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Reflections on Emotions, Imagination, and Moral Reasoning *Toward an Integrated, Multidisciplinary Approach to Moral Cognition*

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Beginning with the problem of integrating diverse disciplinary perspectives on moral cognition, we argue that the various disciplines have an interest in developing a common conceptual framework for moral cognition research. We discuss issues arising in the other chapters in this volume that might serve as focal points for future investigation and as the basis for the eventual development of such a framework. These include the role of theory in binding together diverse phenomena and the role of philosophy in the construction of moral theory. We discuss the problem of distinguishing descriptive and normative issues and the importance of systematic normative analysis for empirical research. We argue that theories of cognitive architecture should play an important role as a backdrop for investigation into specific aspects of moral cognition, and we consider some of the taxonomic issues that will arise for moral cognition research, including types of moral agents, forms of moral cognition, and the nature of morality itself. Finally, we discuss some key issues in moral development, including the importance of

understanding the fine-grained structure of moral motivation and emerging conceptual schemas and the role of active interpretation and problem-solving as children acquire moral skill.

INTRODUCTION

Recently, one of us (Christensen) was visiting a friend, and the discussion turned to the friend's oldest child, a 9-year-old boy with some behavioral difficulties. The boy is visiting a psychologist regularly, and the diagnosis is that he might have mild Asperger's. The father was considering buying a pop psychology book that provides techniques for teaching empathy to children in the hope that this would help. And after all, he said, you cannot have too much empathy. Christensen agreed that the book might help but wasn't so sure that you "cannot have too much empathy." He has a relative with schizophrenia who experiences powerful empathic responses when in more acute phases of her illness. These empathic responses are often inappropriate—responses to perceiving others' distress and unhappiness when there is none—but, more importantly, for this person the strength of these empathic responses is disabling. Fortunately, most of us do not experience such strong empathic responses to the emotional states of others, because it would be difficult to live our own lives coherently if we did.

Clearly, emotions and empathy play a fundamental role in mediating our relations to others. Normal, fluid interaction with others depends on nuanced responsiveness: Based on mutual expressiveness and sensitivity, we can enjoy a conversation, gain trust, and over time develop intimacy with a friend or partner. When social emotions go awry—as they do in individuals with schizophrenia, Asperger's, and psychopathy—social interaction can be difficult or even dangerous. This book, and the workshop on which it is based, explores these issues, and here we reflect on some of the contributions and themes.

INTEGRATING MULTIPLE PERSPECTIVES ON MORAL COGNITION

A central concern of philosophy from its beginnings, moral cognition is now an important subject of investigation for a number of empirical disciplines, and this volume reflects the vibrancy of contemporary research. This is an exciting new phase, but it also presents new problems. At a basic level, there is a problem of mutual understanding: The various disciplines employ diverse methods, concepts, and research questions. Those from a philosophical background may struggle to understand, for instance, how a psychometric instrument like the Psychopathy Checklist Revised (PCL-R) is devised and employed (see, e.g., Langdon & Delmas, Chapter 5; McIlwain et al., Chapter 6). Equally, those from a psychological or neuroscience background may have difficulty following the nuances of theoretical discussion of the *metaphysical noncommitment thesis* and its relation to moral responsibility (McGeer, Chapter 14). The greatest difficulty may lie not with the immediate content of what is written—authors have generally done well in writing

for an interdisciplinary audience and are admirably clear—as with grasping the deeper “logic” of the research: the background context and reasoning that go into conceptualizing the issues in just this particular kind of way. It can take a long immersion in the activities of a neighboring discipline, along with some luck finding the right colleagues and informants, to begin to operate successfully within an alien system of concepts and assumptions. Many of the chapters provide substantial introductory discussions that helpfully present some of the relevant context; however, such discussions can go only so far, and it’s notable that the conceptual landscape differs greatly across chapters.

Mutual understanding arises from and contributes to mutual engagement, and there is a substantial amount of cross-disciplinary engagement on show here. In addition to the fact that the volume as a whole is interdisciplinary, many chapters straddle disciplinary boundaries. Many of the moral problems used as stimuli in empirical studies discussed here are sourced from philosophy: Malle and Guglielmo (contributors to this volume from psychology) respond to work by philosopher Knobe (e.g., 2003); Ravenscroft (a contributor to this volume from philosophy) draws on findings from a range of empirical fields to buttress a view of the role of fiction in moral thought developed in philosophy by Nussbaum (1995, 1997); Mackenzie and Kennett (both philosophers who are contributing to this volume) respond (critically) to psychological research and theory by Haidt and Greene; while Levy (a contributor to this volume from philosophy) makes use of Haidt’s theory to address questions in neuroethics concerning cognitive enhancement. Over time, such interaction will surely increase cross-disciplinary understanding, so what then is there to worry about?

In service of imagining how things might be, we suggest the following ideal for mutual engagement. The various disciplines might work in a complementary fashion within a common framework of issues and concepts. Important results in a particular field would quickly propagate to related areas across disciplinary boundaries. Interdisciplinary collaboration would be common.

While the cross-disciplinary interaction displayed in this volume is promising, there is as yet not much in the way of such a common framework. Nor is it clear that the various disciplines involved will inevitably develop a stronger cross-disciplinary focus since there are many pressures favoring within-discipline orientation, not the least of which are publication, grant, and career prospects. It may therefore need special effort if moral cognition research is to become a single coherent multidisciplinary project. We aim in this chapter to identify some questions and issues that might be the focus of further research and out of which a common framework might be developed.

It will help to initially focus on philosophy in particular, both because it has a special concern with integration and the big picture and because its relationship to empirical disciplines is especially problematic. Philosophy is often viewed suspiciously by empirical scientists, who can find its methods obscure and seemingly antiquated. It thus has, if nothing else, a crucial *public relations* problem, because if philosophy is to participate effectively in the aforementioned cooperative disciplinary matrix envisaged then respect for its methods and contributions is important. Broadly speaking, we see three possibilities for the relation between

philosophy and the sciences: *replacement*, *engagement*, and *separatism*. In the replacement model, the expansion of empirical science wrests from philosophy its traditional subject matter; progress in (rigorous) empirical science will sweep aside (merely speculative) philosophical theory.¹ In the engagement model—which we will defend—philosophy becomes a full-fledged member of a cooperative disciplinary matrix, taking information from the empirical disciplines and contributing to them. In the separatism model, philosophy has fundamentally different methods and subject matter to the sciences and operates autonomously.

