

# Teaching the Bible Responsibly to Children: Cognitive Development and Piaget

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In his *Teaching for Spiritual Growth* (Zondervan, 1994), upon which much of this issue is based, Perry Downs observes most Christian parents, whether they attend church on a regular basis or not, usually affirm, "We want our children to know the Bible." Teaching children of various age groups the Bible is also a high concern of pastors and Sunday School teachers. This is because knowledge of the Scripture is central to Christian growth and maturity. However, there is a problem with a child's capacity to know and understand the Bible because it is distinctly an adult book. More specifically, the problem is that children "know" and "think" about things quite differently from adults. This is why a reoccurring topic of discussion in most every teacher-training program in the local church is how do we help those who teach children to understand the ways children think and know (learn)?

It was in the early 1960s that Ronald Goldman, a British religious educator who wrote from a theologically liberal perspective, pointed out the problems associated with how children understand Scripture. He said because children do not think in the same ways as adults, they will often re-form biblical concepts and terms into meanings that make sense to them. Most of us have read or heard quoted the "cute things" young children tell their parents they learned in Sunday School. For example, "Hallowed be thy name" was remembered and quoted at home as "Harold be thy name." Because "hallowed" was incomprehensible to the child, he changed it, intentionally or unintentionally, into something that made sense to him. Goldman concluded "that the Bible is not a children's book, that the teaching of large areas of it may do more damage than good to a child's religious understanding, and that too much biblical material is used too soon and too frequently" (Ronald Goldman, *Readiness for Religion*, Seabury, 1965; see also Goldman, *Religious Thinking From Childhood to Adolescence*, Seabury, 1964). Not surprisingly, Goldman's research and conclusions grabbed the attention of Christian educators around the world. Of course, the Bible demands that we teach our children its content. Indeed, much of the Old Testament was recorded so that the stories could be passed on to the children of future generations so that they might know of God's faithfulness on their behalf. Strategies were established to prompt children to ask questions (Why is this day different from all other days?) so their parents could tell them the stories of God's faithful care. Clearly it is God's intention in both the Old and New Testaments that children be taught biblical truth. Thus, from a theological point of view it is important to teach the Bible to children, but from a psychological point of view it is important to observe that children understand differently from adults. The dilemma is how we can bring these two concepts together so that we can teach the Bible responsibly to children? Goldman's writings were based on the work of Jean Piaget (1896-1980), the Swiss "genetic epistemologist" who first described the cognitive developmental process in children. While his name is readily recognized and his ideas still taught and studied by college students, especially those preparing to be teachers, the average children's Sunday School teacher is often unfamiliar with Piaget's writings and ideas. In fact, many public school teachers may be unfamiliar with or have forgotten Piaget's background and basic teachings, so perhaps it is best we take a moment to review. During his adolescent, the Swiss-born Piaget began to read in the area of the philosophy of creative evolution. He was later trained in biology and earned his Ph.D. with an emphasis on malacology, the branch of zoology that deals with mollusks. This background sparked the young scientist's interest in the world of ideas and the broader questions of epistemology (the study of the nature and grounds of knowledge). As a result, he began to read widely in the areas of philosophy, religion, and logic, asking not only, "What is knowledge?" but also, "How is knowledge achieved?" Not surprisingly, Piaget's dual concerns of biology and philosophy led him to try to find a biological explanation of knowledge. He used the term "genetic epistemology" to describe the interplay between body and mind that was to be the focus of his thought. He was convinced that intellectual development and how we come to know are "firmly rooted in the biological development of the individual, as expressed by the term 'genetic'" (Mary Ann Spencer Pulaski, *Understanding Piaget*, Harper and Row, 1971, 1980, 3). While doing postgraduate studies at the Sorbonne, Piaget worked with Theophile Simon, who with Alfred Binet developed the first intelligence test. As he attempted to standardize certain aspects of the test, Piaget discovered that children of similar ages systematically missed the same questions in the same way. He began to wonder why this was the case and became increasingly interested in how children think about issues. His intention was to discover how children reason. As a result of his early publications on his findings, he was offered a position as director of research at the Institut Jean Jacques Rousseau in Geneva. Piaget was only twenty-five years old at the time. His career and renown progressed at amazing speed as his many writings and remarkable theories advanced. Through detailed observation, first of his own children, and then of children from all over the world, he developed and refined his theories on logic, moral reasoning, and the cognitive stages in children. In 1950 he published his three-volume theory of knowledge, which was a summary of his life's work to that point. At the time of his death in 1980 he had published forty books and hundreds of journal articles. Just as Charles Darwin emphasized that adaptation is the essence of biological functioning in evolution, so too, Piaget believed that adaptation is the essence of how a person functions cognitively. He defined adaptation as the capacity to organize the sensory stimuli we receive into some sort of order and then to adapt ourselves to our context. Piaget then broke adaptation down into two processes: assimilation and accommodation. The first, assimilation, is the processes by which we incorporate ideas, people, customs, manners, and all sorts of other things into our own activities. For example, the young child who desires to bring a Bible to church. Why? Because he has observed mommy and daddy doing this and he has assimilated this custom into his life. Accommodation is the balance to assimilation, that is, the adjusting of how we reach out to our environment. The young child who learns to raise his hands in praise can be said to have accommodated to his environment or context by learning the behavior of the people around him. He may not understand why hands are raised in praise - hopefully that will come later - rather he is simply seeking to fit in with those around him. Clearly, there is some overlap between assimilation and accommodation. Assimilation is something both animals and humans do. For example, as the deer

