmas that have already been pre-interpreted has eclipsed attention to Component 1—moral sensitivity—but it is readily apparent that in actual moral situations there is often considerable ambiguity regarding the relevant factors, individuals’ perspectives and intentions, viable options and probable consequences of various actions. This component potentially incorporates a range of active research areas in moral psychology, for example: the
interpretation of emergency situations (see Latané & Darley’s (1970) bystander intervention studies); the classification of social situations into moral, conventional, or personal domains (Turiel et al., 1991); the role of information assumptions in the construal of moral situations (Wainryb, 1991); and the role of empathy and perspective-taking (Selman, 1980; Hoffman, 2000). Two members of the Minnesota Group (Bebeau and Narvaez) have been particularly active in studying moral sensitivity, albeit in quite different ways.

Bebeau (1993) has developed and validated the Ethical Sensitivity Test (EST) which assesses participants’ responses to realistic dramatisations of situations with moral implications (presented via audio- or videotape). Her evidence indicates that there is considerable individual variability in moral sensitivity (at least among dental students), that professional-ethics training can bolster functioning on this component, and that moral sensitivity is a distinct process from moral judgement (the correlations between the EST and the DIT are positive but quite modest). Admittedly, not all moral decision-making is as reflective as that evidenced in the context of professional ethics. What is needed here is a measure that better taps sensitivity to moral considerations in everyday moral situations, as well as research that examines developmental patterns in such sensitivity (which would, of course, provide some indication of what to emphasise in moral interventions).

The research by Narvaez (1999, 2001) relevant to Component 1 has examined how people process moral events presented in textual material, although this work could be extended readily to other media and to real-life events. This research is premised on the notion that knowledge about the world is often structured as mental schemas that influence how information is understood and interpreted. Using techniques of discourse processing, she has demonstrated that children’s interpretations of moral themes and events were often characterised by significant distortions, reflecting the notion that people will readily comprehend what accords with their schemas but will misconstrue what does not. Further findings have revealed individual variability in moral comprehension or sensitivity as a function of cultural background, domain expertise and developmental level (Narvaez et al., 1998; Narvaez et al., 1999). This line of research could profitably be extended by classifying, in some way, the different features of common moral situations and exploring developmental patterns in sensitivity to their significance.

Proponents of the componential model (Rest, 1986b; Narvaez & Rest, 1995; Bebeau & Thoma, 1999) have stressed that cognitive and affective processes co-occur at each component, but their research to date has focused more on the cognitive aspects of moral interpretations. If theirs is to be a comprehensive model of moral functioning, it must examine systematically the interface of cognitive and affective factors. In the context of Component 1 it would seem especially valuable to study moral intuitions which have strong affective valence. Haidt (2001) has proposed a social intuitionist model which holds that intuition is the default process in moral functioning and which claims, in direct challenge to the rationalist approach in moral psychology, that a deliberate process of moral reasoning is, when activated at all, more likely an ex-post facto process intended more for impression management and social persuasion than for decision-making. In any case, it is
important that research on the componential model recognise and examine the significance of strong emotional reactions (empathy, antipathy, disgust) and intuitions that are evoked in many moral situations prior to any extensive cognitive processing.

Moral Judgement

Component 2—moral judgement—is the process best tapped by cognitive-developmental approaches to moral development, such as Kohlberg’s and Rest’s, because of their focus on moral deliberation; and more will be said about this component later in the context of evaluating the neo-Kohlbergian model and the DIT. One of the interesting points about the componential model, illustrated by the research of the Minnesota Group, is that some of the components can be divided into separate constructs; in the case of Component 2, these different constructs reflect different levels of abstraction. Three levels of moral judgement processing are proposed: (a) abstract stage structures or developmental schemas, reflecting broad developmental changes; (b) intermediate-level moral concepts; and (c) concrete rules or codes of ethics.