Separatism has been dominant in English-speaking analytic philosophy, which has conceived of the division between philosophy and the sciences in terms of a distinction between conceptual and empirical questions. Philosophy is properly concerned with conceptual questions, using *conceptual analysis* as its method, where conceptual analysis involves the formulation of theories concerning the meaning of particular concepts, like *knowledge*, *intentional action*, or *responsibility*. Such theories are evaluated by their success against counterexamples—that is, cases that fit the definition but are not instances of the concept. The method is notoriously dependent on intuitions: The judgment that a particular case is or is not an instance of the concept in question is based on the intuitions of the philosophical community, and the invention of counterexamples is also left to the imagination of the philosopher.² Philosophers, it turns out, have very fertile imaginations, with examples sometimes taking the form of esoteric science fiction-like scenarios. One problem is that it is not clear whether we can trust our intuitions for such strange cases. Another problem is that it is not clear whether the intuitions of highly trained philosophers are representative of the broader community, with some reason to think that they are not. This leads directly to the problem that, since psychologists can and do use empirical methods to investigate concepts, it seems hard to justify the claim that philosophers do not need to. The field of *experimental philosophy* was developed in response to these kinds of problems and uses experimental methods to investigate the interpretations that laypeople have of the conceptual problems that philosophers have been grappling with. Knobe (see, e.g., 2003) is an exponent of experimental philosophy, and Malle and Guglielmo's (Chapter 13) critical response to Knobe here is a fascinating example in which a traditional philosophical problem (the nature of intentionality judgments) has first been tackled by experimental philosophy, and then been taken up by psychology proper.

But philosophical theories are not always about the meaning of concepts; sometimes they are in ontological mode, concerned with the nature of something, albeit often something quite general or abstract. A salient example here is the nature of reflective agency. Philosophers are interested in concepts of reflective agency, but they also think it is a capacity that people really have (or in some cases lack), and theoretical investigation is particularly concerned with capturing the capacity that people have or lack. No matter how abstract such theories may be, to the extent they concern something real they must make some empirical assumptions. In the past, philosophers have thought that they could safely take as their empirical data common sense facts that are obvious to any intelligent member of society and hence do not require any special scientific support. Basic common sense and introspection tell us that humans make decisions and often use reasoning to make these

decisions. Philosophical theories have been built on such mundane facts, tracing out their more subtle implications. However, empirical cognitive research, including notably the seminal work of Nisbett and Wilson (1977), has shown that common sense and introspection can be very wrong about how our minds work (see also Schwitzgebel, 2008): This leaves philosophical theory potentially vulnerable.

Haidt's (2001) social intuitionist model of moral judgment taps into this structural weakness. It challenges the standard philosophical view of moral agency, which assigns an important role to reasoning by drawing on contemporary cognitive research that has tended to emphasize the role of automatic emotional processes in moral judgment and action. The social intuitionist model is truly radical and would require philosophers to rethink many fundamental issues. For instance, Mackenzie (Chapter 11) argues toward the end of her chapter that our moral practices assume that we are *reason responders*, and philosophical conceptions of moral agency tend to place considerable weight on this (it is, for example, assumed in McGeer's concept of *coreactivity*; Chapter 14, this volume). If the social intuitionist model is correct, then our capacity for reason responding is far more limited than folk practice and philosophical theory have assumed, and substantial practical implications would follow from this. Because the standard philosophical view of moral agency has not been provided with clear, rigorous, empirical support, the challenge from social intuitionism has a great deal of plausibility. For comparison, Camerer, Loewenstein, and Prelec (2005) argue on similar grounds for much the same kind of intuitionist revolution in economics.

We find Mackenzie's (Chapter 11) and Kennett's (Chapter 12) criticisms of the social intuitionist model convincing: they argue that moral judgment and reasoning usually take place in a meaningful personal context and that as an important and not infrequent part of our lives we face major moral decisions that have significant and often complex consequences and that tend to provoke extended bouts of moral reflection. The examples they discuss include whether to end or stay in a marriage, whether to give Ritalin to a child diagnosed with attention deficit/hyperactivity disorder (ADHD), and whether to put an elderly parent in a nursing home. The experiments used to support the social intuitionist model, in contrast, typically involve artificial third-personal judgments, and there is good reason to worry that the results will not generalize to the kinds of major moral decisions that Mackenzie and Kennett describe. It is plausible that the bouts of moral reflection that accompany these kinds of decisions do indeed play a causal role in shaping the decisions made, even if the mechanism by which they do so is not straightforward. However, although these defenses of reflective reasoning are successful, in our view they are also incomplete. A more comprehensive, systematic empirical validation of the nature and role of reflective reasoning is needed. Ravenscroft's (Chapter 4) approach here is instructive: He begins with an intuitively plausible philosophical theory of the role of fiction in the development of moral capacities and surveys relevant empirical research, concluding that the findings do indeed support the theory. The empirical foundations of philosophical theories of moral agency need similar buttressing.

So, in our view, the separatism model cannot work for philosophy because it needs engagement with the sciences if it is to place its theories on a defensible

footing against empirical challenges; however, the basic problem for philosophy also applies to some extent to all disciplines. That is, each discipline, and indeed each field, makes assumptions that might in principle be disproved by results in other fields and disciplines. Philosophy's structural weakness has been that it has had no systematic mechanisms for checking its empirical assumptions, but equally there are few systematic mechanisms for ensuring that research within any particular empirical field is compatible with results in other fields and disciplines. Thus, interdisciplinary engagement is an appropriate model to strive for, not simply because it would be nice but also because it is mandated by basic scholarly principles. It is important to have systematic mechanisms for checking assumptions.

Some may wonder, however, whether replacement is not the more or less inevitable fate of philosophy. The previously described case of psychological research on intentionality judgments, where we see psychology intruding into a traditional field of philosophy, is grist for such a view. And the issue of testability provides further motivation for the replacement view. The idea that important claims should be testable is a core value for scientists, one that philosophers do not always appear to take very seriously. A comment we have overheard (we name no names) is, "I don't mind working with philosophers as long as they're talking about things that are testable." Experimental philosophy applies empirical methods to philosophical questions, but if one is thinking of doing experimental philosophy the question arises, why not go all the way and become a full-fledged psychologist? After all, just what is the primary distinction between experimental philosophy and psychology?

