

**How Exposure to Danger Affects Mental Development and Behavior
And What We Can Do to Improve Adaptation
PATRICIA M. CRITTENDEN, PH.D.**

Our brains and the behavior they generate are evolved to promote our survival. Nevertheless, our infants cannot survive alone, neither physically, nor mentally. Parents' protection fills the gap while the brain is maturing and learning increasingly effective self-protective strategies. Strategies develop across childhood becoming quite complex by adulthood. When infants and children are exposed to too much danger too soon, their strategies are short-cuts to action. Because they are not able to understand fully, they learn some cue to danger and then act. That's protective, but not always accurate. In addition, sometimes a strategy that was appropriate in infancy or early childhood is not appropriate later. In both cases, a new strategy is needed. When the person cannot discover the need for a new strategy and learn the new strategy, intervention is needed. This presentation will explain how identifying strategies, rather than symptoms, and matching treatments to strategies, can improve the effectiveness of intervention.

This talk begins with a simple hypothesis: We are evolved to survive. In particular, our brains and the behavior that they generate are evolved to promote our survival. Nevertheless, our infants cannot survive alone, neither physically, nor mentally. Even though they have all the human genes to guide development, their brains don't develop and often they die if no one takes care of them and engages personally with them. In other words, we are evolved genetically to survive in the context of attachments to our parents and their attachment to us. When we are cared for, we develop the psychological and behavioral competence to survive.

What must we survive? Danger. All kinds of danger. At first our parents protect us, based on their learned skills. Slowly we develop our own skills to protect ourselves from the threats that we experience. That is, our genes provide the tools that enable each human to mature and become capable of complex functions. Our brains mature slowly so that each individual can adapt to his or her unique context; our brains take shape around protecting us from precisely the dangers that we experience. This enables us to learn the best strategy for staying safe where we are living. This means that each human brain reflects our species, but also is uniquely organized to fit each person's history of danger and caregiving. Parents' protection fills the gap while the brain is maturing and learning increasingly effective self-protective strategies.

What are the strategies? Although there are many strategies, there are three main clusters: three patterns of attachment. Some people learn to do the right thing, while hiding their feelings; they act as if they don't need other people. Some people don't know what to do, but they make their feelings very clear to other people; they count on others to know what to do. Some people know what to do most of the time and trust their feelings most of the time, but they need other people some of the time. Of course, the strategies that infant brains can learn are simpler than the strategies that children can learn and these are simpler than the strategies that adults can use. So the strategies develop across childhood becoming quite complex by adulthood.

How does danger change development? When infants and children are exposed to too much danger too soon, their strategies are short-cuts to action. Because they are not able to understand fully, they learn some cue to danger and then act. That's protective, but not always accurate. For example, they might hide their feelings when it would be better to let other people know that they need help. Or they might start screaming at everything so that no one could calm them. The overuse of a simple strategy means that infants' responses will sometimes be maladaptive. In addition, sometimes a strategy that was appropriate in infancy or early childhood is not appropriate later. In both cases, a new strategy is needed.

How can intervention correct maladapted strategies? When the person cannot discover the need for a new strategy and learn the new strategy, intervention is needed. Different treatments are needed for different strategies. Often the same behavior can be part of quite different strategies so we need to know the strategic organization and function of the behavior, not just the presence of a symptom. Knowing which strategy a person is using can guide professionals to use a helpful treatment. Matching treatments to individuals' strategies can improve the effectiveness of intervention.