

50th Anniversary of *Developmental Psychobiology*

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Grant Newton, the first Editor-in-Chief of *Developmental Psychobiology*, opened his introductory editorial in March 1968 with this observation: “When a new area or emphasis in research begins to crystallize and shows signs of permanency, it is customarily graced with a journal.” Today, 50 years later, the journal lives on and we are honored to have been chosen to mark the occasion. Given the subject matter of this journal, we naturally looked back to its developmental origins. The first editorial board assembled by Newton and his Associate Editor, Gilbert Meier, was unusually expansive in its coverage of the burgeoning field: They apparently believed that the wide-ranging expertise represented on that board would be necessary to review the hoped-for articles that would “advance our understanding of how biological and behavioral factors blend in development to produce the myriad functional nuances characteristic of any complex organism.”

That first editorial board comprised a special group of people, from an embryologist whose work with chicks would later earn her a Nobel Prize (Rita Levi-Montalcini) to a psychologist who studied the behavior of ants and who helped lay the conceptual foundations for the field (T. C. Schneirla); from a husband-and-wife team of neuroanatomists (“The Scheibels,” Arnold and Madge) to a pioneering neurophysiologist who was a codiscoverer of the reticular activating system (Donald Lindsley); from a comparative psychologist who gained fame for his work on behavioral development in dogs (J. P. Scott) to the scientist most closely associated with the concept of “early enrichment” (Mark Rosenzweig); and from the “father of developmental neurology” (Heinz Precht) to—in the words of Jeffrey Alberts—the fathers of maternal behavior (Jay Rosenblatt and Howard Moltz). And, then there was the pair of investigators—Victor Denenberg and Seymour “Gig” Levine—whose seminal work on early experience, brain development, and stress pervades the field as we know it today, including many of the articles included in this special issue.

The 12 articles in that first issue of the journal were equally diverse in terms of the topics covered and the species used. Here is a sampling of titles: “Relationship of age at eye opening to first

optokinetic response in deermice”; “Free amino acids of newborn and adult guinea pig brain”; “Age differences in central nervous effects of visual deprivation in the dog”; “The photic sneeze reflex in the human newborn”; and—it was the late 1960s after all—“Effects of LSD on the sleep cycle of the developing kitten.”

The subjects in only 2 of those first 12 papers were human infants. In contrast, of the 12 articles published in a recent issue of the journal (Vol 61, Issue 1), 9 focused on humans. Some titles modernize the tradition that began in the first issue. For example, Kentner, Cyan, and Brummelte have contributed an article entitled “Resilience priming: Translational models for understanding resiliency and adaptation to early-life adversity.” Other papers extend the theme of early environmental impact, but in humans: For example, Michalska and Davis discuss the value of sociocultural processes for examining the psychobiology of emotional development; and Cuevas and Sheya consider the ontogeny of learning and memory from a biopsychosocial and dynamical systems perspective. Cuevas and Sheya also remind us of Carolyn Rovee-Collier’s appeal to “shift the focus from what to why,” allowing for an analysis of the function of infant behavior in emerging cognitive and social processes in each developmental ecological niche. Two additional papers consider how emergent behavioral processes shape social cognition. Specifically, Salo, Ferrari, and Fox review the state of the art in motor system development and action understanding in human and non-human primates; and Levine, Buchsbaum, Hirsh-Pasek, and Golinkoff consider the processes underlying complex event segmentation, including action predictability, and how this skill bootstraps social competence and language.

The apparent shifting balance in our field from animal to human research is attributable, in part, to the emergence of more sophisticated approaches for studying developmental psychobiology in humans. It is no accident, then, that many of our society members submitted abstracts that celebrate these methodological advances. In this golden anniversary issue are papers on biological assessments of chronic stress through hair and nail cortisol (Liu and Doan), on

the insights provided by studying the effects of early brain injury on long-term cognitive development (Demir-Lira, Goksun, and Aktan Erciyas), on new methodological and analytic approaches for studying the gut–brain axis and microbiome in the context of developmental science (Kelsey, Dreisbach, Alhusen, and Grossman), on the use of functional near infrared spectroscopy in awake behaving human infants (Bortfeld), and on the power of deep-learning architectures and automated sensing technologies for measuring complex human behaviors (de Barbaro).

This moment in the evolution of our relatively young society serves as an opportunity to revisit the important ways in which human and animal research continue to complement one another. Fully realizing the value of this complementary relationship requires that we understand the promise and the limits of translational science. This might be the single most critical factor for the future of developmental psychobiology. Watamura and Roth, in their contribution, suggest specific ways to improve translational specificity within the context of animal models of early life stress.

Finally, Barbara Finlay broadens the discussion of translation even further by placing our species within a proper comparative perspective, challenging the stubborn dogma that we humans are exceptional with respect to cortical and subcortical development and the timing of such critical early-life events as birth and weaning.

The articles that follow are not meant to be comprehensive. Instead, they provide a snapshot of where we are, have been, and are positioned to go. It is hard to know where the next 50 years will take us, but—if past is prologue—we expect that our field will continue to be at the forefront of unravelling the nuances of biobehavioral development.

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