One reason replacement might not be the inevitable fate of philosophy is that the remorseless drive to testability and experimentation may carry with it crucial limitations that are balanced by distinctive philosophical strengths. Testability as a goal can take different forms: We can distinguish *narrow* and *broad* testability. Narrow testability is the idea that every important claim should be testable and, if it is to be taken seriously, actually tested. Broad testability is the idea that theories should be assessed against available evidence, with theories that provide the best overall account of the evidence being preferred. Experimental scientists focus on narrow testability: Their mode of operation is the experiment, in which the manipulated phenomena are carefully shielded from uncontrolled contextual influences, and their primary academic currency is the experimental journal article. However, philosophers of science long ago gave up on the idea that narrow testability is an appropriate goal for science as a whole, and with good reason. Scientific theories can be complex and abstract; consequently, to arrive at a specific prediction it may be necessary to take into account multiple aspects of a theory (in some cases multiple theories) and use a complex chain of inferences that bridge between the theory and the shielded experimental situation. If an experimental result is not as predicted, the fault may lie with bridging inferences and methodological limitations rather than the theory (see, e.g., Levy & McGuire, Chapter 8). And, if the fault lies with the theory, it may be difficult to isolate where in the structure of the theory the mistake lies. Narrow experimental testing of all the individual ideas that go into a theory can be not merely impractical but also logically impossible. Hence, broad theory assessment must also focus on internal coherence and predictive and explanatory success in relation to the overall body of evidence. Darwin's theory of

natural selection is a good example: It is strongly supported by the evidence, but there are no decisive individual tests.

Theories get their value because they can unite a variety of seemingly disparate cases into a coherent picture, draw subtle distinctions between superficially similar phenomena, and provide deep explanations. They make difficult phenomena tractable. In the case of moral cognition, we are in urgent need of theory because the phenomena are very complex. The issues that arise in the investigation of moral cognition include many that are fundamental to human cognition and agency in general and hence span all of the cognitive disciplines. Many of the issues are very abstract and conceptually difficult—for instance, the question of what it is to be a morally accountable agent appropriately held responsible for one's actions. As it happens, philosophy has a rich and sophisticated body of theory on exactly these issues (see, e.g., McGeer, Chapter 14). In fact, it is no accident that philosophy has this body of theory: It is constitutionally interested in high-level, synoptic issues and conceptually difficult questions. Thus, philosophy has distinctive strengths that can make a valuable contribution to the investigation of moral cognition, and these strengths are linked to the fact that it is *not* focused on narrow testability.

For this reason, although we think that experimental philosophy is a valuable addition to the philosophical toolkit, we do not think it is the right general model for conducting philosophy. Philosophy is concerned with more than just concepts; it has a broader role in theory construction on fundamental issues, such as the nature of moral agency, for instance. Indeed, the theoretical orientation of philosophy means that there can be problems translating philosophical thought experiments and counterexamples into experiments that investigate how laypeople think. Philosophical thought experiments and counterexamples are often designed to probe theoretical issues that are relatively distant from everyday problems, and the reactions of laypeople to such problems may not be particularly relevant to the theoretical questions being posed by philosophers. For comparison, there is little reason physicists should care about the responses of layfolk to the Schrödinger's cat thought experiment, which is an analytic tool for investigating the structure of a theory that only a competent physicist can properly understand. The problem of translating from a theoretical context to the investigation of ordinary thinking is compounded when the theory is normative because relations between normative theory and the descriptive nature of lay responses to moral problems are complex, as discussed in the next section. Philosophical thought experiments such as the Trolley Problem may prove useful tools for empirical researchers, (as, e.g., employed by Langdon & Delmas, Chapter 5; McIlwain et al., Chapter 6), but results should be interpreted with caution because the original thought experiments were framed with abstract theoretical concerns in mind. They were *not* originally designed to probe how people actually think about moral issues, and while they might nevertheless provide useful insights in the longer run it may be better to devise moral stimuli that specifically target real-world moral cognition.

One of the ways that high-level synoptic theory is valuable is that it can provide a carefully framed context within which more specific empirical questions can be posed and results interpreted. Other things being equal, the fact that a particular set of experimental results are consistent with the experimenter's hypothesis is

only weakly informative because they might be consistent with other hypotheses. Theory can help to identify plausible or interesting alternative hypotheses; conversely, if these have not been carefully identified the experimenter's interpretation of the results is vulnerable. This is the weakness targeted by Mackenzie (Chapter 11) and Kennett (Chapter 12) in their critiques of the social intuitionist model. The latter is itself a relatively complex theory (confirming that philosophers are not alone in engaging in theory construction), but its specific analysis of moral agency is simplistic. This is because it gives relatively little thought to the real-world circumstances in which moral cognition usually occurs, overlooking important aspects of those circumstances, and it uses a limited conception of moral reasoning as solely principle-based reasoning. These limitations affect the generalizability of findings that are interpreted to support the theory. Although the results on *moral dumbfounding* (see, e.g., Haidt, 2001) are consistent with expectations derived from social intuitionist theory, the experiments are not representative of real-world circumstances of moral judgment and reasoning, so we cannot safely generalize from these results to real-world moral judgment and reasoning. The attention that philosophy has given to the high-level analysis of moral agency pays off here, helping us identify aspects of moral agency in the unshielded, contextually influenced, natural human situation that may not be apparent in a narrow, laboratory-based context. In this case, qualitative analyses of data on real-world moral agency may reveal personal situatedness, skill learning, and a far more complex suite of cognitive processes than engaged by snapshot moral judgments in response to peculiar third-personal vignettes.

Thus, in our view, replacement is an unlikely scenario because moral cognition research needs theory, and philosophy has distinctive strengths in theory construction. It will not be the only locus of theory, but philosophy is well suited to the development of abstract, conceptually difficult theory. In this respect, the proneness of philosophy to the use of bizarre science-fiction examples makes some sense: If one is being very careful about the logical structure of a theory then logically possible examples and counterexamples matter, even if they are well outside the range of normal experience. On the other hand, theory must also capture the actual cases, and it is a problem that philosophy has not had a structured approach to the use of empirical examples. Philosophy cannot levitate: It needs firm empirical grounding, and it should strive for broad testability. To achieve this it needs engagement. But the empirical disciplines also need cross-disciplinary engagement for assumption checking, the framing of questions, and the interpretation of results. Ideally, we might hope for a rich flow of information between fields and disciplines and a virtuous feedback cycle in which current empirical findings revise the conceptualization of high-level theory, which feeds back to the framing of empirical questions.

