



Thinking Critically About

CHILD DEVELOPMENT

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Examining **Myths &**
Misunderstandings

JEAN MERCER



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CHILD
DEVELOPMENT

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Misunderstandings

Third Edition

JEAN MERCER
Stockton University



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FOR INFORMATION:

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*To the memory of the great developmental scientist Gilbert
Gottlieb (1929–2006) and for Andrew, Sean,
Jack, and Teagan (the little rosebud)*

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About the Author

Jean Mercer (PhD, Psychology, Brandeis University), professor emerita of Psychology at Stockton University, has taught undergraduate courses on developmental psychology, infant development, statistics, and research methods for 30 years. A past president of the New Jersey Association for Infant Mental Health and a fellow of the Commission for Scientific Medicine and Mental Health, she has written a general interest book about early emotional development, *Understanding Attachment* (Praeger, 2006), and a textbook, *Infant Development: A Multidisciplinary Introduction* (Brooks/Cole, 1998). Her most recent publication is *Alternative Psychotherapies: Evaluating Unconventional Mental Health Treatments* (Rowman & Littlefield, 2014), an exploration of “crazy therapies” for both adults and children. She served as an expert witness in the trial of a mother who kept her adopted children in cages and claimed she had a book advising this—a good example of failure to think straight about child development. A member of APA Division 37 (Society for Child and Family Policy and Practice), she writes a blog, “Childmyths,” at <http://childmyths.blogspot.com>.



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Introduction

Although this book contains a lot of information about child development, it is not a textbook that provides a thorough overview of the field. Instead, it is written as a supplementary text, with the assumption that readers have access to a standard textbook or to other sources of information about children and adolescents. The purpose of the book is to guide students to use critical thinking about child development issues. To that end, the book provides a variety of essays discussing common mistaken beliefs and confusions about development, each one followed by a series of questions that require not only knowledge of facts but also critical thinking skills.

This Introduction will discuss common critical thinking issues that crop up when people talk about child development. To answer some of the questions about the essays, readers will need to understand some components of critical thinking as they will be described here (so it is not a good idea to skip the Introduction as people often do!). In addition, the Introduction will address some of the reasons why the study of child development can be especially fraught with critical thinking problems and why students of this topic—prospective teachers, psychologists, social workers, or just plain parents—need to have excellent critical thinking skills.

Critical Thinking

Students may well yawn when the idea of critical thinking is pressed upon them. Many readers of this book have been asked to do “critical thinking” exercises as far back as elementary school, but on the whole their experiences have simply been of exercises that asked them to go beyond the information they already had, not necessarily in a logical or critical way. Unfortunately, when we look at common secondary school experiences of the last couple of decades, we see that some of these may diminish rather than foster critical thinking abilities.

Some years ago, the novelist Francine Prose (1999) examined efforts toward critical thinking used in high school English textbooks. In her article, aptly named “I Know Why the Caged Bird Cannot Read,” she noted a failure to require close, line-by-line reading and a tendency to ask questions about social or moral implications rather than about the actual content of the novel. Prose referred to one teacher’s manual that asked students reading *Huckleberry Finn* to count the ways in which Mark Twain negated the humanity of the slave character, Jim, rather than asking them to compare the number of such incidents with the number in which his humanity was witnessed. Prose also noted the frequency of assignments in which questions asked were only peripherally relevant to the information available to the student. For example, students might be asked questions whose answers they would be unlikely to know, such as a question about the mental health prognosis of the heroine of *The Bell Jar*. Assignments of these types discourage a focus on recognizing relevant, available information and encourage the view that all possible answers (if long enough) are acceptable. College students who have experienced high school assignments of the kind Prose described are likely to feel comfortable with irrelevancies, low levels of abstraction, and assignments that provide insufficient information, and even to believe that they are excellent critical thinkers because of their handling of such matters.

What Is Critical Thinking?

If the critical thinking assignments you did in high school, or even in some college courses, did not actually involve critical thinking, what in the world *is* the critical thinking that this book will ask you to do? One definition, offered by a group that exists to encourage critical thinking as part of education, is as follows: “Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information It is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness” (“Defining Critical Thinking,” 2013).

