Jean
Mercer

Child DEVELOPMENT

Myths and Misunderstandings

SECOND EDITION

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Jean Mercer
Richard Stockton College of New Jersey

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Jean Mercer (PhD, Psychology, Brandeis University), Professor Emerita of Psychology at Richard Stockton College, 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). She recently 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, providing a good example of failure to think straight about child development. Her blog is http://childmyths.blogspot.com.

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Introduction

Claims About Child Development

Everyone has some knowledge about children because everyone has been a child. Most people have also observed other children and have heard adults talking about children. As a result, students arrive in a child development course with a lot of background knowledge, not as the "blank slates" they would be for a course in Russian, introductory physics, or the Victorian novel.

Students entering a child development or developmental psychology course bring more than observed facts with them. All of us have *theories* of child development based on our observations, the connections among these observations, and the ideas we have picked up in school or social settings. For example, almost every person has a way to explain juvenile delinquency—and chooses either genetics or family experiences as the cause. These explanations come from individuals' theories about child development. Very few people can state their theories in words, but the theories are there, and they exert a strong influence on expectations about development.

So far, this sounds like a good arrangement. Students come to study child development, not "from scratch" but with some knowledge and thoughts already in place. How can this not be good? The answer is this: Not all past observations are completely accurate, and not all theories are good descriptions of the rules of development. In other words, people can "know" a great deal that cannot be substantiated by systematic research. As is often the case, the problem is not what students don't know but what they know that isn't true. Most people who study developmental psychology find that they need to examine their own beliefs and assumptions, throw out some of what they've always thought, and make way for

information supported by good evidence. If your old assumptions are in conflict with new information, you may not thoroughly understand or remember the new information.

Surprisingly, people who have their own children already do not necessarily have more accurate information than beginning students do. A survey of parents conducted by one of the premier associations for education about early development, Zero to Three, showed that parents performed especially poorly on understanding of social and emotional development (DYG, Inc., 2000). The power of old, inaccurate information is a real problem for everyone who needs to know about child development.

This book comprises a series of essays on common but inaccurate claims and beliefs about childhood growth and development. These essays serve to call students' attention to the assumptions they bring to a child development or developmental psychology course. Careful examination of your own assumptions—the "facts" that everybody knows but that are not true—is an exercise that can help prepare you to understand some important issues in the study of development. You will find that the examination process is important because of the complexity of the modern view of developmental change. As is frequently noted among developmentalists, developmental psychology isn't rocket science; it's a lot more complicated than that. When material is complicated, one has to be especially careful to resist falling back on "what everybody knows."

Types of Mistaken Claims

Naturally, not all incorrect claims about child development are of the same type. A range of inaccuracies exists, from completely invalid ideas to incorrect conclusions drawn from correct information.

Some beliefs about development are so off base that one can call them *myths*—ideas that are so far from what research evidence shows that they are essentially a superstition. To use an example from another topic, most cultures have creation myths, which are old stories that explain the origin of the world. Although the stories are interesting and enjoyable to hear, they do not stand up well to close examination. One story tells of an anthropologist who questioned a person who believed the world rested on the back of a giant turtle. The anthropologist asked, "And what's under that?" The person replied, "Another turtle." The anthropologist repeated the question and received the same reply. After the anthropologist's repeated questioning, the exasperated informant declared, "It's turtles, turtles, turtles, all the way

down!" Myths about child development do not stand up to examination any better than the "turtles, turtles, turtles" explanation, but nevertheless these myths are so deeply entrenched in U.S. culture that they are not easily dismissed. For example, the belief that children learn moral values by experiencing punishment for mistakes is generally accepted, but it is probably not correct, and neither is the idea that learning right from wrong is a simple matter.

Some erroneous beliefs about child development are *mistakes*, which are based on errors in research design or conclusions, leading to much-publicized statements that are difficult to correct. For example, in the early days of crack cocaine use, statements about the terrible problems of "crack babies" were common, but later work showed that good environments and early intervention corrected many of the difficulties the babies might have had as a result of prenatal drug exposure.

Some erroneous claims are based on a *misunderstanding* of complex issues and are often related to mistakes in the definition of words. Ideas involving the use of the terms *bonding* and *attachment* are often good examples of such beliefs. As an essay in this book shows, people who make claims about bonding and attachment often assume meanings for these terms that are different from their technical use. These claimants also often believe measurement of these behaviors is easy and the discovery of all of the factors involved in emotional development is uncomplicated.