One of the most important ways for interdisciplinary engagement to occur is organically through ad hoc connections and by means of workshops and books such as this. Ongoing engagement should lead to better mutual understanding and better use of complementary skills and knowledge across disciplines. Considering the pressure for within-discipline focus across the cognitive sciences as a whole, piecemeal interactions in the context of mostly mosaic field and discipline structure

might be the more probable future of moral cognition research. However, as we have noted, it is not clear that organic interactions will be enough to promote sustained cooperative engagement. Thus far, we have tried to make the case that closer forms of engagement would be better, but the question then is how this might be achieved. A strongly top-down approach is unlikely to succeed, among other reasons because it is hard to anticipate the directions that future research will take. However, some core issues of enduring interest are relevant to all of the disciplines involved in moral cognition research, including (1) relations between descriptive and normative issues, (2) the nature of core cognitive architecture, as applied to the question of the various forms of moral cognition and the ways that they shape action, (3) taxonomies of moral types, and (4) moral development. Topics such as these could serve as cross-disciplinary focal points, and if the conceptualization of core topics becomes more standardized it would become easier to relate research in one field to others. Even the identification of areas of dispute, as we seek to do in each of the following cases briefly, may help to clarify the kind of work that needs to be done.

RELATIONS BETWEEN DESCRIPTIVE AND NORMATIVE ISSUES

Philosophical moral theory is more normatively than descriptively oriented, though as discussed already it does aim to capture the capacities of real agents, and philosophers need no reminding of the significance of normative issues. Empirical researchers, on the other hand, have a strong descriptive orientation. Close connections between empirical and normative questions will be an ongoing challenge for moral cognition research because they present difficult conceptual and practical problems. To begin with, it is important to clearly distinguish between descriptive and normative questions. For instance, Mackenzie (Chapter 11) claims that Haidt (e.g., 2001) has failed to grasp the normative nature of cognitivist moral theory, misunderstanding it as descriptive. Criticisms appropriate to descriptive theory do not necessarily apply to normative theory; thus, even if the evidence indicated that people do not commonly employ reflective reasoning to causally influence their decisions, this wouldn't show that they should not. Descriptive and normative issues are linked, however. Thus, if people cannot shape their decisions using reflective reasoning then we should abandon normative models that suggest they ought to.

Empirical research tends to take *normal* (e.g., normal subjects, healthy subjects, normal development) as the baseline for comparison in defining pathological conditions. This is a reasonable starting point. However, it will be important to clarify distinct descriptive and normative issues, and as empirical research makes progress it will be increasingly necessary for it to directly address normative issues. As a basic point we should not confuse *normal* with *normative*: Normal moral cognition may differ substantially between cultures and across times, and, moreover, the most morally admirable individuals may be fairly rare. It is even possible that we might come to decide that statistically normal forms of moral cognition

are morally objectionable. There are thus two quite distinct projects: (1) identify the statistical distribution of forms of moral cognition in the population; and (2) develop normative classifications of forms of moral cognition. Psychopathy is both statistically abnormal and morally objectionable, and the classification of psychopathy as morally objectionable is part of the normative project.

We have already said that philosophical conceptual analysis is notorious for relying on intuitions, but empirical researchers are also relying on some combination of intuitions and community attitudes for their normative classifications. Philosophy at least has the advantage that it subjects such intuitions to sustained critical scrutiny; it will be a problem if a veneer of *objectivity* obscures the role of normative intuitions in empirical research. In the case of psychopathy, the appropriate normative classification (that it is morally objectionable and should be prevented) seems obvious and unproblematic, but in other cases things won't be so easy. As empirical classifications become more fine-grained and interventions more powerful, the normative issues will become less obvious and in some cases more consequential. For example, it may be possible to prevent a psychopathic or Machiavellian developmental pathway with empathy-enhancing treatment in early childhood but at the expense of later career success for the individual. As powerful intervention techniques become available, parents, with varied knowledge and goals, will want to take them up. Some parents may try to promote empathy to a degree that is unbalanced and dysfunctional. Others may attempt to deliberately reduce the empathy of their child in the hope that this will help them succeed in a career such as business or law.³ Entrepreneurial figures of the Dr. Phil variety will promulgate advice widely.

In such a context, careful, systematic, normative analysis will be a vital input for all aspects of empirical research, including the classification of pathologies and the construction of intervention techniques. Normative models of moral cognition will be important both as a contrast for classifying pathologies and as a goal for interventions. Again, these are reasons for close engagement between philosophy and the empirical disciplines studying moral cognition.

MORAL COGNITION AND COGNITIVE ARCHITECTURE

Separatism is not a good model also because larger theories of cognition can have important implications for moral cognition, including the form that moral knowledge takes and the way that it shapes behavior. Part of understanding moral cognition is the task of embedding moral cognition in a larger account of cognitive architecture, and no individual field can adequately tackle this alone. By *cognitive architecture* we mean the major structure of the cognitive system. Is there one main system or multiple interacting systems? If the latter, how are the systems related? What are the representational and processing characteristics of each system?

Haidt's appeal to dual-process accounts (see, e.g., 2001) is an example of how broader conceptions of cognitive architecture can shape and constrain proposals on the nature of moral cognition. According to dual-process theorizing, there is a fast, high-capacity automatic system and a slow, low-capacity conscious system (see Evans, 2008, for a review). Mackenzie (Chapter 11) and Kennett (Chapter 12)

argue that major moral decisions induce moral reasoning that plausibly influences decisions and that even when moral judgments or actions are fast and automatic they will often have been shaped by a prior history of moral learning that involved rational reflection. But, if all rapid moral judgments, and the actions thus instigated, are purely automatic, as dual-process theory suggests, our rational moral agency is still very limited and somewhat robotic—for instance, we can review and plan ahead rationally, and rationally learn new response dispositions, but in the heat of the moment we operate on autopilot.