Bebeau and Thoma (1999) have examined such intermediate-level moral concepts that are more specific than abstract schemas but more general than concrete codes. To date, the research focus has been on intermediate concepts that reflect the content of professional ethics (e.g. informed consent, whistle-blowing) and thus are better guides to action than more abstract notions of morality. Their measure, the Intermediate Concept Measure (ICM), presents a series of moral situations and asks respondents to rate various possible action choices and their justifications. Performance on the ICM is indicated by the extent of the agreement in action and justification choices with those of a sample of ethicists. The preliminary evidence with the ICM indicates that it does differentiate students at different levels of education, that it is sensitive to the effects of professional-ethics training and that it provides non-redundant information to the DIT (the DIT and ICM are only modestly correlated indicating that intermediate concepts are not simply reflective of the more abstract developmental stages or schemas). Again, the field would be advanced considerably if research regarding intermediate-level moral concepts could be extended to include such concepts in everyday life (beyond the present focus on professional ethics), and if a taxonomy of such concepts could be developed. Of course, an examination of developmental patterns would further our understanding regarding their acquisition and their relationship to other aspects of moral judgement and would help to provide a framework for moral education efforts. For example, what intermediate-level concepts are most likely to arise in the context of the classroom, the family, or the realm of competitive sports, for example? Which of these concepts require the least in terms of children’s cognitive and social competence and thus would be acquired early; and which entail the scaffolding of greater cognitive complexity and social understanding in order to become a functioning part of one’s moral apparatus?

Proponents of the componential model aspire for it to provide a synthesis of the
psychological processes identified by disparate theoretical traditions in moral psychology. In terms of Component 2, some conceptual as well as empirical work is needed to integrate different models of moral orientations—frameworks for moral judgement—that are extant in the field. The emphasis of Rest’s model of moral judgement falls within the Kohlbergian tradition with a focus on justice and social cooperation; but competing orientations to morality have been identified, notably Gilligan’s (1982) ethic of care (in contrast to the ethics of justice) and Shweder’s (Shweder et al., 1997) ethics of community and divinity (in contrast to the ethic of autonomy).

The claimed interconnectedness between cognition and affect within this component has not yet been well explicated, except in general terms. Arguments have been made that moral ideals and conceptions of social cooperation typically are accompanied by affective elements such as a sense of fairness or care (Rest, 1984, 1986b; Narvaez & Rest, 1995) and obviously there is considerable interest among members of the Minnesota Group in pursuing these affective ties; however, a more compelling account of the significance of affective processes and how they co-occur with cognition is essential if the componential model is to avoid being condemned as unduly rationalistic.

Moral Motivation

The third component, moral motivation, addresses the question: why be moral? Kohlberg’s (1981) response to this question, reflecting his liberal enlightenment stance, was to claim that true moral understanding is auto-motivating, sufficient to empower moral action; but the oft-noted “gappiness” of moral life (Walker & Hennig, 1997) presents a significant challenge to this view, one that Kohlberg eventually came to recognise (Kohlberg & Candee, 1984). Having reasoned through a conflict and identified the moral course of action (Component 2) does not necessarily imply that one feels compelled to act in this way. What, then, is it that motivates moral behaviour and prioritises moral values over other concerns that people may have?

There is not much to say about the componential model’s handling of the moral motivation component because relatively little conceptual or empirical work has been undertaken in this regard by its proponents. Rest (1983) did identify several major competing theories of moral motivation, but it is unclear as yet how these could be synthesised and subsumed within the framework of the componential model. This component is particularly appropriate for examining cognitive–affective inter-relationships because it entails commitment to a moral judgement or ideal. Blasi (1995), Colby and Damon (1992) and Hart and Fegley (1995) have identified self-identity, particularly the centrality of moral values to one’s self, as significant for moral functioning; and so it would seem that conceptual and empirical work on identity development could yield some payoff regarding our understanding of moral motivation. This area is fraught with many challenges, however, given that many different types of moral motivation may be operating simultaneously. The compelling need we experience to regard ourselves as moral implies the corrupting power
of rationalisations that serve to undermine moral integrity (Bandura, 1991). In other words, researchers need to cast a sceptical eye on individuals’ verbalised accounts of their moral motivation.

In terms of assessment of Component 3 by members of the Minnesota Group, Bebeau (1993) has reported the initial development of the Professional Role Inventory which assesses the extent of commitment to professional values, particularly in terms of the concepts of responsibility and authority. It would seem, however, given the description of the moral motivation component above, that a more comprehensive measure is needed that can tap both cognitive and affective processes in the development of moral identity and moral personality.

