

Chapter One

Introduction to the Dissertation: Philosophy, Developmental Psychology, and Intuition

The history of philosophy is thoroughly entangled with developmental psychology. In Plato's *Meno*, Socrates applies his famous "doctrine of recollection," according to which all learning is just recollection of things antecedently known from past lives, to questions about the nature of morality and to skeptical concerns about the possibility of learning. John Locke devotes the entire first book, and much of the second book, of his *Essay Concerning Human Understanding* to an extended discussion of the origin of ideas, interweaving developmental claims about the origins of various types of ideas with philosophical claims about their nature. His discussions of the nature of words and of the origins, extent, and reality of knowledge likewise hang upon developmental theses. Philosophers reacting to Locke, such as Berkeley, Hume, and Kant, have likewise seen connections between developmental issues and various issues at the center of philosophy.

Contemporary philosophers continue to make connections with developmental psychology. Willard Quine's *Word and Object* concerns itself centrally with the learning of language from scratch (as a child or jungle anthropologist would), and Quine draws substantial philosophical conclusions about the nature of

language (e.g., about its indeterminacy) from these observations. Donald Davidson (1984) has drawn even broader conclusions about language, knowledge, and the mind from a similar starting point, and some of his views and their developmental connections will be discussed in the second chapter. Jerry Fodor (1983) has helped to revive an innatist view of the mind in philosophy, again connecting issues about the development of the mind with issues about its nature. In fact, it is hard to find a philosopher of mind, language, or epistemology who isn't committed to some view or other about the development of children.

Developmental psychology, likewise, often builds upon philosophical foundations. Like many other sciences, developmental psychology had its origins in philosophy, and much work in developmental psychology still explicitly positions itself with respect to developmental claims made by philosophers such as Locke and Kant. The work of contemporary philosophers has also had a great impact on developmental psychology. The contemporary developmental literature on the child's "theory of mind," for example, grew out of observations by philosophers on the importance of a creature's understanding false belief for its understanding of the mind (Bennett 1978; Dennett 1978; Harman 1978; Wimmer and Perner 1983), and much of the work in theory of mind still draws upon the observations of philosophers of mind such as John Searle, Fred Dretske, and Jerry Fodor. Work on language development (e.g., Markman 1989) has set itself puzzles drawn from Quine's (1960) work described above. Work on conceptual change in childhood (e.g., by Carey 1985; Gopnik and

Meltzoff 1997) has drawn upon work on conceptual change in philosophy of science (especially Kuhn 1960/1970). Work on the nature of the child's concepts (e.g., Keil 1991; Gelman and Coley 1991) has drawn on philosophical discussions of the nature of human concepts in general (e.g., Wittgenstein 1958; Putnam 1975b; Millikan 1997).

While many philosophers find themselves committed to developmental positions, or to positions that developmental psychologists have thought to have consequences for their work, few contemporary philosophers have explored the empirical side of developmental psychology in any extended way. In this dissertation, which treats philosophical issues that arise in the context of developmental psychology, I hope to help remedy this deficit. In particular, I will examine the concepts of *theory*, *representation*, and *belief* as they arise in recent philosophical and developmental work. These concepts play a crucial role in both disciplines.

The concept of *theory* plays a crucial and obvious role in the philosophy of science: Most philosophers of science suppose one of the primary enterprises of science, if not *the* primary enterprise, to be the construction and evaluation of theories. It is therefore almost impossible to do work in philosophy of science without discussing, in one way or another, scientific theories. For developmental psychology as well, the concept of a theory has played an important role. At least since the time of Jean Piaget, some developmental psychologists have likened the

cognitive development of children to the processes of theory change in science. Children are thought of as constructing, testing, modifying, and rejecting theories much as scientists do, and a major task of developmental psychology, on this view, is the elaboration of children's theories and the mechanisms of their change. There is currently substantial debate over the value of such a "theory theory" within developmental psychology. What is at stake is nothing less than a general picture of the nature of cognitive development.

The concept of *representation* has also played an important role in the work of philosophers and developmental psychologists. Many philosophers of mind, such as Fred Dretske (1988), John Searle (1983), and Jerry Fodor (1975, 1990) have taken representations to be among the most important components of the mind, although they have defined the term 'representation' in rather different ways, as we will see in chapter four. A number of developmental psychologists have followed them in this, and some, such as Josef Perner (1991), Alison Gopnik (Gopnik and Astington 1988), and Henry Wellman (1990), have argued that coming to understand the representational nature of mind is a major accomplishment in the preschooler's development of an understanding of minds. However, unless we have a clear understanding of what a "representation" is supposed to be, then we cannot clearly understand either the philosopher's claims about the nature of mind or the developmentalist's claims about the child's development of an understanding of mind.