It is arguable, however, that an important class of cognitive processes does not fit into either pole of the dual-process taxonomy. Specifically, these processes are controlled but relatively low effort, rapid, and relatively high capacity. These characteristics might allow effective cognitive control of proximal action in time-pressured situations, contrary to dual-process theory. If such cognitive processes exist, they might support controlled moral judgment in proximal action control. The question then is what reasons there are to think these processes exist. To begin with, consider controlled cognition. Although the paradigm form of controlled cognition is reasoning—extended linguistic deliberation—there are a variety of kinds of controlled cognition. Mental rotation is a nonlinguistic example (e.g., imagine a red Volkswagen Beetle; now rotate the mental image 180 degrees in the horizontal plane), as is visual search (e.g., scanning the room for your keys). Controlled cognitive processes can be used to make rapid explicit judgments (e.g., a visual comparison to decide which of two objects is larger), and controlled judgment processes can also tap into implicit knowledge systems. Consider, for instance, estimating whether a box containing books will be too heavy to pick up or whether you will be able to jump between two rocks when crossing a stream. These judgment processes tap into motor emulation mechanisms that are not directly consciously accessible but that provide input to conscious judgment.

The next issue to consider is working memory. Famously, Miller (1956) argued that working memory capacity is about seven items, though Broadbent (1975) estimated that for active reasoning processes capacity was significantly less: three to four items. This is reflected in the dual-process theory claim that system 2 is capacity limited. Miller, however, noted a mechanism for circumventing the capacity limitation of working memory, namely, chunking. The number of representations that can be actively maintained is limited, but each representation may itself contain a lot of information. Using representations with high information content is thus a way of extending the capacity of working memory without violating the basic capacity limit. Ericsson and Kintsch's (1995) theory of long-term working memory built on this idea to show how experts can rapidly encode and retrieve large amounts of information by using familiar conceptual structures as a framework for encoding and retrieval. Because experts can rapidly access large amounts of information, they can make rapid controlled judgments. Consider a pilot coming in to land, whose airspeed is high and who must decide whether he can lose enough speed to land safely or should abort the landing and go around. The pilot must make the decision under time pressure, but the decision is likely to involve practiced controlled evaluation employing a rich situation model of the aircraft and circumstances (Endsley, 1995).

With these pieces in place we can now tease out the connection to moral cognition. Just as Mackenzie (Chapter 11) and Kennett (Chapter 12) point out, we are all morally skilled: Through childhood and as adults we gain extensive moral training. Not only has this furnished us with a stock of prelearned judgments and responses—we do not need to think through whether stealing is wrong every time we go to the shops—but it also provides us with a body of moral knowledge we can draw on to make controlled moral judgments on the fly. For instance, we rightly blame people for being tactless, but being tactful is a complex skill that must at times draw on rich situational information, including personality, the mood of the person we are talking to, and their recent experiences. We are often tactless because we are thoughtless, and conversely being tactful requires thought (i.e., paying attention, anticipating, choosing our words carefully). Just like the pilot, we can shape our actions using controlled evaluation that draws on a rich understanding of the situation. Thus, we suggest, it is possible to make considered moral judgments in the heat of the moment and to use them in proximal control of action.

In this case we should reject the apparent limitation on moral reasoning implied by dual-process theory because, we have argued, dual-process theory is oversimplistic in neglecting the possibility of pervasive decision making that is fast and relatively effortless but controlled and relatively unencapsulated. Generalizing from this case, the nature of cognitive architecture will impose strong constraints on many aspects of moral cognition, and consequently it will be important to relate moral cognition to global theories of cognition. At this point, it may be worth returning to the question of the relation between philosophy and the sciences. Before we claimed that philosophical theories of agency need buttressing against empirical challenges like that of Haidt (e.g., 2001), and we cited Ravenscroft's (Chapter 4) survey of empirical evidence pertaining to Nussbaum's (1995, 1997) theory of the role of fiction in moral cognition as an example of how such buttressing might occur. The critique we have just given of dual-process theory is another example, and conceptually the issue of cognitive architecture is an appropriate intermediate level for theory bridging between more specific forms of cognitive research and theories of agency. Theories of cognitive architecture and theories of agency should be closely meshed, both because facts about cognitive architecture will be constraints on theories of agency and because theories of agency provide a higher-level understanding of the role that cognitive architecture performs. If they are meshed it will be easier to relate theories of agency to empirical findings about cognition, and challenges like that of Haidt can be assessed on a systematic basis.

MORAL TAXONOMIES

All of the fields investigating moral cognition have an interest in reaching a shared conceptualization of core moral phenomena. Key taxonomies include kinds of moral agents, kinds of moral cognitive states, and kinds of moral cognitive processes. More fundamentally, there is the question of how the domain of the moral itself is to be characterized. Still more fundamentally, there are questions concerning the basic structure of the taxonomies.

With regard to the last issue we will distinguish between *clean* and *messy* taxonomies: Clean taxonomies partition neatly, whereas messy taxonomies do not. One reason messy taxonomies can arise is because the categories are the product of complex underlying causal factors that overlap across categories. Some work in moral cognition research appears to assume a fairly clean taxonomy for the domain of the moral—for instance, the idea that moral cognition is domain specific (see, e.g., de Rosnay & Fink, Chapter 2) and the idea that the moral can be neatly delineated in terms of the moral–conventional distinction (Blair, 1995). FitzGerald and Goldie (Chapter 10) are skeptical that the scope of the moral is so clear-cut, and we tend to agree. As they point out, a given thick concept such as *moral disgust* can integrate ethical, prudential, and aesthetic considerations. Case, Oaten, and Stevenson (Chapter 9) similarly argue that moral disgust is rich and distinct from *core disgust*. They find that there is little evidence to support a causal link between judgments of moral violations and core disgust. FitzGerald and Goldie also note that supposedly conventional rule violations may involve causing offense or other kinds of harms. They cite Prinz’s (2008) example of wearing shoes indoors in Japan: Although the rule is nominally conventional, violating it can cause great offense (a harm). De Rosnay and Fink (Chapter 2) list not putting toys away properly as an example of a conventional violation, but not putting toys away properly might be seen as a harm to Mummy. When Mummy is explaining to the child why she must put her toys away properly she may emphasize just this point.