Moral Character

The fourth component in the model entails the personality attributes and cognitive strategies involved in the implementation of actions that are consistent with the moral choice. The label for this component, “moral character”, does not reflect adequately the psychological processes involved here because common understandings of the term would include the other components of moral sensitivity, judgement and motivation. The character traits involved in carrying out moral actions include courage, perseverance, self-control and integrity. The development of self-control has long been recognised as a central aspect of the socialisation process and a voluminous body of research has been accumulated in that regard, but much less is known about other characterological dispositions. In part, this neglect can be attributed to the disparaged position of “virtues” in moral psychology, at least until recently.

The Minnesota Group has not yet accorded much attention to this component of the model, instead devoting their energies primarily to the assessment of moral judgement. Bebeau (1993) noted a checklist for implementation skills in clinical settings but obviously a more comprehensive assessment of moral character in everyday life is warranted. My own research on naturalistic conceptions of moral character (Walker & Pitts, 1998) could be regarded as a beginning step in delineating important personality attributes in moral functioning.

In summary evaluation of the componential model, the Minnesota Group has provided a valuable heuristic in positing a framework that could synthesise the field but its potential has yet to be fully realised. What is now required is: (a) considerable conceptual work in assimilating within this model the concepts of various theoretical traditions and research programmes in moral psychology; (b) sustained empirical attention to the development of reliable and valid assessments of each component; (c) assessment of the interactive contribution of multiple components in explaining different types of moral behaviour; and (d) the careful formulation of moral education programmes that have as their goal the fostering of adequate functioning in all four components.
The Neo-Kohlbergian Approach

In contrast to the componental model which has been known in the field for almost two decades, the second major conceptual contribution of the Minnesota Group—the neo-Kohlbergian approach—has only recently been introduced, notably in a 1999 book (Rest et al., 1999a) and in two journal articles that provide helpful overviews (Rest et al., 1999b, 2000). Although numerous challenges to both Kohlberg’s model and methodology have been raised by many scholars, Rest and his colleagues believe that the approach is still generally useful and largely valid but that some modifications are required, hence the neo-Kohlbergian label. While acknowledging one’s intellectual lineage is commendable, I would argue that the chosen nomenclature is overly modest, given the magnitude of some of the reformulations.

The neo-Kohlbergian approach shares with the traditional Kohlbergian approach an emphasis on the personal construction of basic moral meanings in its understanding of moral epistemology, in contrast to a reliance on received social norms. The neo-Kohlbergian approach is also unabashedly developmental, including the implication that a higher level is more defensible from a moral-philosophical point of view. The objections to defining morality in terms of conventional norms and the adherence to a developmental perspective converge in the neo-Kohlbergian approach with an emphasis on the shift from conventional to postconventional moral judgement, reflecting a somewhat similar stress in Kohlberg’s writings. Finally, the two approaches explicitly share a focus on cognition. This self-admitted cognitive bias of the neo-Kohlbergian approach flies in the face of the arguments underlying the componental model for a broader conception of morality that includes affective processes. In this regard, it is important to recognise the circumscribed nature of the neo-Kohlbergian enterprise—that it focuses on the cognitive aspects of the moral judgement component of the Four Component Model. What will be discussed in what follows are the most noteworthy formulations and reformulations of the neo-Kohlbergian approach, ones that clearly diverge from traditional interpretations of Kohlberg’s model or that warrant particular scrutiny because of their implications.

Macro-morality

Rest and colleagues distinguish between what they label micro- and macro-morality. Micro-morality concerns face-to-face relationships with particular others and with the development of virtues within individuals; whereas macro-morality concerns the formal structures of society, as defined by institutions, rules and roles that enable cooperation at a societal level (Rest et al., 1999a, 1999b). While acknowledging that the two types of morality necessarily have important interconnections and interactions, the self-proclaimed focus of the neo-Kohlbergian approach is on macro-morality (Rest et al., 1999a, p. 5) and it is alleged similarly that Kohlberg’s model is more illuminating of macro-morality issues.