Some erroneous beliefs are related to *missing information*. Strange though it may seem, researchers are still very far from having all of the basic data that will show people how development proceeds. For example, it is common to hear explanations for child behavior couched in the term *brain development*, but in fact there is very little information about normal brain development or how it relates to behavioral and cognitive change. At the time of this writing, research related to this concept in brain development is being conducted by studying developmental changes in 500 typical children (Waber et al., 2007). Also, though we may hear "it's genetic" or "it's in the DNA" as explanations for children's behavior and cognition, we need to remember that there are many questions to answer about the role of genetics in development.

"Seductive Ideas"

In the late 1990s, the leading developmental psychologist, Jerome Kagan, published a book with the intriguing title, *Three Seductive Ideas*. Although

Kagan's (1998) book is not quite as juicy as its title suggests—these ideas would not be much help if you wanted to seduce someone—*Three Seductive Ideas* addresses some important issues for our consideration of child development claims. Seductive ideas, according to Kagan, are assumptions that are so attractive to people that they quickly give the ideas credence and fail to give them the examination they require. They are ideas that people respond to with an immediate "yes, of course" and can confuse an examination of claims about child development. Kagan referred to one of his seductive ideas as the love of abstraction. *Abstraction* is a necessary tool for forging an understandable conclusion out of many pieces of information, but it can prove dangerous when people abstract excessive simplicity out of complication and are thus unable to tell the difference between two events. Humans care for their offspring, and ducks care for their ducklings: People can abstract from these facts a simplified statement about maternal care. But how important are the details that were lost? Can people make conclusions about human caregiving by studying ducks with their ducklings? In examining claims about child development, people need to notice whether supportive material comes from studies of another species and decide whether a claim is acceptable. Our tendency to pursue abstraction can make this difficult to do.

A second seductive idea discussed by Kagan is one of enormous importance for the study of child development: *infant determinism*, which is the assumption that experiences in the first few years of life are of overwhelming importance and cannot easily have their impact altered or corrected by later events. It is possible that this idea is true, but it is presently a seductive idea rather than a well-supported principle. Again, examination of claims about development should check for the presence of the assumption of infant determinism and consider that conclusions drawn directly from this assumption may not have a solid basis in fact.

Adults may also find their thinking "seduced" by the assumption of *adultomorphism*, a made-up word based on *anthropomorphism*, or the assumption that animals think and feel as humans do. *Adultomorphism* is the assumption that infants, children, and adolescents share the motives and abilities of adults. Adults holding this assumption feel they are able to understand child development issues on the basis of their own experiences, without examining the facts of child development. At best, adultomorphism confuses students; at worst, of course, it can lead to child abuse by adults who assume that a child is able to obey any adult command and refuses to do so only out of malicious opposition. Professional research reports rarely involve adultomorphic thinking, but claims made by nonprofessional life coaches and parent educators may be based on adultomorphism.

Why Is It All So Complicated?

Intuitively, people expect young children's lives to be explained by simple factors and uncomplicated connections and expect only a bit more complexity for adolescents. (At the same time, adults think their own lives are so full of complications that no one can appreciate them.) This expectation is a mistake, of course. If anything, children's lives are governed by more complex rules than those of adults because the rapid physical and mental changes of childhood are factors in themselves, beyond the experiences and hereditary factors that are more obvious. In this section, I comment on some other issues that contribute to the complexity of child development and can slow students' understanding.

Values and Political Goals

An important complicating problem in the understanding of child development is that some of our beliefs are guided by *values* and others by *political goals*. As is the case in many areas of life, our thoughts about child development are affected as much by how we want things to be as by what they actually are.

The values connected with child development issues are powerful. They include the status and obligations of men and women, the importance of obedience and independence, and the relative values of the immediate family and the community. The duties and entitlements of boys versus those of girls, as well as the duties and entitlements assigned to minority versus majority populations, are part of our value system. With respect to infants and sick or injured older children, important values include the importance of quality of life versus life itself. Unfortunately, in the universal situation of limited resources, the needs of children are often compared to the needs of the elderly, and values help people determine which group is given more. Further, beliefs about how life should be—equity as a measure of fairness, for instance—may help to determine expectations about similarities or differences between groups of people (boys and girls, perhaps). An individual's commitment to any of these values helps to determine the questions he or she asks and the answers he or she accepts about aspects of development.

