Processes of Change in Brain and Cognitive Development
Attention and Performance XXI

Edited by
Yuko Munakata
Department of Psychology
University of Colorado at Boulder
Boulder, USA

and

Mark H. Johnson
Centre for Brain and Cognitive Development
School of Psychology
Birkbeck, University of London
London, UK

This book is based on the papers presented at the Twenty-First International Symposium on Attention and Performance held at Winter Park, Colorado, July 26–Aug 1, 2004.

OXFORD UNIVERSITY PRESS
Contents

The Attention and Performance Symposia  xiii
Authors and Participants   xv
Group Photograph   xxiv

Association lecture

1 Contrasting domains in the control of action:
The routine and the non-routine   3
Tim Shallice

Part 1 Learning mechanisms

2 How far can you go with Hebbian learning, and when
does it lead you astray?   33
James L. McClelland

3 Constructive learning in the modeling of psychological development   61
Thomas R. Shultz

4 Dynamically guided learning   87
Rebecca L. Gómez

5 Core mechanisms of word learning   111
Lori Markson

Part 2 Constraints on learning

6 Developmental constraints on or developmental
structure in brain evolution?   131
Barbara L. Finlay, Desmond Tak-Ming Cheung, and Richard B. Darlington

7 Under what conditions do infants detect continuity violations?   163
Renée Baillargeon, Jie Li, Yuyan Luo, and Su-hua Wang

8 The emergence of cognitive specialization in infancy: The case of face
preference   189
Francesca Simion, Chiara Turati, Eloisa Valenza, and Irene Leo
9 Age-related changes in infant memory retrieval: Implications for knowledge acquisition 209

Harlene Hayne

10 Learning how to be flexible with words 233

Kim Plunkett

11 Social learning and social cognition: The case for pedagogy 249

Gergely Csibra and György Gergely

12 Constraints on the acquisition of specialization for face processing 275

Isabel Gauthier

Part 3 Representational change

13 Different profiles of plasticity within human cognition 287

Helen J. Neville

14 Atypical representational change: Conditions for the emergence of atypical modularity 315

Michael S. C. Thomas and Fiona M. Richardson

15 A brand new ball game: Bayes net and neural net learning mechanisms in young children 349

Alison Gopnik and Clark Glymour

Part 4 Representational integration and dissociation

16 Modeling integration and dissociation in brain and cognitive development 375

Randall C. O'Reilly

17 Enhanced red/green color input to motion processing in infancy: Evidence for increasing dissociation of color and motion information during development 403

Karen R. Dobkins

18 When do 4-month-olds remember the ‘what’ and ‘where’ of hidden objects? 427

Denis Mareschal and Andrew J. Bremner

19 The infant as synesthete? 449

Daphne Maurer and Catherine J. Mondloch

20 The development of human conceptual representations: A case study 473

Susan Carey and Barbara W. Sarnecka
Part 5 What have we learned (or can we learn) from cognitive neuroscience about developmental change?

21 Species comparisons in development: The case of the geometric ‘module’ 499
   Lynn Nadel and Almut Hupbach

22 Learning about learning and development with modern imaging technology 513
   B. J. Casey, Dima Amso, and Matthew C. Davidson

23 Spatial cognitive development following early focal brain injury: Evidence for adaptive change in brain and cognition 535
   Joan Stiles, Brianna Paul, and John R. Hesselink

24 Modules, genes, and evolution: What have we learned from atypical development? 563
   Annette Karmiloff-Smith

25 Connectionist models in developmental cognitive neuroscience: Critical periods and the paradox of success 585
   Mark S. Seidenberg and Jason D. Zevin

26 Processes of change in brain and cognitive development: The final word 613
   Richard N. Aslin

Author Index 623
Subject Index 641