The philosophical validity of this distinction between micro- and macro-morality has yet to be argued. It is difficult to imagine how anything beyond a somewhat
superficial distinction can be maintained given the interdependencies between living a virtuous life, relating to others with integrity and interacting with the secondary institutions of society within a moral framework. It has not been demonstrated that Kohlberg would have accepted the hiving-off of micro-morality from his model because he was particularly vested in demonstrating that principled morality was readily applicable to particular relationships (Kohlberg et al., 1990). Regardless, it seems to be both unnecessary and unwarranted in this case to claim that one’s approach to moral judgement development is not particularly relevant to everyday morality. Obviously, the intent of the componential model, previously discussed, is to address the full range of concerns in moral functioning, including micro-morality, so it is unclear what is accomplished, conceptually or practically, by the admitted focus of the neo-Kohlbergian approach on macro-morality.

Post-Conventional Morality

A considerable amount of the intellectual energy of Kohlberg’s enterprise was devoted to the articulation of principled moral judgement—the developmental endpoint and anchor for the theory—in terms of formalist principles of justice and respect for persons (Kohlberg, 1981; Kohlberg et al., 1990). However, he was castigated on conceptual grounds for aligning his psychological theory with a particular philosophical tradition (Blasi, 1990) and on empirical grounds for the lack of demonstrable data regarding the principled level.

The neo-Kohlbergian approach avoids this problem by advocating as a developmental endpoint not a principled morality but rather a less philosophically pure “common morality” that is characterised in more general terms and not explicitly based on any recognisable moral philosophy. Thus, the post-conventional items on the DIT are simply those that have been found to cluster and to be highly regarded by relatively mature and sophisticated people. This common morality is defined as “a social construction, evolving from the community’s experiences, particular institutional arrangements, deliberations and the aspirations that are voiced at the time and which win the support of the community” (Rest et al., 1999b, p. 301). If the common morality reflects the shared ideals and circumstances of the community, then that implies different moral communities may evolve different moralities which would in this conception be ethically relative, a notion in sharp contrast to Kohlberg’s assertion regarding the universal applicability of his model.

Moral Schemas

The neo-Kohlbergian approach abandons Kohlberg’s six moral stages and proposes instead three developmental schemas: personal interest, maintaining norms and postconventional. These schemas, however, retain many of Kohlberg’s essential insights about moral judgement development, but the definitions are somewhat different. Schemas are commonly understood to be general knowledge structures that reside in long-term memory and that thus facilitate information processing. In the neo-Kohlbergian approach schemas differ from stages in that they are not
defined in terms of cognitive operations; thus they are more concrete and entail more content than Kohlberg’s stages and scoring system (Colby & Kohlberg, 1987) that ruthlessly purged content to reveal structure. Schemas, therefore, are much more situational, specific to particular contexts.

The personal interest schema entails many of the themes in Kohlberg’s Stage 2 and 3—it appeals to the personal stake that individuals have in the consequences of an action. The maintaining norms schema roughly parallels Kohlberg’s Stage 4—it appeals to generally accepted social norms and hierarchical role structures for governing a society, recognising the need for norms that have society-wide scope and are uniformly applied. The postconventional schema, as discussed previously, perhaps diverges the most from Kohlberg’s Stage 5 and 6—it appeals to shared ideals arising from the experience of the community, ideals which are fully reciprocal and logically coherent in fostering consensus. The postconventional schema entails several elements according to the neo-Kohlbergian formulation: the primacy of moral criteria (laws and norms are understood in terms of the moral purposes and frameworks that underlie them), appeals to ideals that are shareable (and thus open to rational scrutiny and analysis and are not simply an expression of personal intuition), and full reciprocity (social norms should be not only uniformly applied but also impartial in their formulation).

