

Volume 32 Issue 4

October 2020

ISSN: 0954-5794

# DEVELOPMENT AND PSYCHOPATHOLOGY

*Dante Cicchetti*  
Editor

SPECIAL SECTION

*Conceptualizing and Interrogating Autism Spectrum Disorder from a  
Developmental Psychopathology Framework*

*Jed T. Elison*  
Editor

**CAMBRIDGE**  
UNIVERSITY PRESS

## Editor

Dante Cicchetti

Institute of Child Development, University of Minnesota

## Associate Editors

**Theodore P. Beauchaine**, Ohio State University, USA; **Patrick Davies**, University of Rochester, USA; **Stephen Hinshaw**, University of California, Berkeley, USA; **Suniya Luthar**, Arizona State University, USA; **David Magnusson**, University of Stockholm, Sweden; **Ann S. Masten**, Institute of Child Development, University of Minnesota, USA; **Fred A. Rogosch**, Mt. Hope Family Center, University of Rochester, USA; **Michael Rutter**, Institute of Psychiatry, London, UK; **Ronald Seifer**, Brown University, USA; **Daniel Shaw**, University of Pittsburgh, USA; **L. Alan Sroufe**, Institute of Child Development, University of Minnesota, USA; **Melissa L. Sturge-Apple**, Mt. Hope Family Center, University of Rochester, USA; **Sheree L. Toth**, Mt. Hope Family Center, University of Rochester, USA; **Elaine Walker**, Emory University, USA

## Editorial Board

**Lenneke Alink**, Leiden University, The Netherlands; **Marian Bakersman-Krandenberg**, Leiden University, The Netherlands; **Carrie E. Bearden**, University of California, Los Angeles, USA; **Marjorie Beeghly**, Children's Hospital, Boston & Wayne State University, USA; **Jay Belsky**, University of California, Davis, USA; **Jacob Burack**, McGill University, Canada; **Keith Burt**, University of Vermont, USA; **Nicole Bush**, University of California, San Francisco, USA; **Susan Calkins**, University of North Carolina, Greensboro, USA; **Susan Campbell**, University of Pittsburgh, USA; **Tyrone Cannon**, Yale University, USA; **Laurie Chassin**, Arizona State University, USA; **E. Jane Costello**, Duke University Medical Center, USA; **Michael DeBellis**, Duke University Medical Center, USA; **Jean Decety**, University of Chicago, USA; **Leah D. Doane**, Arizona State University; **Colin G. DeYoung**, University of Minnesota, USA; **Jenalee Doom**, Denver University, USA; **Colleen Doyle**, Institute of Child Development, University of Minnesota, USA; **Mary Dozier**, University of Delaware, USA; **Katie Ehrlich**, University of Georgia, USA; **Inge-Marie Eigsti**, University of Connecticut, USA; **Nancy Eisenberg**, Arizona State University, USA; **Peter Fonagy**, Menninger Clinic, USA and University College, London, UK; **Cynthia Garcia Coll**, Carlos Albizu University, Puerto Rico; **Elena L. Grigorenko**, University of Houston, USA; **Elizabeth Handley**, Mt. Hope Family Center, University of Rochester, USA; **Benjamin L. Hankin**, University of Illinois, Urbana-Champaign, USA; **Nicholas Ialongo**, Johns Hopkins University, USA; **Camelia Hostinar**, University of California, Davis, USA; **Sara Jaffee**, University of Pennsylvania, USA; **Mark Johnson**, Birkbeck College, London, UK; **Canan Karatekin**, Institute of Child Development, University of Minnesota, USA; **Jungmeen Kim-Spoon**, Virginia Tech, USA; **Julia Kim-Cohen**, University of Illinois, Chicago, USA; **Bonnie Klimes-Dougan**, University of Minnesota, USA; **Jennifer Lansford**, Duke University, USA; **Mark Lenzenweger**, SUNY Binghamton, USA; **Leslie Leve**, University of Oregon, USA; **Alicia Lieberman**, San Francisco General Hospital, USA; **Sonia Lupien**, McGill University, Canada; **Michael Lynch**, SUNY Geneseo, USA; **Jenny Macfie**, University of Tennessee, USA; **Jody Todd Manly**, Mt. Hope Family Center, University of Rochester, USA; **Peter J. Marshall**, Temple University, USA; **Erin B. McClure-Tone**, Georgia State University, USA; **Kate McLaughlin**, Harvard University, USA; **Ellen Moss**, Université du Québec à Montréal, Canada; **Eun Young Mun**, University of North Texas, USA; **Dianna Murray-Close**, University of Vermont, USA; **Angela Narayan**, Denver University, USA; **Misaki N. Natsuaki**, University of California, Riverside, USA; **Joel Nigg**, Oregon Health and Science University, USA; **Jennie G. Noll**, Pennsylvania State University, USA; **Thomas G. O'Connor**, University of Rochester, USA; **Assaf Oshri**, University of Georgia, USA; **Daniel Pine**, National Institute of Mental Health, USA; **Robert Plomin**, Institute of Psychiatry, London, UK; **Seth Pollak**, University of Wisconsin, Madison, UK; **Michael Posner**, University of Oregon, USA; **Robert M. Post**, Bipolar Collaborative Network, USA; **Sally J. Rogers**, University of California, Davis, USA; **Glenn Roisman**, Institute of Child Development, University of Minnesota, USA; **Isabelle M. Rosso**, Harvard University, USA; **Tania Roth**, University of Delaware, USA; **Mary K. Rothbart**, University of Oregon, USA; **Karen Rudolph**, University of Illinois at Urbana-Champaign, USA; **Richard Ryan**, University of Rochester, USA & Australian Catholic University, Australia; **Jessica E. Salvatore**, Virginia Commonwealth University, USA; **M. Mar Sanchez**, Emory University, USA; **John Schulenberg**, University of Michigan, USA; **Margaret Sheridan**, University of North Carolina, Chapel Hill, USA; **Elizabeth A. Shirlcliff**, Iowa State University, USA; **Margaret Beale Spencer**, University of Chicago, USA; **Lisa Starr**, University of Rochester, USA; **Eric Thibodeau**, University of Minnesota, USA; **Kathleen M. Thomas**, Institute of Child Development, University of Minnesota, USA; **Don Tucker**, University of Oregon, USA; **Audrey R. Tyrka**, Brown University, USA; **Kristin Valentino**, University of Notre Dame, USA; **Brian Vaughn**, Auburn University, USA; **Helena Verdelli**, Teachers College, Columbia University, USA; **Irwin Waldman**, Emory University, USA; **Philip D. Zelazo**, Institute of Child Development, University of Minnesota, USA; **Robert Zucker**, University of Michigan, USA