The idea that moral rules are obligatory and universal whereas conventional rules are alterable and contextual also seems open to challenge. Moral rules are also indexed to context—for example, the rule “do not kill” is suspended in war and for self-defense (a point that exerts considerable imaginative pull for young boys)—and on the other hand, within a context, supposedly conventional rules may be treated as obligatory. The way that harm is caused may be context sensitive, meaning that some kinds of harm avoidance or prevention may not be easily captured by universal rules. Tact, which we used already as an example of on-the-fly moral judgment, shows this kind of context sensitivity. “Be tactful” is a good rule of thumb, but being tactful is very context specific. Tact also shows higher-level context sensitivity: Being tactful is not always the right thing to do, for sometimes *plain speaking* is more appropriate.

The general point is that the nature and scope of the domain of the moral is itself a difficult issue. Even the idea that morality should be understood in terms of rules and moral action understood as rule following is contested. This view is known in philosophy as *ethical generalism* and contrasts with the position known as *moral particularism* (Dancy, 2009). It is problematic that many researchers in the interdisciplinary field of moral cognition seem to be favoring ethical generalism without much critical analysis or awareness that there are plausible alternative views. It is important to consider moral particularism as a normative theory because it provides a very different vision of ideal moral cognition to that suggested by ethical generalism. It is also worth examining actual forms of moral cognition from a particularist standpoint. For instance, some forms of cognition that are not moral from a generalist point of view will count as moral from a particularist point of view; the normative distinction thus affecting the descriptive scope of

the phenomena to be investigated. An emphasis on moral rules and obligation, for instance, may obscure nuanced situational judgment. De Rosnay and Fink (Chapter 2) describe the mind-set of older children as “increasingly deontic”; this may be right, but only part of the story. That is, older children may have greater awareness of moral obligation and the emotional consequences of moral violations but also can be more fluid and context sensitive in their moral judgments and reasoning. They become not crude rule followers but sophisticated moral interpreters able to weigh up multiple morally relevant factors in a situation and make a context-sensitive judgment (compare Churchland, 2000; Clark 1996, 2000). Is it okay to lie sometimes, for instance, to protect someone else’s feelings? Was the hungry, deprived child wrong to steal food from the local store? Maybe not so much. It is also possible that there are individual differences in styles of moral cognition, with some individuals tending toward a universal, rule-oriented style and others to a particularist style that emphasizes contextual judgment.

If it is hard to even define the scope of the domain, more specific taxonomic issues in moral cognition research are not likely to be much easier. The nature of the moral emotions will be one of the key taxonomic issues, and empathy is a particular focus of attention in this volume. As noted in Langdon and Mackenzie’s Introduction, definitions of empathy vary across chapters. To briefly recapitulate, Hawes and Dadds (Chapter 3) define empathy as encompassing both *affective empathy* (the sharing of another’s emotional state), and *cognitive empathy* (the understanding of another’s mental state). McIlwain et al. (Chapter 6) adopt a similar distinction between *hot* and *cold* empathy. In contrast, de Rosnay and Fink (Chapter 2) distinguish empathy from psychological *perspective-taking*, claiming that perspective-taking need not involve empathy. They see empathy as taking two forms: as experienced responsive emotions (typically sadness or concern); and a more active *empathic role-taking* (distinct from perspective-taking). Ravenscroft (Chapter 4) similarly conceives empathy as involving the experience of the emotion of the other; simply understanding the emotional state of the other is not sufficient and indeed not necessary, according to Ravenscroft.

One point to note in assessing these various usages of the term *empathy* is that there is some degree of leeway in how we frame our definitions. Thus, if we want to define the term empathy so that it encompasses all ways of knowing about the emotional states of others, we can stipulate that it does. On the other hand, we might prefer definitions that are finer-honed to avoid conflation of distinctive content. According to the *New Oxford American Dictionary*, empathy is “the ability to understand and share the feelings of another.” To our sensibilities, simple emotion contagion does not count as sufficient for empathy on this definition because emotion contagion lacks the understanding component (so we disagree with Ravenscroft [Chapter 4] on this point). And, on the other hand, we agree with de Rosnay and Fink (Chapter 2) that empathy is not reducible to perspective-taking or theory of mind. We think the most natural interpretation is to conceive empathy as having two components that are jointly required: emotion mirroring and emotion knowledge. Empathy involves emotion mirroring, with cognitive understanding that the experienced emotion is that of the other. In effect, this way of defining empathy limits it to de Rosnay and Fink’s second form, in which case their first

form is better understood as sympathy rather than empathy. Sympathy is distinct from empathy in that the emotion may complement rather than mirror the other; feeling concerned for someone else is not necessarily sharing their emotion, for example (see Goldie, 2000, Chapter 7, for a similar view).

Au: Goldie 2000 not in ref list.

This way of defining empathy is consistent with the appraisal view of emotions advocated by Mackenzie and the picture articulated by de Oliveira-Souza and Moll, which see moral emotions and other morally relevant cognitive states as involving the coordination of multiple systems and processes. They suggest that moral behavior involves the engagement of *event-structured complexes*, which are procedures evoked by specific contexts, and they define psychological states as *event-feature-emotion complexes*, which involve the coordinated activation of social knowledge, emotions, and motivations. One way that the involvement of cognition in the emotional response is significant is that it can permit higher-order regulation. For example, consider a hypothetical case involving a man who, to punish his wife, seems to forget her birthday. In the definition of empathy proposed here, if he simply knows she will be hurt and unhappy then he is using emotion knowledge and this is not a case of empathy. On the other hand, if he thinks about what it will be like from her point of view and senses how she will feel, then he is using empathy. But *he is happy* that she will be hurt: He can empathically mirror her emotional state but maintain his own distinct (contrary) emotional attitude. Call this unsympathetic empathy. The emotion here has a complex higher-order psychological structure that includes high-order regulation (the simultaneous maintenance of two distinct emotional attitudes). Such high-order regulation may be a key part of skilled social emotional engagement of both pathological and good kinds. Of the various discussions of empathy in this volume, only McIlwain et al. (Chapter 6) consider strategic control of empathy, and their focus is on its role in Machiavellian moral psychology. But the strategic control of emotion may be integral to healthy emotional responsiveness (Lambie & Marcel, 2002; Ochsner & Gross, 2005).