These three schemas were derived through factor-analytical studies of responses to the DIT, which yielded three factors (Rest et al., 1999a). The emphasis of the neo-Kohlbergian approach and the DIT has been explicitly on the conventional to postconventional shift in moral thinking, but therein lies a major limitation of the model and the measure—the approach does not offer a great deal of insight into moral judgement in childhood, the period of life when considerable development and moralisation take place and when many moral education programmes are implemented. There is now abundant evidence regarding the moral capabilities and sensitivities of young children (Damon, 1988; Kochanska & Thompson, 1997; Hoffman, 2000), not only in other components such as moral sensitivity and moral motivation (where assessment often does not require the verbal articulation of reasoning), but also in the area of moral judgement (Killen, 1991). So it is particularly unfortunate in that regard that the DIT does not assess moral Stage 1 and that by the time participants have the requisite cognitive and verbal ability to respond to the DIT (which requires at least a 12-year-old reading level), the personal interest schema is no longer in play (representing a form of reasoning that is now rejected). Thoma and Rest (1999) did note the possibility that the personal interest schema really entails two separate schemas in children, as a re-clustering of the stage-typed DIT items with a large sample of low-scoring individuals revealed that Stage 2 and 3 formed distinct schemas (a pattern that is not found with higher-scoring participants who do not differentiate different types of immature reasoning). It is recognised, of course, that the distinctive focus of the DIT is on the shift to postconventional reasoning and that it was never intended to be an omnibus measure, appropriate for all developmental levels. My appeal is that the approach not lose sight of the foundational developments occurring in moral judgement development earlier in childhood.
Moral Types

The neo-Kohlbergian approach rejects Kohlberg’s strong stage model, particularly the notion that stages represent holistic structures of thought in development and that individuals are either in a stage or in a transition between stages. Despite the considerable evidence supporting the strong stage model in the moral domain (Walker, 1988), Rest (1979) argued for some time for a soft stage model that describes development as entailing shifting distributions of reasoning across stages, with response patterns that may vary considerably depending upon the demands of the assessment procedures. Thus, stage-typing within the neo-Kohlbergian framework has consistently been eschewed, with continuous scores (such as the P, D or N2 scores) being the preferred indices of developmental level.

Given this long-standing antipathy by neo-Kohlbergians to the strong stage model in moral reasoning development, it is perhaps a surprising feature of the approach (Rest et al., 1999b; Thoma & Rest, 1999) that it now also includes a typology of six moral types into which people can be classified, a typology that clearly reflects the strong stage (Piagetian) notion of alternating phases of consolidation and transition in stage development. The conceptual inconsistency between a soft stage model and a moral typology has yet to be addressed. Nevertheless, some novel and important findings have been provided by this research.

Some of my research (Walker & Taylor, 1991; Walker et al., 2001) has examined patterns of consolidation and transition in moral stage development (as assessed by Kohlberg’s strong stage model). Thoma and Rest (1999; Rest et al., 1999b) have extended such research within the neo-Kohlbergian framework, using the DIT. Consolidation on the DIT means clear preference for a specific schema (as indicated by item ratings), whereas transition means no evidence of a schema preference. Combining these two types of information—predominant schema (personal interest, maintaining norms, or post-conventional) and extent of schema mixture (consolidated or transitional)—yields a typology of six moral types. These moral types have been found to be ordered developmentally, although the insensitivity of the DIT to lower-stage reasoning means that very few participants are classified at either of the initial two types (transitional or consolidated personal interest schema). The primary argument here is that people should process information differently as they develop through periods of consolidation and transition, because transition is presumably indicative of developmental disequilibrium. Indeed, it has been found that a consolidated moral type does facilitate information processing as evidenced by: fewer “can’t decide” choices in response to DIT dilemmas, smaller variance in scores across dilemmas, fewer inconsistencies between rating and ranking data and greater consistency between dilemma choices and the inferred choices implied by item ratings (the utiliser score; Thoma et al., 1991).

The classification of participants into consolidated and transitional types using the DIT is not exactly comparable to the procedures derived from strong stage models and, given the continuous stage model and the structure of the measure, it is not well suited to assessing relative reasoning around the modal schema (which is an important variable in related research within Kohlberg’s model; Walker & Taylor,
1991; Walker et al., 2001). It will be helpful in future research to directly assess comparability in consolidation/transition status and information-processing strategies between Kohlbergian and neo-Kohlbergian models and measures.

