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Book Review: Current Perspectives & Applications in Neurobiology: Working with Young Persons Who Are Victims and Perpetrators of Sexual Abuse

Edited by Robert E. Longo, David S. Prescott, John Bergman, and Kevin Creeden

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Editor's Note: *David Prescott is the Review Editor of the Forum. He did not solicit, nor was he involved in any way in the production of this review. RJW*

Navigating the literature on neuroscience and interpersonal neurobiology related to adolescent delinquency and violence can be daunting. This vast body of literature includes post-traumatic stress disorder (PTSD) and epigenetics research (mechanism through which genotypes respond to environmental stimuli such as trauma), gene x environment interactions studies (e.g., Brody et al., 2009), research on the relationship between complex trauma and behavioral disinhibition resulting from impairments in the integration of the cortical and subcortical regions of the brain (Cook et al., 2005; Perry, 2008; van der Kolk, 2001), and the mounting evidence from studies with youthful offenders that genetic influence and early adversity factors are associated with negative outcomes through the mediating interplay with neurobiological deficits (e.g., van Goozen, Fairchild, & Harold, 2008). What is even more daunting is understanding how to apply insights from neuroimaging and the ways brain research can be utilized in designing effective interventions with youth with sexually harmful behaviors that go beyond usual offense-specific approaches.

In *Current Perspectives & Applications in Neurobiology: Working with Young Persons who are Victims and Perpetrators of Sexual Abuse*, Longo, Prescott, Bergman, and Creeden successfully integrate a wide body of literature in developmental neuroscience and interpersonal neurobiology (that began with the work of Daniel Siegel) relevant to the assessment and treatment of sexually abusive youth. As the title suggests, understanding the developmental antecedents (e.g., trauma and maltreatment) to sexually abusive behavior as putative risk factors permeates the book, and the editors and contributors have been collectively writing and presenting at the major conferences about the applications of neuroscience with this population for several years.



Robert E. Longo

The third of a series of *Current Perspectives* texts published by NEARI Press, the editors once again provide a comprehensive, accessible volume for practitioners at all levels, in both residential and community-based settings. The editors have assembled contributions from leading researchers and practitioners in the fields of trauma and sexual aggression.



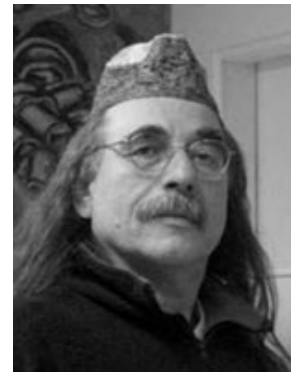
David S. Prescott

At the outset, Longo and Prescott engage the reader with a discussion of states-of-affairs in the field, the importance of providing practice guidance to clinicians, and utilizing the evidence of the effects of trauma on the brain in conducting risk assessments. They state, “If we are to expect youth to become able to relate to others empathically (a protective factor against sexual aggression), we must be skilled in brain-based interventions.”

The overarching framework of the book is holistic, driving home the message that assessments and interventions with sexually abusive youth should draw from a number of domains including developmental context and overall health and nutrition, while incorporating principles of risk, need, and responsivity in fostering positive outcomes. Moreover, this volume not only maps out effective neurodevelopmentally informed approaches based on research, it delivers as a consummately balanced book emphasizing ethical practice, empathic attunement, the importance of self-regulation of emotion, “bottom-up” approaches and techniques for rebuilding neural pathways, and conceptualizing defensive strategies such as traumatic dissociation as adaptive, necessary for survival, and not necessarily pathological (e.g., Bergemann, p. 105).

The book is divided into three sections: Introduction, Theory, and Interventions. All of the chapters are rich in content, covering a range of topics and interventions including trauma and executive functioning, traumatic brain injury (TBI), experiential therapies, the G-MAP approach in the UK, sensorimotor psychotherapy, and quantitative electroencephalogram (QEEG) brain mapping and neurofeedback. Case studies are well placed and illuminate the practical application of theory in several chapters (e.g., illustrating neurotherapy in sexual abuse cases in Chapter 6 and treatment planning in Chapter 8).

The Introduction section lays the groundwork for the rest of the text. Blanchard’s chapter is compelling in the sense that it incorporates an anthropological perspective, drawing parallels between advancements in neuroscience and ancient tribal discourses of healing (e.g., that of the Navajo). In the following chapter, Prescott reminds us that risk assessment should be attentive to the developmental context, and he provides a thorough overview of the current thinking in the field in terms of challenges and controversies in measuring arousal in adolescents (incorporating information from neuroscience), the emerging typologies, and risk assessment instruments such as the ERASOR. This chapter sets the stage for future investigations regarding how risk assessments square with the neuroscience research, how neurodevelopmental issues can manifest as treatment challenges, and the relevance of teaching mindfulness skills to youth that has been the message of contemplative neuroscience in the last decade or more. David Burton, an expert in sexual aggression, then sets the historical context for theory building (from Binet to Bandura) and presents data on innovative research concerning trauma and executive functioning. This is an understudied area among sexually abusive youth, especially in light of findings that deficits in executive functioning and poor emotional regulation may be related to maltreatment history as well as sexual and nonsexual behavioral problems.



John Bergman



Kevin Creeden

In the Theory section (Part Two) the authors elucidate principles of interpersonal neurobiology, and considerations for assessment and evidence-based practices in trauma treatment. In Chapter 5, Bergemann draws from Alan Shore, and offers an excellent discussion of fear response and its impact on the nervous system, and on traumatic shame. Kaiser and Meckley follow with an equally excellent chapter on understanding brainwave abnormalities resulting from trauma and the use of neurotherapy (EEG biofeedback) in addressing sexual abuse. The chapters on applying neuroscience to the therapeutic milieu (Chapter 7), treatment planning (Chapter 8), and the well established three-phase G-MAP approach that enhances motivation and helps clients manage stress (Chapter 9) round out this section nicely. The chapter introducing TBI (Chapter 10) is helpful in setting the stage for the case study in Chapter 16. The fact that contributors address ethical implications in neuroscience (Chapter 11) is especially salient in light of research on both the promises and pitfalls in utilizing neuroscience in juvenile justice.

In Part Three, the chapters focusing on Interventions are some of the most valuable contributions in the book, and many are gems. Figured prominently are the linkages between the research and clinical practice implications. This section includes chapters on sensory integration, John Bergman's insightful contribution on experiential therapies and psychodrama, Cuninggim and Bengis' discussion of the relationship between neurodevelopment and learning and task completion, and a chapter on medications and the brain. The inclusion of Ogden, Goldstein, and Fisher's work on sensorimotor therapy (Chapter 12) reflects the authors' efforts to provide state-of-the-art interventions. The emphasis on body-based therapies that integrates neuroscience and attachment theory to address traumatic sequelae including affect regulation is very complementary to usual trauma therapies. I have found that the Modulation Model ("Windows of Tolerance," between hyper-arousal and dissociation) is particularly helpful when working with sexually abusive youth with trauma histories, as a way to foster responsivity and incremental change in treatment.

In summary, this is a forward-thinking foundational text. Advancements in developmental neuroscience and findings about the teen brain have permeated legal theory and have resulted in a call for differential treatment of youthful offenders. I hope that the editors and authors associated with this volume will continue developing these topics. My only suggestion is that they, perhaps, address gender differences in neuroscience in a subsequent volume.

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