This sounds like a great deal to ask of any student, so let’s look at some of the factors that may seem more doable. Critical thinking is *active*; it’s not just a matter of absorbing and reflecting back pieces of information, so it can take time and energy. Critical thinking is *evaluative*; it involves assessing the evidence for claimed facts and the reasoning by which they are related to each other and to conclusions. Critical thinking examines the

relevance of information to conclusions and rejects conclusions based on facts that may be correct but have nothing to do with the issue.

How Do You Think Critically?

Achievement of critical thinking skills is a lifetime's work. No one succeeds in applying good critical thinking skills to every problem, every day. But we can learn how to do this important job by dealing with two issues.

First, in order to do a good job of critical thinking, we have to be as sure as possible that we are thinking about valid information. Without trustworthy facts, our application of thinking skills is not worth much. This is why *evaluation* is an important part of critical thinking. Students of child development need to learn some specialized skills for assessment of information, and those skills will be discussed later in this Introduction.

Second, if we want to think critically, we need to recognize some common *fallacies*, or errors of reasoning. We need to be able to see when other people are reasoning fallaciously, but it's even more important to be able to check our own reasoning for fallacies. Many authors have created lists of fallacies to watch out for, and the study of fallacies has become a topic of its own. Fortunately, not all of these fallacies are common in the study of child development, so we can limit the useful fallacy list to a relatively small number.

Fallacies to Watch for When Studying Child Development

Analogies and Metaphors

Analogies and metaphors are useful thinking techniques that compare two different things by showing the ways in which they are similar. These techniques are helpful in teaching about development, as many developmental events are difficult to observe directly or occur over long periods of time. The problem with analogies and metaphors is that although they may be used to convey ideas, they cannot in themselves establish an argument or support an inference. One problem is that they fail to note how the two things are different. Analogies can be abused as well as used, and such abuse leads to fallacious conclusions.

Common analogies. Here are some common analogies and metaphors used in the study of development: (1) "stages" or "milestones" of development; (2) the term *attachment* or *bond* to describe an attitude toward

another person; (3) brain/cortical/hand/gene “dominance” (use of this metaphor may be one reason why it is so difficult for students to define dominant and recessive genes); (4) “regression” (not the statistical kind); (5) the term “sexual” in the description of psychosexual stages of development. These comparisons may be extremely valuable for teaching purposes, but their downside is the fallacious assumption that phenomena with some things in common will have everything in common.

Easily abused analogies. In the study of development, one common instance of abuse of analogies involves fallacious reasoning from aspects of nonhuman development to aspects of human development. For example, John Bowlby’s application of ethological concepts of imprinting in birds to human attachment abused an analogy, and fortunately it was rejected after some consideration by developmental scientists. But this type of critical thinking error is still with us, and not in textbooks alone. For example, an article in the *APA Monitor on Psychology* (Price, 2009) titled “Programmed for Life?” has a subhead stating that “your developmental environment can undercut your memory, give it a boost, or possibly even predict how you’ll treat your children,” but the reported study deals with factors influencing how much mice lick and groom their pups.

Affirming the Consequent and Other Forms of Transductive Reasoning

If you have not already read about Piaget’s work on early cognitive development, you are bound to meet this topic as you study children and adolescents. Piaget’s discussion of early childhood cognition included a description of *transductive* reasoning, a form of primitive logic in which a child assumes that when two events share some characteristics, they are likely to share others, including a cause-and-effect relationship that may work in either direction. Piaget’s famous example of this was a situation in which his daughter, given a cup of orange-colored chamomile tea, insisted that a green orange she wanted must have become ripe and attained the color that meant she could eat it. Unfortunately, we adults are not entirely immune to transductive reasoning, and when we use it, our reasoning can also involve fallacies.

Affirming the consequent. This fallacy or error in critical thinking involves the practice of assuming that the converse, or reverse order, of a claimed condition is true. For example, let’s take the following statement:

If a child has Reactive Attachment Disorder, she has lived in an orphanage or under similar conditions. [This is true, as the list of criteria for the Reactive