**DIT and DIT2**

The neo-Kohlbergian approach not only entails conceptual reformulations, but also methodological ones—the introduction of the DIT2 to replace the DIT, and the development of a new scoring index (the N2 score) to replace previous indices (notably, the P and D scores). Given the popularity of the DIT, a critical evaluation is essential. In the neo-Kohlbergian approach, the focus is on tacit moral understandings rather than the articulation of reasoning (as with the MJJ). The claim is that people typically know more than they can tell; and thus the DIT was designed as something of a projective test because it presents brief questions or fragments of reasoning (not coherent arguments) to which participants supply meaning as they respond to the items in their ratings and rankings. In the neo-Kohlbergian approach, the DIT is understood as a device for activating moral schemas, at least to the extent that they have been developed, and for assessing these schemas in terms of importance judgements.

The Minnesota Group has embarked upon a programme of research to demonstrate the construct validity and reliability of the DIT and DIT2 (Rest et al., 1997, 1999a, 1999b, 2000). The relevant criteria include: differentiation of groups that would be expected, from a developmental or expertise perspective, to differ in moral judgement level (as a function of age or education); progressive change over time in longitudinal studies; sensitivity to moral education interventions; relationships to other measures of moral cognition (e.g. moral comprehension); relationships to political attitudes and choices (given the macro-morality emphasis of the model); the prediction of moral behaviour; and evidence of internal structure and reliability. The more-than-ample amount of research evidence relevant to these criteria (see the comprehensive review by Rest et al., 1999a) provides fairly decisive support for the construct validity and psychometric properties of the DIT. Furthermore, there is evidence that the measure has discriminant validity; that it is not simply a mere reflection of other variables—verbal ability and political attitudes being prime contenders. Thoma et al. (1999) reported that the criteria used to evaluate the construct validity of the DIT are still met when controlling in some way for verbal ability and political attitudes.

On the DIT, participants first rate and then rank stage-(schema-)typed items. The traditional index of moral judgement development has been the P score which reflects the ranking of postconventional items. Over the years, the P score has worked well but has the nigirling problem of ignoring a great deal of potentially informative data—none of the rating data and none of the ranking data regarding lower-level items (the personal interest and maintaining norms schemas) are used. This unsatisfactory situation has been addressed by the recent introduction of a new hybrid index (the N2 score) which uses two types of data from the DIT: the ranking of postconventional items and the difference in ratings between the personal interest
and the postconventional items, the latter type of data being more heavily weighted (Rest et al., 1997). This new N2 index is demonstrably superior to the P score in terms of the criteria for construct validity and reliability discussed above (Rest et al., 1997), largely because it is able to characterise participants’ response distributions more effectively. It represents a considerable psychometric achievement given the extensive analytical machinations involved in deriving the most effective index; however, its formulation is rather inelegant and not conceptually driven so it is difficult to say what it really represents.

The final methodological innovation of the Minnesota Group is the DIT2 (Rest et al., 1999). Frankly, the DIT was beginning to look the worse for wear. Some dilemmas reflected moral issues of a different era, some items were poorly worded and frequently an inordinate number of participants failed the consistency checks. The DIT2 uses new or updated dilemmas and only five (rather than the previous six) of them, has updated items and clearer instructions, has new consistency checks that purge fewer participants, and relies on the N2 index. Rest et al. provide data that indicate that the DIT2 is a better instrument in that it provides stronger support for the validity criteria, largely because it purges fewer participants and thus retains a wider range of scores overall. Although the DIT2 represents a marginal improvement over the DIT in purging a lower proportion of younger participants, the cognitive demands of the measure mean that it still is not appropriate for children. The development of a measure that can assess children’s moral judgement abilities should be high on the neo-Kohlbergen agenda. The DIT2 continues the reliance on a strategy of presenting brief fragmentary items to which participants respond. This strategy limits the discriminations that the measure can provide (since it reflects essentially just three developmental schemas).

In summary evaluation, the neo-Kohlbergen approach introduces some important conceptual and methodological reformulations that should energise research in moral psychology. Particularly notable are the spirited defence of postconventional morality, the proposal of three moral schemas (and six moral types) in moral judgement development, the evidence supporting the construct validity of the DIT and the introduction of the DIT2 and new scoring index (the N2 score). Residual concerns about the approach include its self-professed cognitive bias, limited applicability to micro-morality and lack of attention to moral judgement development in childhood. Undoubtedly, the componental model and neo-Kohlbergen approach will do much to frame the research agenda in moral psychology and moral education over the next several years.

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