Finally, the concept of *belief* also plays a crucial role in much work in both philosophy and developmental psychology. Most philosophers interested in representation regard beliefs as central cases of representations, and many begin their discussions of representation in general with discussions of belief in particular. Our ordinary, "folk" psychology is, in the view of many philosophers (e.g., Fodor 1987; Stich 1983; Searle 1992), a psychology in which belief plays a central role, and philosophical explanations of behavior that are friendly to folk psychology often appeal primarily to beliefs and desires. Developmental psychologists sympathetic to such views have regarded development of the child's understanding of belief as crucial in the development of a theory of mind in general (Perner 1991; Wellman 1990; Astington 1993). More broadly, many developmental psychologists have seen the determination of what it is a child believes about any particular subject as crucial in characterizing the child's understanding of that subject. Cognitive development is often understood, by such psychologists, as largely consisting in changes in the child's *beliefs*.

Outline of the Dissertation

The second chapter of the dissertation initiates my discussion of the concept of *belief*. In particular, I explore the question of whether infants and non-human animals, creatures without language, can have beliefs. I examine two well-known arguments against infant and animal belief advanced by Donald

Davidson, and I show how those arguments fail to establish their conclusion. I then offer a plausibility argument in favor of thinking that infants and animals have beliefs, and I describe some practical considerations suggesting that the term 'belief,' if it is to be of broad use in academia, ought not to apply exclusively to the cognition of adult human beings. A general account of belief is not offered until later in the dissertation.

The third chapter of the dissertation treats the concept of a *theory*. In particular, this chapter is concerned with the debate within developmental psychology over how much the cognitive development of children is like theory change in science. Useful debate on this topic requires a clear understanding of what it would be for a child to have a theory. I argue that existing accounts of theories within philosophy of science and developmental psychology either are less precise than is ideal for the task or cannot capture everyday theorizing of the sort that children, if they theorize, must do. I then propose an account of theories that ties theories and explanation very closely together, treating theories primarily as products of a drive to explain. I clarify some of the positions people have taken regarding the "theory theory" of development, and I conclude by proposing that psychologists interested in the theory theory look for patterns of affect and arousal in development that would accompany the existence of a drive to explain.

I begin chapter four by distinguishing two very different conceptions of *representation* at work in the philosophical

literature. On the first, "contentive" conception (found, for example, in John Searle and Jerry Fodor), something is a representation, roughly, just in case it has "propositional content"; on the second, "indicative" conception (found, for example, in Fred Dretske), representations must not only have content but must also have the function of indicating something about the world. I argue that the philosopher Dennis Stampe conflates these two conceptions in a seminal paper of his on representation, and that Alison Gopnik and Josef Perner conflate these conceptions in their discussions of the child's understanding of the mind. The latter conflation, I argue, leads Gopnik and Perner to think that when the child comes to appreciate the nature of misrepresentation at age four, the child must also undergo some change in her understanding of desire. This chapter, like the previous one, concludes with some suggestions for empirical research. In particular, I argue that it is an open question whether the child understands indicative representation generally at age four, and that one useful test of this hypothesis would look at the child's understanding of representational art.

Chapter five returns to the topic of belief. In this chapter, I describe some of the desiderata of an account of belief, and I argue for the existence of "in-between" states of believing, in which a subject cannot accurately be described either as fully believing or fully failing to believe the proposition in question. I also describe in some detail the container metaphor for belief, quite popular now in philosophy of

mind, and I suggest that some of the images evoked by this metaphor may draw us toward a view of belief that, on reflection, we would not want to accept.

In chapter six I offer a "phenomenal, dispositional" account of belief. The account is dispositional because it treats believing as matching to an appropriate degree a stereotypical set of dispositions. The account is phenomenal, because unlike dispositional accounts as typically conceived, the dispositions belonging to that stereotypical set include dispositions to have certain sorts of phenomenal experiences. One of the primary virtues I claim for this account is its facility in handling cases of in-between believing, and I describe its application to a number of cases of in-between believing. The last two sections of the chapter are intended to forestall possible objections to the account. In the first of those sections, I defend the view that appeal to the causes of a belief is not necessary for full characterization of that belief. In the last section, I argue that beliefs conceived dispositionally can both cause and explain phenomenology and behavior.