**Editorial Board Members in Memoriam:** Dennis P. Cantwell, Donald J. Cohen, Nicki R. Crick, Doug Derryberry, Thomas J. Dishion, Norman Garnezy, Xiaojia Ge, Robert Harmon, Stuart Hauser, Marian Radke-Yarrow, Lee Robins, James Snyder

**Aims and Scope:** *Development and Psychopathology* is an international multidisciplinary journal devoted to the publication of original empirical, theoretical, and review articles on the interrelationship of normal and pathological development in children and adults.

**Editorial Office:** Institute of Child Development, University of Minnesota, 51 East River Parkway, Minneapolis, MN 55455. Telephone: 612-625-5213. E-mail: devpsychopathol@umn.edu

**Assistant to Editor:** Karlyn Wegmann, University of Minnesota

**Publishing, Production, and Advertising Office:** Cambridge University Press, One Liberty Plaza, New York, NY 10006.

**Subscription Offices:** (for USA, Canada, and Mexico) Cambridge University Press, One Liberty Plaza, New York, NY 10006; (for UK and elsewhere) Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, UK.

**2020 Subscription Information:** *Development and Psychopathology* (ISSN 0954-5794) is published five times per year by Cambridge University Press, One Liberty Plaza, New York, NY 10006, USA/Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, UK. Annual subscription rates: Institutions print and electronic: US \$1150 in the USA, Canada, and Mexico; UK £635 + VAT elsewhere. Institutions electronic only: US \$851 in the USA, Canada, and Mexico; UK £472 + VAT elsewhere. Individuals print and electronic: US \$286 in the USA, Canada, and Mexico; UK £154 + VAT elsewhere. Individuals electronic only: US \$227 in the USA, Canada, and Mexico; UK £126 + VAT elsewhere. Single Part: US \$264.00 in the USA, Canada, and Mexico; UK £146.00 + VAT elsewhere. Prices include postage and insurance. Airmail or registered mail is extra. Back volume prices are available upon request.

**Institutional Subscribers:** Information on *Development and Psychopathology* and all other Cambridge journals is available at the Cambridge Journals Online website via <http://www.journals.cambridge.org>

**Indexing:** This journal is covered in *Child Development Abstracts & Bibliography*, *Current Contents/Social & Behavioral Sciences*, *Social Sciences Citation Index*, *Index Medicus*, and *MEDLINE*.