population in certain areas of America has increased and the area in which they live has decreased, deer have had to accommodate their behavior by grazing along highways in full view of passing cars. Further, they have learned to assimilate new kinds of food as their normal feeding areas have been drastically reduced or disappeared. Similarly, Piaget observed that humans learn to accommodate and assimilate to their environment. Babies learn to put new things into their mouths as their parents teach them to eat solid food. But they also must learn that not everything they find should go into their mouths. Therefore, as the baby functions adaptively to her environment, she also develops cognitively as she slowly establishes categories of things that do go into her mouth and things that do not go into her mouth. In his many hours of observing children, Piaget saw that they continue to reach out actively and explore their environment. In fact, one can almost watch them learn as they explore their world and organize it cognitively into meaningful systems. At the same time, they adapt their behavior to what they are learning, always trying to maintain a balance between what they are learning and how they behave. The regulatory dynamic between assimilation and accommodation is "equilibration." The human mind seeks to understand, to keep ideas in balance; so young children find simple ways to explain their world, offering childish explanations for what they experience. But as their world grows and their ability to understand develops, children seek better, more adequate levels of equilibration. The explanations we found satisfying in childhood fail to satisfy our sophisticated minds as adults, so the force of seeking equilibration stimulates the mind to higher levels of reasoning. Piaget believed that there are three factors that stimulate cognitive development: maturation, experience, and social transmission. In his summarization of these three factors, Perry Downs defines these three factors in this way: Maturation is more than a biological force; it is also cognitive. Just as the body matures, so the mind matures, developing new capacities for thinking and reasoning. Children exercise growing muscles, strengthening them through use. Likewise, they must use their minds to strengthen them at each level of development. But the mind is more than a muscle to be strengthened; it is a developing aspect of the human personality, growing in predictable ways. Experience also prompts cognitive development by providing sensory input for children. Active involvement with their environment allows children to gain information necessary for later cognitive development. Experience of direct sensory involvement with the environment is what Piaget had in mind - not a sterile sort of "academic" involvement, but a direct touching, tasting, smelling, hearing, and seeing sort of involvement. Because of this need, Piaget believed that "play is the work of the child." It is through playing that the child is able to gain this type of experience. Social transmission, the third factor, stimulates cognitive development. The verbal instructions offered by parents and teachers are critical stimulations for cognitive growth. Children must make sense of the various things said to them, reconciling the various messages they receive. When they hear contradictory messages, cognitive conflict is experienced as their sense of equilibration is disturbed. In this sense they may be disequilibrated (not a term used by Piaget, but descriptive of the state) and will seek to find higher levels of understanding that may serve to resolve the conflict and restore them to a state of equilibration (see Downs's Teaching for Spiritual Growth and, for more detail, Pulaski's Understanding Piaget. While Pulaski's book is currently out-of-print, it is widely available from used book dealers. Two other words that are very helpful are Hans Furth's Thinking Goes to School: Piaget's Theory in Practice (Oxford, 1982) and Dorothy Singer's A Piaget Primer: How a Child Thinks (Plume Books, rev. ed, 1996). Thus, the young child is first taught "Jesus is the Christmas baby" who was laid in a manger by his mother. Later the same child is taught "Jesus was God's Son who died on the cross for our sins," the latter concept introducing God the Father and God the Son, the cross, and sin. These strange, conflicting messages can be resolved only as the child realizes that the baby in the manger grew up to become the man who died on the cross. Thus, equilibration is reestablished when the higher level of thinking is taught and gained. What was important, and still is, about Piaget's work is he saw children, not as miniature adults, but as being cognitively different from adults. In other words, he understood that they saw the world in ways different from those of adults, and that these different modes of understanding should be respected. Further, rather than seeking to understand individual differences, Piaget worked to describe ways in which all children are the same. He believed that in all ages and in all cultures there were predictable patterns to the ways children made sense of their environment, that there were sequential stages of "cognitive development" through which all children passed on their journey toward adulthood. Through extensive observations and interviews with children, Piaget described and refined these stages of cognitive development. They are briefly summarized in the table on the following page. In the sensorimotor period children decrease their ego-centrism, learning that others exist in the world, and these others must be taken into consideration. They learn that specific actions can produce specific results and that they can influence their environments. In the preoperational period, the child's egocentrism does Piaget's Stages of Cognitive Development not allow him to take another's point of view. When Piaget took his son for a ride in the car, he observed that the boy did not recognize a familiar mountain when it was seen from a different vantage point. The boy believed that the mountain, rather than his point of view, had changed.

