

# Thriving

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## The Dueling Needs for Safety and Adventure

*Larry K. Brendtro*



A large body of research shows that the human social brain has unique *biosocial drives* which motivate attachment, achievement, autonomy, and altruism.<sup>1</sup> Further, like all animals, we have deep brain survival circuits which are triggered when well-being is potentially challenged or enhanced.<sup>2</sup> The brain's amygdala instantly detects either threat or opportunity and activates avoidance or approach responses. When threat is apparent, survival circuits motivate defensive reactions. In contrast, opportunity calls pleasure-seeking into play. Thus, survival circuits serve two polarized needs:

**Safety:** *Avoiding harm is essential to survival.* Perceived threats spark negative emotions like anxiety, fear, or shame and activate stress reactions in brain and body.

**Adventure:** *Overcoming risks is necessary to build resilient brains.* Novel experiences generate positive emotions and form new brain connections through “adaptive plasticity.”<sup>3</sup>

The brain would be flooded without some means of prioritizing incoming stimuli, so it is designed to focus on novelty.<sup>4</sup> The amygdala instantly spots unusual stimuli and conveys information through pathways to both the higher and lower brains. While the amygdala has often been called the brain's danger detector, it also encodes positive, pleasurable events.<sup>5</sup> Recent research shows that *the amygdala is the brain's safety-adventure switch*, activating defensive threat reactions as well as seeking stimulation.

The new science of optogenetics literally "sheds light" on these inborn safety and adventure responses. Sea algae genes that respond to light are inserted into the amygdala of mice. This allows specific neurons to be turned on by tiny beams of light.<sup>6</sup> Stimulating one area in the amygdala triggers fear while switching to another area produces a fearless, adventuresome mouse. All animals have similar amygdala circuits although humans augment these core survival brain programs with higher capacities for thought and feeling.

Safe environments protect children from adverse experiences and are crucial in healing trauma.<sup>7</sup> Traumatized children often revert to deep brain survival circuits to protect themselves from perceived danger.<sup>8</sup> Initially, verbal interventions may not be effective. Helping children feel safe requires consistently responding to them in moment-to-moment interactions to develop new deep brain neural pathways. They also may benefit from rhythmic sensory stimulation such as music or motion.<sup>9</sup>

Trauma therapy emphasizes establishing security and predictability including repetitive, structured activities. However, if we only shelter children, they never will learn to manage stress. At some point, safety must be balanced with risk taking which entails novel, unpredictable, creative activities. Overcoming manageable levels of risk creates a "steeling" effect, preparing the person to successfully cope with future challenges.<sup>10</sup>

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The dueling needs for avoiding harm and taking risks are essential for healthy growth and development. Safety is jeopardized not only by physical danger but by threats

to emotional and social well-being. But to become resilient, children must balance safety with adventure—the etymology of which is “to take risks.” Effective challenge and adventure activities engage youth in supportive and safe environments. The key is to balance risk and safety by avoiding extremes on the following continuum<sup>11</sup> as seen in Figure 1 and described here:

- **Boredom.** Seeking opportunity for greater stimulation.
- **Play.** Exploring through fun activities that evoke little fear.
- **Adventure.** Engaging in stressful activities with manageable risk.
- **Crisis.** Inability to cope with threat of physical or psychological harm.

**Figure 1**



Play is a core emotion in mammals.<sup>12</sup> “When we stop playing, we start dying,” says psychiatrist Stuart Brown, founder of the National Institute of Play.<sup>13</sup> Adventure and play strengthen other developmental needs: fostering belonging, teaching new skills, building self-regulation, and developing concern for others. Play and adventure are preparation for coping with challenges, the foundation of resilience.

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The quest for adventure is particularly prominent in the brains of adolescents.<sup>14</sup> A surge of stimulation seeking and desire for social approval propels them toward behaviors that can lead to catastrophe or positive growth. Our challenge is to provide avenues where youth can pursue adventure while preserving safety.<sup>15</sup> For over a century, pioneers in education and youth work have demonstrated the value of adventure. Jane Addams advocated for recreational opportunities to capture the spirit of city youth. Kurt Hahn created Outward Bound to meet the need of adolescents for some *grande passion*. Nicholas Hobbs founded the Re-ED model which called for teaching joy to troubled children and youth. The dueling needs for safety and adventure are anchored in survival circuits of the brain, and each is essential in creating environments in which young people not only survive but thrive.

**Larry K. Brendtro, PhD**, is Professor Emeritus at Augustana University, founder and former president of Reclaiming Youth International, and co-author of Reclaiming Youth at Risk. He is a Senior Training Consultant for CF Learning and is a highly regarded international speaker. He may be contacted by email at [speakers@cflearning.org](mailto:speakers@cflearning.org)

(Endnotes)

<sup>1</sup> Brendtro, L., & Mitchell, M. (2015). *Deep brain learning: Evidence based essentials in education, treatment, and youth development*. Albion, MI: Starr Commonwealth.

<sup>2</sup> LeDoux, J. (2015). *Anxious: Using the brain to understand and treat fear and anxiety*. New York, NY: Viking.

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<sup>4</sup> Strother, M. (2012). A mind for adventure. *Reclaiming Children and Youth*, 16(1), 17-21.

<sup>5</sup> Janak, P., & Tye, K. (2015). From circuits to behavior in the amygdala. *Nature*, 517(15), pp. 284-293.

<sup>6</sup> Deisseroth, K. (2010). Controlling the brain with light. *Scientific American*, 303(5):48-55.

<sup>7</sup> Bath, H. (2016). *Helping kids who hurt: The three pillars of transforming care*. Newcastle, Australia: Allambi Youth Services.

<sup>8</sup> Perry, B., & Hambrick, E. (2008). The neurosequential model of therapeutics. *Reclaiming Children and Youth*, 17(3), 39-43.

<sup>9</sup> Maikoetter, M. (2011). From intuition to science: Re-ED and trauma-informed care. *Reclaiming Children and Youth*, 19(4), 18-22.

<sup>10</sup> Rutter, M. (2012). Resilience as a dynamic concept. *Developmental Psychopathology*, 24(2), 335-344.

<sup>11</sup> Adapted from: Priest, S., & Gass, M. (1997). *Effective leadership in adventure programming*. Champaign, IL: Human Kinetics.

<sup>12</sup> Panksepp, J., & Biven, L. (2012). *The archeology of the mind: Neuroevolutionary origins of human emotions*. New York, NY: W. W. Norton.

<sup>13</sup> Brown, S. (2009). *Play: How it shapes the brain, opens the imagination, and invigorates the soul*. New York, NY: Penguin, p. 73.

<sup>14</sup> Steinberg, L. (2015). *Age of opportunity: Lessons from the new science of adolescence*. Boston: Mariner Books.

<sup>15</sup> Strother, M. (2012). A mind for adventure. *Reclaiming Children and Youth*, 16(1), 17-21.