

## EDITORIAL

# Multilevel approaches toward understanding antisocial behavior: Current research and future directions

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Antisocial behavior is multifaceted and has a rich history of research. Nearly two decades have passed since Richters and Cicchetti (1993a) co-edited a Special Issue in this Journal entitled, “Toward a Developmental Perspective on Conduct Disorder.” At that time, researchers in the field examined questions such as the utility of taxonomies in defining antisocial behavior (Hinshaw, Lahey, & Hart, 1993; Richters & Cicchetti, 1993b), the developmental processes associated with the emergence of antisocial behavior in children (Loeber et al., 1993), emerging literature on the neuropsychology of antisocial behavior (Moffitt, 1993; Pennington & Bennetto, 1993), gender differences in antisocial behavior (Zahn-Waxler, 1993; Zoccolillo, 1993) and the role of attachment and families in the etiology of antisocial behavior (Greenberg, Speltz, & Deklyn, 1993; Waters, Posada, Crowell, & Keng-Ling, 1993). The issue ended by presenting some fresh approaches to the treatment of antisocial behavior in youth (Dodge, 1993; Kazdin, 1993). At the time of publication, these manuscripts contributed a great deal to the literature on antisocial behavior, propelling the field forward into new and exciting directions.

Much has changed since the publication of that Special Issue. Advances in quantitative theory and practice have made it increasingly possible to account for heterogeneity within those who exhibit antisocial behavior using person-centered analyses and growth curve analyses (Nagin, 1999, 2005). We now have a greater understanding of the varied developmental pathways by which youth come to exhibit antisocial behavior (Campbell et al., 2010; Mulvey et al., 2010). However, this literature is relatively new, and more work is needed

in order to understand the variability in the development of antisocial behavior.

Researchers have also begun to incorporate multiple levels of analysis in their approach to studying antisocial behavior, particularly the intersection of biological and environmental influences on antisocial behavior (Cicchetti, 2008). We now understand that genetic vulnerabilities for violence may be moderated by extreme environmental events, such as childhood maltreatment (Caspi et al., 2002; Jaffe et al., 2004; Kim-Cohen et al., 2006; Mead, Beauchaine, & Shannon, 2010). The literature has moved toward understanding how distinct physiological patterns, such as low resting heart rate, may help us to further understand differences in risk for antisocial behavior (Baker et al., 2009). In this issue, authors build upon the existing research to apply a multilevel approach toward understanding antisocial behavior across many developmental periods, using a number of different phenotypic expressions of antisocial behavior (e.g., aggression, substance use).

As the field has become more multidimensional, models of how antisocial behavior develops have also become more comprehensive and innovative. Cascade approaches have highlighted the dynamic role of early experience in influencing later outcomes (Cicchetti & Tucker, 1994; Masten & Cicchetti, 2010). Such approaches have been combined with existing models to investigate how early risk factors may impact functioning across multiple domains and levels of analysis to influence antisocial behavior. Studies have examined how early experiences shape brain development, neurotransmitter functioning, temperament, and neuroendocrine functioning, which may in turn influence antisocial behavior (Cicchetti, 2002; Gunnar & Vazquez, 2006; Mead et al., 2010). The role of gender, attachment, and parent–child relationships can now be examined within broader contextual models of antisocial behavior. The articles in this issue share an innovative spirit and test novel theories among populations at varying levels of risk from young childhood to samples of incarcerated offenders.

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Finally, the challenge in the field of antisocial behavior has been to translate this research into effective interventions. Much of this work has been informed by the literature on early parent–child relationships, examining how reducing maternal depressive symptoms (Shaw, Connell, Dishion, Wilson, & Gardner, 2009) and changing parenting practices (Forgatch, Patterson, Degarmo, & Beldavs, 2009) may impact risk for antisocial behavior. We have asked the contributors in this Special Issue to consider the implications of their research for informing interventions.

In sum, the field of antisocial behavior has come a long way, but we still have far to go. In putting together this Spe-

cial Issue, we sought to bring together researchers from disparate areas in order to provide a comprehensive perspective on the field of antisocial behavior. Contributors were encouraged to use innovative techniques and models, to consider the role of multilevel influences across multiple domains, and to reflect upon how their work could inform treatment and future research on antisocial behavior. The result is a collection of articles that we hope will prompt new ideas and questions about the study of antisocial behavior in the decades ahead.

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