In chapter seven, I apply the account of belief just developed to two puzzle cases in philosophy and two puzzle cases in developmental psychology. I argue that both Saul Kripke's "Puzzle about Belief" and the self-deception literature in philosophy suffer from a failure to recognize the legitimacy of describing a subject as being in an in-between state of believing. With my dispositional account of belief in hand, the cases described by Kripke and by philosophers interested in self-

deception no longer look so puzzling. I then argue that the developmental literature on the child's understanding of object permanence, as well as a paper by Wendy Clements and Josef Perner, similarly suffer from a failure to recognize the legitimacy of describing the child as in an in-between state of believing regarding the topics at hand. One ought, in fact, to expect that the gradual development of new competencies and new understandings of the world will move children gradually through periods in which they cannot accurately be described as either fully believing or fully failing to believe the propositions expressing the knowledge they unequivocally have at the end of the process.

Chapter eight briefly reviews the dissertation, with a particular eye to the practical benefits of my work for the fields of philosophy and developmental psychology.

The Role of Analysis and Intuition in This Dissertation

For two of the concepts discussed in this dissertation, *theory* and *belief*, I provide a novel analysis, and for one of the concepts, *representation*, I provide a clarification of some differences between existing analyses. In the course of doing this conceptual work, a number of practical decisions must be made that reflect my view of the aims of conceptual analysis. In the last few decades, most philosophers have been too quiet about the values guiding their conceptual analyses, but in mid-century, a number of philosophers quite explicitly debated what these aims

should be. So, for example, Norman Malcolm (1942) argued that philosophical analyses of words and concepts must cleave precisely to ordinary language usages, and that only confusion and falsity is to be gained by any attempt at conceptual modification and linguistic redefinition (at least by philosophers). Less extreme "ordinary language" philosophers such as John Austin (1956) simply recommended close study of and adherence to ordinary language as a fruitful, guiding technique for philosophers. In opposition, a number of people working in philosophy of science, such as Rudolf Carnap (1962) and Carl Hempel and Paul Oppenheim (1948), saw "explication" as a central project of philosophy. Explication was defined as the process of transforming an inexact concept from ordinary language (the *explicandum*) into a more exact concept for philosophical and scientific use (the *explicatum*). Carnap (1966, p. 5) describes four goals that must be balanced in explication: (1) similarity of the explicatum to the explicandum, (2) exactness, (3) fruitfulness, and (4) simplicity.

The approach taken in this dissertation has more in common with Carnap's approach than with Malcolm's. My aim is to assist philosophers and developmental psychologists in developing concepts that will be *pragmatically useful* for their academic research. While it is definitely desirable to treat concepts in a way that matches up to some extent with pre-theoretical, ordinary concepts -- for ease of understanding, if nothing else -- assuring such a match cannot be the final value of

pragmatically-oriented conceptual work. Simplicity, fruitfulness, coherence with important distinctions and divisions in the field, and precision (and sometimes vagueness in the right places -- see my chapters on belief) must all be considered as goals in concept-tinkering, and people with different interests may reach different conclusions about how these factors are all to be balanced and thus about how best to analyze a particular concept. Ordinary-language analysis is more like analysis in the strict sense of breaking apart and displaying what is already present. My project is not so much to describe existing use as to make recommendations for future use; something new is constructed and offered up to take the place of, or to give definiteness to, an existing vague or muddled concept.

Taking this pragmatic approach to conceptual analysis requires a certain willingness to say things that run contrary to our pre-theoretical intuitions. At the very least, we should be unsurprised if an explication strains some of our linguistic intuitions about when it is and is not appropriate to use a certain word -- a natural consequence of the effort to *adjust* our understanding of particular concepts and the words attached to them. Some of the claims in this dissertation may diverge from the reader's intuition in other respects as well, when those intuitions conflict with conclusions established on the basis of empirical evidence or philosophical inquiry.

Since the charge that a philosophical claim is "counter-intuitive" is often employed as though being counter-intuitive by

itself were reason enough to abandon a claim, I would like briefly to discuss the role I see intuition playing in this dissertation. Philosophers all too often are insufficiently deliberative about the assumptions involved in condemning a position for having counter-intuitive consequences, and I want to give at least momentary pause to the reader who might be inclined to leap in immediately with such assessments of the work to come.¹

The conclusion one is usually meant to draw from the charge that a claim is counter-intuitive is that that claim must be (or probably is) false. The typical role of a charge of counter-intuitiveness, accordingly, is as the penultimate step in a *reductio*. But certainly this form of argument will work only in domains for which intuition is taken to be a reliable guide. No one argues, any more, that it is counter-intuitive to claim that the Earth revolves around the Sun, and therefore there must be something wrong with our celestial mechanics. Nor does anyone argue that it is counter-intuitive to assert that things gain mass as they approach the speed of light, and therefore Einstein's theory of relativity stands in need of correction. But in philosophy the accusation of counter-intuitivity is taken seriously. What is supposed to be the difference?

