

Sarah Evans
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Information Behavior in Young Children: A Suggested Model

Caregivers often express frustration at the seemingly mindless behavior of young children. A mother who spends all day with an infant craves conversation with a “real” person. A chagrined father asks his three-year-old, “Didn’t I just tell you not to do that?” Experiencing some negative emotions when dealing with young children is understandable. But perhaps these feelings could be lessened by better knowledge of a child’s mental development. In this brief paper, I put forth that the behavior of young children can be understood as a model of information gathering and processing that allows a child to make sense of the world and participate as a member of their society. The research upon which I am basing this model comes from the work of Alison Gopnik, Andrew Meltzoff, and Patricia Kuhl presented in the book *The Scientist in the Crib: Minds, Brains, and How Children Learn* (1999). Key components of the model are influenced by the work of Brenda Dervin and Marcia Bates.

To begin, information will be defined broadly as any difference that makes a difference to a conscious human mind (Bateson as cited in Case, 2002). Yet is a baby or child truly a conscious human mind? For many centuries, humans were considered a tabula rasa at birth, a clean slate upon which experience would write. Into the mid-20th century, infants were not given anesthetics for minor operations because it was believed their minds could not register the pain. With mounting evidence, aided by the technology of brain scans, scientists’ perspective changed to accept that even a newborn has amazing mental capabilities that enable them to develop and thrive. Gopnik et al. (1999) describe it best:

[W]hat we see in the crib is the greatest mind that has ever existed, the most powerful learning machine in the universe. The tiny fingers and mouth are exploration devices that probe the alien world around them with more precision than any Mars rover. The crumpled ears take a buzz of incomprehensible noise and flawlessly turn it into meaningful language. The wide eyes that sometimes seem to peer into your very soul actually do just that, deciphering your deepest feelings. The downy head surrounds a brain that is forming millions of new connections every day. That, at least, is what thirty years of scientific research have told us.

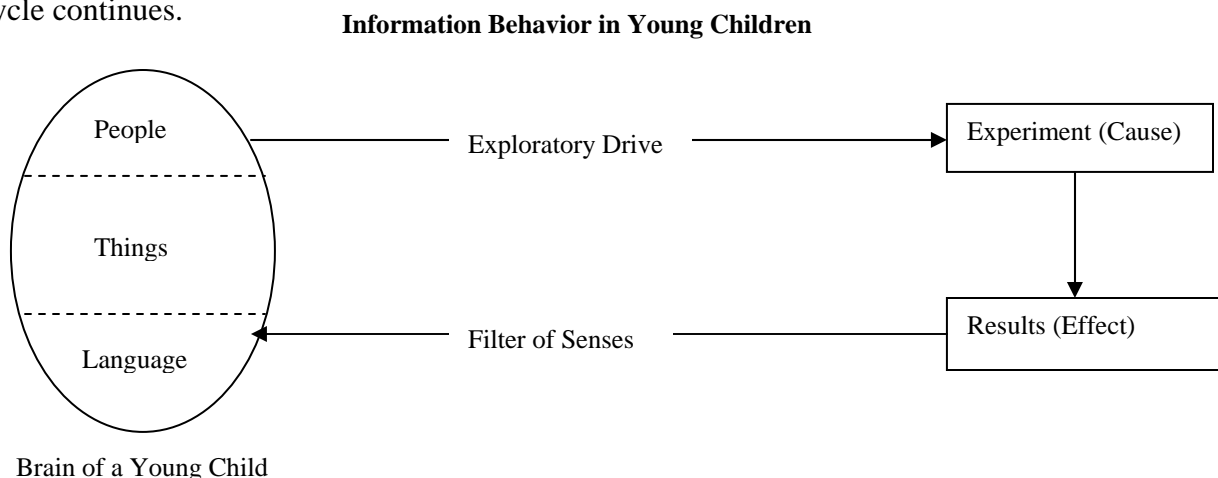
(Gopnik et al, 1999, p. 2)

In their book, these developmental psychologists demonstrate that humans are born with three kinds of knowledge: information about people, information about things, and information about language. Born with an intense exploratory drive, children eagerly test their knowledge, usually through cause and effect “experiments.” Consider such favorite toddler activities as peek-a-boo or dropping food from a high chair. Repetition verifies the effects (mommy is still there; the food goes splat) and any change in results (mommy squeals; this food makes a different noise) brings renewed interest in trying the experiment. In contrast, the adult’s drive to similarly explore and experiment has been overridden by the need for food, shelter, and reproduction.

Since a baby does not walk into a library or search the Internet to inform herself about the world, most traditional models of information seeking are not applicable to the behaviors of young children. Yet some of the theories and key concepts from these models can be pulled together to model the child’s process. In Brenda Dervin’s sense-making model, she describes

“the constant human imperative of making sense where none is given.” (Dervin as cited in Harris and Dewdney, 1994, p. 17) This is similar to the idea of a human exploratory drive described by Gopnik et al. (1999). Dervin also posits that a person’s understanding is constrained by her senses and her experiences. This fits with the theory presented by Gopnik, et al that a child takes the knowledge they are born with and, using their senses, creates experiences to inform them. Marcia Bates berrypicking model is also relevant to young children’s information behavior (Bates, 1989). A child’s mind could not handle all the information it needs to become a functioning adult at birth. Instead the information is retrieved a bit-at-a-time to be processed. Bates also explains that the search need evolves throughout this process, which concurs with the fact that children’s information needs evolve as they gain more knowledge (Bates, 1989).

Based on the research by Gopnik et al and the models of Dervin and Bates, I have developed the following model of information behavior in young children. The brain of a young child is represented on left side. Within there is information about people, things, and language. Because this knowledge is interrelated and will change, dotted lines have been chosen to show a non-solid separation. The need to explore drives the child to create an experiment or a cause. This leads to a result or an effect. The result is then filtered through the child’s senses back the brain, where information in the three sections is added upon or altered based on the experiences. With this new schema or set of information, the child will be driven to more experiments as the cycle continues.



In this paper, I have considering the research of development psychologists Gopnik, Meltzoff, and Kuhl together with the models of Dervin and Bates to create a model of information behavior in young children. While money is not typically spent to build information systems for infants, I believe this kind of work has value for ourselves and our society. Each of us was once a child and children continue to come into this world. By studying children, we can add to our general knowledge of human beings. In addition, the work of caring for young children can be frustrating and exhausting. Information that helps caregivers better understand a child can offer perspective and confirm the importance of their job. Lastly, and perhaps most importantly, by understanding the information behavior of young children, we can create environments that best nurture their development into caring, capable adults. In this way, we can contribute to the betterment of our world, for today and tomorrow.

References

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