The three models of moral judgment canvassed by Langdon and Delmas (Chapter 5) emphasize bottom-up processes. In the Humean model, an act triggers an emotional response, which triggers an intuitive judgment as to the moral properties of the act. In the Humean–Kantian model, an act triggers parallel emotional and conscious reflective responses, which may cohere or conflict. In the Rawlsian model, an act triggers unconscious analysis of causal and intentional properties of the act, which produces a moral judgment, which in turn induces emotional responses and conscious reasoning. Of these models, only the Rawlsian identifies a clear directive role for cognition, though confined to unconscious cognitive processes. This may underestimate the role of conscious cognitive processes in situational interpretation and the sensitivity of emotional responses to interpretation. Consider a case in which someone you meet at a conference tells you about problems they are having in their department. Colleagues are being unkind, are undermining the person, and so on. You respond empathically and sympathetically. As the conversation goes on, though, you find out that this is only the latest in a long series of troubled work situations: The person had unhappy relations at the previous place they worked, and the place before that; in fact, in a long series

of positions the person does not seem to have ever had decent, considerate colleagues. You start to notice that this person's manner is socially odd, and you begin to wonder if he might not be at least partly responsible for his problems. Your initial empathic response declines.

From a normative point of view the cognitive formation of interpretations is crucial: It is important to make a reasonable effort to form an accurate interpretation before arriving at a moral judgment, especially if the judgment will be acted upon. In other words, *rushing to judgment* is a moral failure. For instance, if you were to repeat to others as true or as likely to be true, the accusations of your unhappy conversation partner concerning his colleagues and they turn out to be false, you would be participating in slander. Malle and Guglielmo (Chapter 13) find that intentionality judgments are not driven by moral judgments, which is as it should be. Normatively, we want moral judgments to depend on analysis of intentionality. In some cases the analysis of intentionality is likely to be very rapid and largely unconscious, but in other more difficult cases we may need to employ controlled cognition. In this example, your initial moral interpretation follows that of the person telling you their story: You believe there has been injustice, and you feel angry on their behalf; however, as the conversation unfolds you begin to suspect this interpretation. Musing reflectively, you assemble clues to a different interpretation: the person's hunched and somewhat mechanical demeanor, wooden voice and prolix monologue-style of conversation, the improbability of having uniformly bad colleagues, and so on. Your moral assessment of the situation changes—you are no longer confident that the person's colleagues are being unfair to him—and flowing from this revised interpretation your emotional responses also change.

In addition to highlighting the role of cognitive processes in reaching moral judgments this example also supports another point made by Mackenzie (Chapter 11), namely, that conceptualizing moral evaluations in terms of *acts* and *judgments* may give an overly static sense of what is going on. Moral evaluations may sometimes concern complex situations that unfold over time rather than individual acts and may involve more or less continuously developing interpretations rather than one-shot judgments.

A general conclusion to draw from these points is that our moral taxonomy will tend to be somewhat messy. It is hard to neatly characterize the domain of the moral; emotion and cognition are entangled, and moral judgments sometimes involve thick concepts and rich cognitive processes, making it both difficult and unnecessary to strictly distinguish moral cognition from cognition more broadly. As noted already, the integrative account of moral psychology given by de Oliveira-Souza and Moll (Chapter 7) is consistent with—and helps to explain—this messiness. The multidimensional trait view of personality espoused by McIlwain et al. (Chapter 6) and by Langdon and Delmas (Chapter 5) also fits this picture, as does the continuity view of psychopathy that Langdon and Delmas argue for. In their view, the traits of clinically identified psychopaths are continuous with personality traits present in the general population. Broadly speaking, the messiness of moral taxonomies will count in favor of cross-disciplinary engagement because many issues and phenomena are closely linked and will tend to cut across field specializations.

MORAL DEVELOPMENT

Different theoretical perspectives will regard development differently; a nativist perspective diminishes the importance of specific experience and learning in favor of maturational processes, whereas perspectives that emphasize cognitive learning will emphasize social experience as a driver of learning, as considered by de Rosnay and Fink (Chapter 2). Skill learning emerges as an important feature of moral development for Mackenzie (Chapter 11) and Kennett (Chapter 12), underwriting their claims that many unreflective intuitions and response dispositions in the adult are both rationally acquired and rational in execution, despite the absence of concurrent reflection. The account of controlled moral judgment sketched herein similarly appeals to moral development as involving expertise and skill acquisition. In light of these kinds of claims, the literature on skill and expertise may have interesting implications for research on moral development. For example, expertise research indicates that high levels of deliberate practice are needed to reach elite levels, as opposed to more informal performance and exposure (Ericsson, Krampe, & Tesch-Römer, 1993). In contrast, although instruction and *coaching* play an important role in early moral development, most moral learning is informal.

The *shunting* view of moral development advocated by McIlwain et al. (Chapter 6) suggestively depicts what moral development might be like from a multidimensional trait perspective. Traits show parametric variation and are linked. Consequently, extreme scores on some traits restrict later variation in other traits. Some trajectory-dependent multidimensional trait constellations become more likely than others. This is congenial to the integrative account of de Oliveira-Souza and Moll (Chapter 7), and indeed their integrative picture is a necessary complement to the multidimensional trait picture because we need to understand the process interactions (e.g., McIlwain et al.'s *cascading constraints*) that underlie changes in trait values.

For this kind of analysis it will be important to characterize the fine-grained structure of the shunting forces. McIlwain et al. (Chapter 6) suggest that early distrust and fearlessness might combine to reduce the kind of experience of others' emotions required for the full development of emotion perception. Cognitive control and interpretation, which we suggested already as being important to emotions such as empathy, may also play an important role in developmental shunting. For instance, it may be that children learn interpretive schemas that help to organize their behaviors, to enhance their reward experience, and to justify those behaviors. Abnormal affective responsiveness produces unusual reward structure and unusual behavior patterns. We might expect that the interpretive schemas that develop will tend to support these behaviors and to incorporate defensive and justificatory mechanisms that support a coherent self-concept in the face of dissonance with socially normative schemas and values. The cynical worldview and blame shifting that McIlwain et al. (Chapter 6) report in Machiavellian people are consistent with this picture. Thus, as well as a broad understanding of the role of empathy in moral development, it will be important to look at the nature of children's conceptual learning in relation to the role of interpretive schemas in both moral evaluation and in self-control. De Rosnay and Fink's (Chapter 2) findings

concerning conscience point in this direction; they show that higher levels of moral self-concept are associated with more mature social behavior.