In certain fields, intuitions are the foundations atop which all theories must be built. In linguistics, intuitions about grammaticality are an important part of the raw data for theories of grammar; if a grammatical theory produces predictions that too

¹ Elements of this discussion will also appear in Gopnik and Schwitzgebel (1997).

seriously violate our grammatical intuitions, we must reject the theory. (Nevertheless, things are not entirely simple, as is made evident by such famous sentences as "The horse raced past the barn fell"².) One might argue that the same is true in moral philosophy: We have certain intuitions about what is moral and what is not moral, and it is the business of moral philosophy to construct theories that account for the accuracy of these intuitions and organize them into a workable structure. Still, it is controversial whether this is how moral philosophy does (or should) work.

Intuitions are an important part of the data in philosophy of mind as well. We make intuitive judgments about our minds, about our experiences, perceptions, and internal states. However, it should be noticed that the data that must be accommodated in philosophy of mind are the intuitive *judgments* that some such propositions *P*, *Q*, etc. are true, which leaves as an open question whether *P*, *Q*, etc. are *actually* true. In this regard, intuitions play a slightly different role in philosophy of mind than in linguistics or moral philosophy as conceived above: In the latter fields, when people have an intuition that *X* is *F* (e.g., *X* is ungrammatical or immoral), the datum to be accounted for is the *F*-ness of *X*, and the occurrence of the intuition itself is only attended to in a secondary way if at all, while in philosophy of mind the reverse is true. That we *make* certain intuitive judgments is an undeniable fact that philosophers of

² That this sentence is grammatical can be seen by comparing it to the similarly-structured sentence "The man hit with the rock shouted."

mind must accommodate; whether those intuitive judgments are *right* is a separate question altogether.

Intuitions are reliable indicators of the adequacy of grammatical, moral, and philosophical theories of the sort described above in a *constitutive* way: They are the very material that the theories seek to organize. Intuitions may be reliable in a non-constitutive way also. The expert chess-player may have an intuition that one chess move is better than another, even if she cannot articulate exactly why. If I develop a theory of chess that is meant to classify certain types of moves as good and others as poor, and the theory runs contrary in a range of cases to Gary Kasparov's intuitions, I have good reason to be concerned. His intuitions have been honed by long practice and have been employed in brilliant chess play. On the other hand, it is not *impossible*, the way it is in the grammatical case, that my theory is right and Kasparov is broadly mistaken (for example, if everyone else is more terribly mistaken). A theory of chess that violates Kasparov's intuitions may be unlikely to succeed, but in simply in violating those intuitions it does not conflict with a piece of the data the theory is attempting to organize. The theory is not about Kasparov's intuitions; it is about chess.

We are all experts, in a pragmatic sort of way, in everyday psychology, and perhaps for this reason, counter-intuitive claims in psychology or philosophy of mind should be regarded as *prima facie* less plausible than intuitive claims, just as we would regard as *prima facie* less plausible a theory of chess that ran

counter to a grandmaster's intuitions. After all, our psychological intuitions are grounded in wide experience of our own minds and the minds of others. Nonetheless, it does not follow that our psychological intuitions are infallible, just as a grandmaster's intuitions about chess aren't infallible. Nor need our intuitions even be entirely coherent. (At the end of section one in chapter four, and in chapters five and six, I will point out some places in which our intuitions may pull in conflicting directions.) As psychological science has matured, we have become more confident in leaving intuitions behind when they conflict with well-supported psychological claims, as for example in the cases of blindsight (Weiskrantz 1986) and attribution error (Nisbett and Ross 1980). So, although we may justifiably take reflective psychological intuition as a good preliminary guide, we no longer take it as the final authority about the mind.

One might argue that all judgments rest, ultimately, in intuition, and that therefore there can really be no court of appeal beyond that of intuition. Even, however, if we accept the premise that all judgments do ultimately rest on intuition (however such a claim is to be spelled out), the conclusion either does not follow or is irrelevant to the issue at hand. We don't take seriously our intuitions about the details of physics, and we are right not to. Therefore, either intuition is not always the final court of appeal, or it is, but certain counter-intuitive judgments are nonetheless acceptable in the face of strong evidence (which might be thought of, on this view, as

stronger intuitions that conflict with it), and thus the argument cannot without further work establish that we must adhere to any specific intuitions we might have in discussing the mind in particular.

All this said, I do not think that anything I will defend in this dissertation rebels too violently against our intuitions. In my arguments and my analyses, I will be guided by what I hope to be a well-considered balance of reflective intuition, philosophical and psychological theory, empirical data, and a pragmatic aesthetic of simplicity.