© Cambridge University Press 2020. All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopy, or otherwise, without permission in writing from Cambridge University Press. For further information see <http://us.cambridge.org/information/rights> or <http://www.cambridge.org/uk/information/rights>

**Photocopying Information (for USA only):** The Item-Fee Code for this publication (0954-5794/18) indicates that copying for internal or personal use beyond that permitted by Sec. 107 or 108 of the US Copyright Law is authorized for users duly registered with the Copyright Clearance Center (CCC), provided that the appropriate remittance per article is paid directly to: CCC, 222 Rosewood Drive, Danvers, MA 01923. Specific written permission must be obtained for all other copying; contact the nearest Cambridge University Press office. Contact the *ISI Tearsheet Service*, 3501 Market Street, Philadelphia, PA 19104, for single copies of separate articles.

Periodicals postage is paid at New York, NY, and additional mailing offices. POSTMASTER: Send address changes in the USA, Canada, and Mexico to: *Development and Psychopathology*, Cambridge University Press, One Liberty Plaza, New York, NY 10006.

Printed in the United States of America.

---

# DEVELOPMENT AND PSYCHOPATHOLOGY

---

VOLUME 32

OCTOBER 2020

NUMBER 4

## SPECIAL SECTION

### *Conceptualizing and Interrogating Autism Spectrum Disorder from a Developmental Psychopathology Framework*

JED T. ELISON

EDITOR



---

# DEVELOPMENT AND PSYCHOPATHOLOGY

---

Volume 32

October 2020

Number 4

## CONTENTS

*Special Section: Conceptualizing and Interrogating Autism Spectrum Disorder from a Developmental Psychopathology Framework*

*Special Section Introduction*

JED T. ELISON    **1173**    Editorial: Considering Transient Instantiators

*Special Section Articles*

AMI KLIN, MEGAN MICHELETTI,    **1175**    Affording autism an early brain development re-  
CHERYL KLAIMAN, SARAH SHULTZ,    definition  
JOHN N. CONSTANTINO, AND WARREN JONES

NATASHA MARRUS, JULIA D. GRANT,    **1190**    Genetic architecture of reciprocal social behavior  
BROOKE HARRIS-OLENAK,    in toddlers: Implications for heterogeneity in the  
JORDAN ALBRIGHT, DREW BOLSTER,    early origins of autism spectrum disorder  
JON RANDOLPH HABER, THEODORE JACOB,  
YI ZHANG, ANDREW C. HEATH,  
ARPANA AGRAWAL, JOHN N. CONSTANTINO,  
JED T. ELISON, AND ANNE L. GLOWINSKI

KYLE B. REID, LORI-ANN R. SACREY,    **1206**    The association between social emotional  
LONNIE ZWAIGENBAUM, SARAH RAZA,    development and symptom presentation in autism  
JESSICA BRIAN, ISABEL M. SMITH,    spectrum disorder  
SUSAN BRYSON, VICKIE ARMSTRONG,  
WENDY ROBERTS, PETER SZATMARI,  
TRACY VAILLANCOURT,  
AND CAROLINE RONCADIN

REBECCA J. LANDA, RACHEL REETZKE,    **1217**    Early behavioral profiles elucidating vulnerability  
MADIHA TAHSEEN,    and resiliency to later ASD outcomes  
AND CHRISTINE REINER HESS

MEGHAN R. SWANSON    **1230**    The role of caregiver speech in supporting  
language development in infants and toddlers with  
autism spectrum disorder

- ERIN KANG, MATTHEW D. LERNER,  
AND KENNETH D. GADOW **1240** Atypical communication characteristics among clinic-referred youth with and without autism spectrum disorder: Stability and associations with clinical correlates
- HEATHER A. YARGER  
AND ELIZABETH REDCAY **1254** A conceptual model of risk and protective factors associated with internalizing symptoms in autism spectrum disorder: A scoping review, synthesis, and call for more research
- JAMES BARTOLOTTI, JOHN A. SWEENEY,  
AND MATTHEW W. MOSCONI **1273** Functional brain abnormalities associated with comorbid anxiety in autism spectrum disorder
- JAMES B. McCAULEY, REBECCA ELIAS,  
AND CATHERINE LORD **1287** Trajectories of co-occurring psychopathology symptoms in autism from late childhood to adulthood
- ANNA GUI, LUKE MASON, TEODORA GLIGA,  
ALEXANDRA HENDRY, JANNATH BEGUM ALI,  
GREG PASCO, ELIZABETH SHEPHARD,  
CHARLES CURTIS, TONY CHARMAN, MARK  
H. JOHNSON, EMMA MEABURN,  
EMILY J. H. JONES,  
AND THE BASIS-STAARS TEAM **1303** Look duration at the face as a developmental endophenotype: elucidating pathways to autism and ADHD
- MEGHAN MILLER, SHANE AUSTIN,  
ANA-MARIA IOSIF, LEIANA DE LA PAZ,  
ANNIE CHUANG, BURT HATCH,  
AND SALLY OZONOFF **1323** Shared and distinct developmental pathways to ASD and ADHD phenotypes among infants at familial risk
- JANE E. ROBERTS, JESSICA BRADSHAW,  
ELIZABETH WILL, ABIGAIL L. HOGAN,  
SAMUEL McQUILLIN, AND KIMBERLY HILLS **1335** Emergence and rate of autism in fragile X syndrome across the first years of life
- SANDY TRINH, ANNE ARNETT,  
EVANGELINE KURTZ-NELSON,  
JENNIFER BEIGHLEY, MARTA PICOTO,  
AND RAPHAEL BERNIER **1353** Transcriptional subtyping explains phenotypic variability in genetic subtypes of autism spectrum disorder
- MICHAEL S. GAFFREY, SARAH MARKERT,  
AND CHEN YU **1362** Social origins of self-regulated attention during infancy and their disruption in autism spectrum disorder: Implications for early intervention