Although values play a strong role in guiding individual thoughts, it is important to remember that groups of people share values that help determine their political goals, which in turn help to determine the groups' actions regarding children, such as a vote on school funding. Values also make it likely that groups will emphasize beliefs about children that are congruent with their goals. Political organizations may feel little need to

present all relevant information when making a decision affecting children but instead may choose to work with myths, misunderstandings, or partial truths that predispose others to agree with them. The existence of political goals can influence discussion of research evidence, as was seen some years ago in the books *The Bell Curve* (Herrnstein & Murray, 1994) and *The Myth of the First Three Years* (Bruer, 2002). These popular books discussed the effects of genetics versus early childhood experience on children's school performance and contributed to arguments about the appropriateness of funding for early childhood and other school programs.

The study of child development has probably never been a "pure" science. For example, developmentalists may be interested in certain issues because the issues are related to programs to improve children's physical and mental health. In fact, value-based decisions are a major way of deciding what is an improvement and what is not. A recent book, *Science in the Service of Children* (Smuts, 2006), describes how the developmental sciences came out of a combination of ideals, scientific and otherwise. Does this mean that the study of child development is vague and subjective in nature? Is it an immature science or one with inadequate methods (Cahan, 2007)? No, but the role played by values in the study of child development is so strong that one must be careful to evaluate what is really so and what is simply how people think things should be.

Variations on the Developmental Theme

Individual Differences

The complexity that must be faced before one understands child development is only partly a matter of values and politics. The facts about development are complicated. The common term *average child* is confusing shorthand that means that any group of children will contain individuals who are quite different from each other. People can accurately say they know a child whose measurable characteristics are equivalent to the mathematical average of the measurements of all children in a group, but in fact we can only average numbers, not children. Paradoxically, a group may not include any child whose measured characteristics are exactly the same as the average child, that hypothetical person who has measurements equivalent to the average taken from every child's measurements.

In child development, perhaps even more than in adult life, individual differences are key, and understanding the extent of those differences is vital in understanding how development progresses. The term that describes the extent of individual differences is *variability*. (This word applies to other kinds of difference, too, but those are discussed later.) Without getting too

deeply into statistics, there are quantitative measures of variability, such as standard deviation or variance. These statistics are ways of stating the amount of variability in a group, just as the average or mean is a way of stating the number that best describes the whole group.

Information about children often states the average measurement (e.g., IQ) in a group but less frequently gives a measurement of variability. However, knowledge of variability provides greater insight into the nature of a group and helps in making good decisions. Take, for example, a decision about giving resources to two groups of needy babies, if you can give money to one group only. The average weight of both groups is 6 pounds, which is within the normal range. But what if one group had very low variability in weight, with all of the babies weighing about the same? And what if the other group had very high variability, with half of the babies weighing only 3 pounds and the other half weighing about 9 pounds? When you have this information about variability, it's easy to see that the group with the very small babies needs more help, even though both groups have the same average weight.

Individual differences may be brought about by different events in the environment, by hereditary factors, or by a combination of the two. In the highly variable group of babies described previously, the small babies may have had small parents, they may have been born prematurely, or a combination of factors, such as a small mother receiving poor nutrition during pregnancy, may have affected the birth weights. The description of individual differences only identifies the variation, not why it occurs, although the "why" is also an important issue.

The existence of a great deal of variability and individual differences in children's development is one of the reasons our casual observations cannot give us a very good idea of what children are all about. Especially in today's small families, people have limited opportunities to observe anyone's development except their own. As it happens, a small sample of people chosen out of a large population (all children in the world) may not resemble the large population at all closely. In fact, in choosing a small sample, we may accidentally come up with a group of people who are dramatically different from others. Our own observations may be helpful in providing us with vivid stories and examples, but they will not necessarily help us avoid myths and other mistakes.

Population Differences and Diversity

The issue of diversity is another aspect of variability. The term *diversity* means variation, really, but today the term is used primarily to refer to the importance of considering ethnic differences. Discussion of diversity often