#### PERIOD CHARACTERISTICS

#### OF THE STAGE DEVELOPMENTAL

#### TASKS

Sensori-motor	0-2 years	Simple reflexive behavior gives way to ability to form schemas (beginnings of symbolic thought)
Object permanence	infant becomes aware over time (3 to about 20 months)	that objects may leave and return
Pre-operational	2-7 years	Use of symbolic thought and development of imagination
Egocentrism	- inability to consider events from another person's point of view, irreversibility	- mentally reverse a sequence of events or logical operations back to the starting point; centration
- tendency to focus, or center, on only one aspect of a situation; conservation	- two equal physical quantities remain equal even if the appearance of one changes, as long as nothing has been added or subtracted	Concrete operational
7-11 years	Capable of true logical thought about physical operations; able to perform operations - conserve, reverse, and consider all physical factors	Not able to think hypothetically and abstractly
Formal	11 years +	Able to think hypothetically and abstractly
May be limited to areas of expertise or operational special interest		

It is in this same stage that Piaget talks about "conser-vation," which is the ability to understand that certain attri-butes of an object remain constant. In a classic experiment, Piaget showed children two equal balls of clay. When one was rolled into the shape of a hot dog, the children believed it now contained more clay because it was "longer." They could not conserve the fact that it was only shape, not volume, that had changed.

Also in this second stage, "centration" is the tendency to focus only on certain aspects of an object, idea, or event and to ignore the rest. Children in this stage tend to centrate their perspective to one aspect of their perceptual field, failing to perceive other aspects or relationships of the phenomenon under investigation. For example, when asked by her parents what she did in Sunday School the child reports, "We had cookies." When they parents ask her what she learned about, the little girl replies, "The cookies were good." When the father, indicating his growing concern for the lack of content taught in the class, asks, "But did you talk about Jesus?," his daughter answers, "The cookies were chocolate." Mom and Dad may be tempted to conclude they should change churches or their daughter has no heart for spiritual matters.

However, says Piaget, what has really happened is that the child has "centrated," focusing only on that aspect of the Sunday School hour that was most sensory and most satisfy-ing to her. As she matures she will learn to "decenter," or focus on greater complexities in her perceptual environment. However, for the moment, her stage of cognitive development limits her capacity to perceive only the broad picture.

In the concrete operational stage "seriation" emerges, allowing children to number and place objects, events, and ideas in logical order. The preoperational child has great difficulty in placing historical events, such as those recorded in the Bible, in sequential order. Thus, whether Jesus or Moses came first is beyond the logical ability of a four-year-old. However, the nine-year-old has the ability to seriate, together with the ability to grasp concepts of time, space, and speed. These new abilities allow children to unscramble much of the information they acquired in previous years, but did not really understand.

However, while the child in his concrete operational years can order and understand their perceptual environment in much more satisfying ways, he is still limited to that which is concrete, that is, what he actually sees and experiences. Movement to the next stage, formal, opens the world of possibility and hypothesis to children. As children move into their adolescent years, the final liberation of their thinking emerges.