*Regular Articles*

- EFSTATHIOS PAPACHRISTOU AND EIRINI FLOURI **1375** The codevelopment of internalizing symptoms, externalizing symptoms, and cognitive ability across childhood and adolescence
- RAHA HASSAN, HARRIET L. MACMILLAN, MASAKO TANAKA, AND LOUIS A. SCHMIDT **1390** Psychophysiological influences on personality trajectories in adolescent females exposed to child maltreatment
- STEFANIA A. BARZEVA, JENNIFER S. RICHARDS, WIM H. J. MEEUS, AND ALBERTINE J. OLDEHINKEL **1402** The social withdrawal and social anxiety feedback loop and the role of peer victimization and acceptance in the pathways
- ALISON GIOVANELLI, CHRISTINA F. MONDI, ARTHUR J. REYNOLDS, AND SUH-RUU OU **1418** Adverse childhood experiences: Mechanisms of risk and resilience in a longitudinal urban cohort
- SONYA NEGRIFE, ELANA B. GORDIS, ELIZABETH J. SUSMAN, KIHYUN KIM, MELISSA K. PECKINS, JANET U. SCHNEIDERMAN, AND FEROL E. MENNEN **1440** The Young Adolescent Project: A longitudinal study of the effects of maltreatment on adolescent development
- MICHAEL A. SKIBO, MELISSA L. STURGE-APPLE, AND JENNIFER H. SUOR **1460** Early experiences of insensitive caregiving and children's self-regulation: Vagal tone as a differential susceptibility factor
- ADRIENE M. BELTZ, ROBIN P. CORLEY, SALLY J. WADSWORTH, LISABETH F. DiLALLA, AND SHERI A. BERENBAUM **1473** Does puberty affect the development of behavior problems as a mediator, moderator, or unique predictor?
- JULIE R. HOYE, DAVID CHEISHVILI, HEATHER A. YARGER, TANIA L. ROTH, MOSHE SZYF, AND MARY DOZIER **1486** Preliminary indications that the Attachment and Biobehavioral Catch-up Intervention alters DNA methylation in maltreated children
- EVA H. TELZER, CARINA H. FOWLER, MEGAN M. DAVIS, AND KAREN D. RUDOLPH **1495** Hungry for inclusion: Exposure to peer victimization and heightened social monitoring in adolescent girls
- DEBRIELLE T. JACQUES, MELISSA L. STURGE-APPLE, PATRICK T. DAVIES, AND DANTE CICCETTI **1509** Maternal alcohol dependence and harsh caregiving across parenting contexts: The moderating role of child negative emotionality

- LUCIA MIRANDA REYES, JULIA JAEKEL,  
JANA KREPPNER, DIETER WOLKE,  
AND EDMUND SONUGA-BARKE
- 1524 A Comparison of the effects of preterm birth and institutional deprivation on child temperament
- MARÍA JOSÉ RODRIGO, INMACULADA LEÓN,  
LORNA GARCÍA-PENTÓN,  
JUAN ANDRÉS HERNÁNDEZ-CABRERA,  
AND ILEANA QUINONES
- 1534 Neglectful maternal caregiving involves altered brain volume in empathy-related areas
- ROCHELLE F. HENTGES,  
CHELSEA M. WEAVER KRUG,  
DANIEL S. SHAW, MELVIN N. WILSON,  
THOMAS J. DISHON,  
AND KATHRYN LEMERY-CHALFANT
- 1544 The long-term indirect effect of the early Family Check-Up intervention on adolescent internalizing and externalizing symptoms via inhibitory control