The issue of conscience, however, raises questions about the nature of moral motivation. The conception of the moral domain in terms of obligations and the restriction of self-interest⁴ tends to put the emphasis on the negative side of things: Moral agents avoid actions they would otherwise want to perform. De Rosnay and Fink's (Chapter 2) discussion of conscience in terms of awareness of the negative psychological consequences of moral violations is consistent with this, suggesting a negative view of moral motivation: Moral agents seek to avoid morally bad actions. But some moral agents, at least some of the time, may be seekers of good, actively pursuing morally worthy outcomes because they value them. In relation to learning, we may need to consider learning in which children not only discover the benefits of being good but also come to appreciate the negative consequences of being bad.

Another way we may need to take an active view of moral agency relates back to the role of interpretation discussed already. Our emphasis on the controlled use of mental models is consistent with a strong role for imagination in cognition, and we agree with Mackenzie (Chapter 11) that imaginative engagement with situations will be an important form of moral reasoning. We also agree with Ravenscroft (Chapter 4) and Nussbaum (1995, 1997) that fiction will play a strong role in cultivating imaginative capacity. But Ravenscroft's view of the response to fiction strikes us as too passive, in that he doesn't allow enough of a role for control and interpretation. Ravenscroft's view of the dangers of violence in fiction seems still to regard the consumers of fiction as passive, noninterpretive imitators. The empirical evidence on the impact of fictive violence on real-world violence may be more mixed than his survey indicates, with Ferguson, Rueda, Cruz, Ferguson, Fritz, and Smith (2008) casting doubt on a link between violent computer games and violent behavior in boys—for example, youth violence has declined substantially even as sales of violent computer games have been increasing. From a theoretical standpoint, we would expect that children with sophisticated interpretive schemas will be skilled at distinguishing fictive from real violence and able to enjoy the former relatively safely. Young boys may fantasize about being Batman or a Jedi Knight, but most of them realize that, unfortunately, the world they actually live in operates on different rules.

Fiction provides children with conceptual schemas, and it probably also teaches them to be sophisticated navigators of conceptual schemas, distinguishing different perspectives and actively interpreting and evaluating, along the way cultivating their own point of view. The right kind of parental encouragement may promote active interpretation and facilitate the development of reflective skills. Active interpretation is a double-edged sword, however, and in some cases children may become resistant to the moral messages that parents and other members of society are sending them. The general point is that it will be important to understand the specific conceptual structures that emerge in moral development and the active processes of engagement and interpretation employed by the child.

The final point we will make here concerns the nature of moral reasoning. The conception of moral reasoning employed by Piaget (1932/1997), Haidt (2001), and many others is one based on ethical generalism: Moral reasoning

is concerned with abstract principles. A different conception, more consistent with the personal, situated point of view of moral agency, is that moral reasoning tends to take the form of relatively concrete problem-solving, employing conceptual resources derived from situations encountered. Consider a young child trying to build a bridge with wooden blocks: A good part of the problem-solving process will involve direct manipulation, rearranging the blocks, comparing one block with another. It will also involve the formation of mental models of the blocks and their bridge-relevant possibilities. These mental models guide controlled exploration of the physical problem, and controlled manipulation of the mental models themselves can be used to explore the structure of the problem and generate insight. But the child almost certainly will not form an abstract geometric representation of the bridge construction problem and arrive at a solution through formal geometric analysis. Moral reasoning in general may be more like the child's problem solving, involving situationally acquired mental models rather than deep theoretical analysis. Piaget (e.g., 1970) thought that problem solving leads to the formation of abstract formal representations, but we can reject that aspect of his theory while retaining the insight that problem solving plays a key role in psychological development (cf. Hooker, 1994).

CONCLUSIONS

A large part of our purpose in this chapter has been to tease out higher-level issues that arise out of the other chapters in the pursuit of elements of a framework that might eventually help to coordinate research across the fields and disciplines that study moral cognition. To reiterate the point we made at the end of the second section, all of the disciplines have an interest in the development of shared conceptualizations of core issues, and such conceptualizations could serve as cross-disciplinary focal points. Some of the more fundamental issues include relations between descriptive and normative issues, moral cognition and cognitive architecture, key moral taxonomies such as normative and pathological forms of moral cognition, the nature of morality itself, and the nature of moral development. Our discussion of these issues here can do little more than gesture at some of the problems that will need to be addressed in the development of a common framework, and no doubt many will disagree with our take on some of these issues. The more important point, however, is that, in general, multilevel theorizing will be helpful—that is, approaching particular issues in moral cognition with an explicit account of how these issues are embedded in a picture of moral cognition as a whole, and (in turn) of cognition as a whole. The big picture will be heavily contested, but even the recognition of disputed ground will help in the development of a more coordinated multidisciplinary approach. In terms of content, many of the chapters here have supported a more cognitive view of moral cognition than the intuitionist account while nevertheless recognizing that emotion plays an integral role. As such, they challenge the principle-based picture of moral reasoning and support an active, situated picture of moral agency.⁵

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ENDNOTES

1. The idea that science will replace philosophy is an uncommon trope (see, e.g., a *New York Times* article discussing Haidt's research; Brooks, 2009).
2. The nature of the intuitions involved in philosophical theorizing is controversial, but they are arguably not in general the gut feelings posited by Haidt's social intuitionist model. According to Sosa (2007) intuitions are cognitive competencies, while Goldman (2007) sees intuitions as associated with the content of concepts: Possessing a concept gives rise to beliefs in accord with the concept.
3. *Toughening up* a child for the rigors of life is not an uncommon parental strategy. Sending the child to military school is a traditional method, whereas the song "A Boy Named Sue" poignantly describes a more unconventional approach.
4. For example, de Oliveira-Souza and Moll (Chapter 7) say that "the key for defining ... motivations as 'moral' is their ability to overcome the (proximate) interests of the self or agent."
5. Our thanks to Catriona Mackenzie for helpful comments on an earlier draft of this chapter and to Andrew Geeves and Doris McIlwain for many discussions on skill and emotion.