It is development into the formal operations stage that often influences an older child's religious thinking. Adolescent agnosticism may emerge as the youth of the church wonder if God really does exist. Other questions of faith, such as the trustworthiness of Scripture or the exclusivity of Jesus as the only means of salvation may also emerge. However, these kinds of questions do not necessarily indicate a crisis in faith, rather they are simply indicative of the fact that young people are using their new cognitive capacities to think about their faith. In the long run, questioning is much better than never questioning. This is because questioning means thinking, and thinking is necessary for spiritual growth.

How do we apply the findings of Goldman, Piaget, and others to Christian education today? Goldman was influenced in his writing and research by the state of religious education in Great Britain during that time, a time in which religious training was part of the curriculum of the public schools. The problem was that children seemed to become less religious as a result of their religious training. In his attempt to speak to this problem, and to take Piaget's work seriously, Goldman ended up advocating that the Bible not be taught until children had developed a proper "readiness for religion."

Further, because Goldman viewed Scripture as simply a human collection of myths and legends, he had no problem in arguing the Bible is expendable for the religious training of children. He was correct in his effort to take Piaget's work seriously, but wrong in his conclusion. Ideally, what he should have done was consider both the theological importance of the Bible as God's inerrant Word to man and the cognitive development of children. So how can we use Piaget's insights to help us teach children more effectively? Perry Downs offers the following eight suggestions:

Teaching is a matter of stimulating equilibration. Effective teaching begins by activating the existing cogni-tive structures through the introduction of familiar con-cepts. Beginning with what is known engages the mind and provides a framework for what will follow. Second, the teacher should introduce new concepts or facts that the existing cognitive structures cannot accommodate. This disruption of the cognitive equilibration may cause a certain degree of discomfort, but it is necessary to the learning process. The slight level of anxiety generated by being disequilibrated provides the "energy" necessary for learning. Third, the teacher helps the student create new cognitive structures that can assimilate the new ideas. Teaching is a matter of helping people think in more adequate ways about the subject matter being presented. For example, in His parables Jesus moved from talking about a familiar concept to introducing a new idea that shattered the religious categories of His audience. Then He resolved the conflict by suggesting better ways to think about the kingdom of God.

Cognitive stages control what the child can learn. Learn-ing is subordinate to the level of cognitive development. Concepts beyond the cognitive ability of a child cannot be grasped until the appropriate cognitive stage necessary for the concept has been reached. Children like to please adults; they can learn to give the answers they believe we want to

hear, but that is different from comprehending what they are saying. Children need to be taught the truth, but it must be presented in ways they can understand. Theology tells us the content we need to teach, but psychology helps us know when and how we should teach it.

Avoid multisymbolic abstractions for children under twelve. Much of our Christian vocabulary is based on complex concepts. Using terms such as "Ask Jesus into your heart" or "Give your all to God" requires more cognitive sophistication than most children can deliver. These concepts are based on a variety of symbolic meanings that are beyond the grasp of children. Indeed, some are beyond the grasp of adults. Children are capable of faith. Indeed, in Matthew 18:3 Jesus used the humility of the child as a model for believers, affirming that such humility would be the basis for a childlike trust. But that is different from assuming that children can understand all our terminology and abstract concepts. Those who work with children in the church should especially be aware of how things are said, considering the cognitive ability of the children they teach.

Concrete learning is necessary for later abstract thinking. Rather than just not teaching the Bible as Goldman suggested, we should strive to teach children Bible stories so that as they move into the formal operations stage they have biblical data with which to form their new modes of thinking. It is probably better to tell Bible stories to children than to read them, because they were meant to be told, and by telling them we can fit them to the cognitive level of the child. We can choose language that is appropriate to the child's cognitive level and bring the story to life by inflection and oral interpretation. Of course, not all of Scripture is appropriate for the young child. We must choose content that is understandable and applicable to the life of the child. Especially appropriate are stories that teach of God's character - His goodness, greatness, majesty, and holiness. Also, stories that tell of God's mighty acts on behalf of His people have special meaning to children.

Emphasize social interaction and environmental stimulation. Learning is accomplished through interaction with the environment. "Sit down and be quiet" should be said only to gain control in the classroom. Children learn best through active involvement - touching, tasting, smelling, feeling, and doing. Because of the process of adaptation, children need active and interactive learning environments. The effective teacher will in terms of learning activities for children, activities that are directed and controlled so that learning outcomes may be attained. Children are directed into active involvement with their environment to stimulate learning.

Focus on only one central aspect of the lesson for children under seven. Because of a child's tendency to concentrate, well-designed lessons focus on only one key idea. All of the activities of the day center on only one idea, which is taught in a variety of ways. A simple concept such as "God helps us" is taught through stories, songs, play, and pictures. The built-in repetition allows the child to engage the concept in a variety of ways, increasing the probability of learning.

Abstractions for a child under the age of twelve must always be tied to a concept referent. Children in the concrete operations stage are capable of abstract reasoning if the abstraction is related to something real. Math is taught, for example, using "apples and oranges" to tie the abstract concepts to real objects. Rather than asking children to reason only in the theoretical domain, the teacher makes the concept concrete by tying it to reality. Likewise, theological concepts must be tied to real-life situations. For example, God's love must be discussed on the basis of actual examples of His love for us. If the concept is left totally abstract, the child will have difficulty grasping it, but when it is tied to actual ways God expresses love, the concept can become "alive" and meaningful to the child. While many adults enjoy theoretical discussions, children think such discussions are "dumb" because they cannot see relevance to their life. Only when theory is tied to actual experience can the child appreciate the importance of the concept being discussed.

Finally, allow for questions and dialogue to correct mis-conceptions. Because children think differently from adults, their perceptions need to be checked to monitor how they are understanding the concepts being taught. Teaching must be dialogical with children, allowing them to express their understanding and to raise questions. Because Christian education is concerned with thinking correctly, it is especially important that children understand what is being taught. Misconceptions can lead to inappropriate fears or other conclusions that might hinder spiritual growth. Teaching is not just a matter of the teacher talking, it is a matter of listening as well. This is especially true when our students think in ways different from ours as adults. We need to hear what they are saying and help them to understand correctly. Through questions and dialogue we can correct the mis-conceptions of children and lead them toward a better understanding of their faith. How Can Preachers Stay On Top of What They Need to Know?

The major obstacle to our knowing and learning what we need to know is usually time. The focus of what preachers need to do every day should be related to God's purpose and plan for their ministries and lives. One of the best recent resources on this dilemma is Kevin Miller's *Surviving Information Overload* (Zondervan, 2004). Miller writes not just for pastors, but for business leaders and others whose services and jobs demand they "stay on top" of information and data related to any degree to their work.

In keeping up with one's reading it is not so much how much is read, but what is read. Quality should always come before quantity. When we ask our resource people about what materials we should read in researching a particular topic or biblical book, we inform them how much time we have allowed for preparation. We also specify we are looking

for the top thirty books, articles, etc. on a topic, including works in print and works no longer in print, as well as forthcoming works about which they might be aware. Asking for this information from two or more resource people who are experts in their fields means we must often overlap and summarize their collective advice. All of this is to say that there must be certain limitations placed on every research project.

The time factor can be dealt with in many ways, but the best is to plan sermons and studies out for an entire year or more. This takes away the stress of rushing to gather material for upcoming sermons and allows the pastor to read and study at a more leisurely pace. We have used this discipline both in the pastorate and at EMOS.

However, the fact remains that we live in an "information age." So it is very important to know how to do research, which includes such basics as how to use a library and being familiar with standard research tools. Some common sense recommendations for staying on top of what preachers need to know include the following:

Understand the difference between what you must know and what you can safely ignore. This is much like knowing which books you should read slowly and carefully and which you can safely skim through rather quickly.

Always be engaged in deepening and broadening your knowledge of a subject or field. Never assume you know everything about a subject, because you don't. Always be involved in reading six or seven books, so that you can read according to your interest on any given day.

Have a system for retaining or storing the information you really need so you can quickly and easily retrieve it.

Know how to do solid, objective (unbiased) research.

Pastors should set aside a minimum of one day each week in which they can focus on reading and preparation.

Select resource people or mentors who can help you in the areas where you are weakest and need help.

Allow more than sufficient time to engage in research and preparation. Research projects often have a way of expanding as you discover other resources you need to read, even though the topic has been sufficiently narrowed so it is manageable (not too broad).