The Handbook of Children, Media, and Development

Handbooks in Communication and Media

This series aims to provide theoretically ambitious but accessible volumes devoted to the major fields and subfields within communication and media studies. Each volume sets out to ground and orientate the student through a broad range of specially commissioned chapters, and also to provide the more experienced scholar and teacher with a convenient and comprehensive overview of the latest trends and critical directions.

The Handbook of Children, Media, and Development, *edited by Sandra L. Calvert and Barbara J. Wilson*

Forthcoming
The Handbook of Rhetorical and Public Address, *edited by Shawn Parry-Giles*
The Handbook of Critical Intercultural Communication, *edited by Rona Halualani and Thomas Nakayama*
The Handbook of Internet Studies, *edited by Robert Burnett, Mia Consalvo, and Charles Ess*
The Handbook of Global Communication and Media Ethics, *edited by Robert Fortner and Mark Fackler*

The Handbook of Children, Media, and Development

Edited by

Sandra L. Calvert and Barbara J. Wilson

This edition first published 2008

Blackwell Publishing was acquired by John Wiley & Sons in February 2007. Blackwell's publishing program has been merged with Wiley's global Scientific, Technical, and Medical business to form Wiley-Blackwell.

Registered Office
John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom

Editorial Offices
350 Main Street, Malden, MA 02148-5020, USA
9600 Garsington Road, Oxford, OX4 2DQ, UK
The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

For details of our global editorial offices, for customer services, and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell.

Library of Congress Cataloging-in-Publication Data

The handbook of children, media, and development / edited by Sandra L. Calvert & Barbara J. Wilson.
p. cm.
Includes bibliographical references and index.
ISBN 978-1-4051-4417-9 (hardcover : alk. paper) 1. Mass media and children. 2. Child development. 3. Children's mass media. I. Calvert, Sandra L. II. Wilson, Barbara J.

HQ784.M3H26 2008
302.23083—dc22

2008009039

A catalogue record for this book is available from the British Library.

Set in 10/13pt Galliard by Graphicraft Limited, Hong Kong
Printed in Singapore by C.O.S. Printers Pte Ltd

01 2008

Dedicated to
Cheryl, Lee, and Mary Ann
and
John, Bob, and Joan

Contents

Notes on Editors and Contributors

Sandra L. Calvert is Chair and Professor of the Department of Psychology at Georgetown University and the Director of the Children's Digital Media Center (http://cdmc.georgetown.edu), a multi-site interdisciplinary research center funded by the National Science Foundation (2001–11; BCS-0126014 and BCS-0623871) and the Stuart Family Foundation. Dr Calvert authored *Children's Journeys through the Information Age* (1999), and co-edited *Children in the Digital Age: Influences of Electronic Media on Development* (2002). She has served on two committees for the National Academies, leading to two committee co-authored books: *Food Marketing to Children and Youth: Threat or Opportunity* (2006) and *Youth, Pornography, and the Internet* (2002). Dr Calvert, who received her doctorate in Developmental and Child Psychology from the University of Kansas, is a fellow of the American Psychological Association. She serves on advisory boards for Cable in the Classroom, PBS Kids Next Generation Media, and the Joan Ganz Cooney Center for Educational Media and Research. She provides technical assistance to Congress in the development of the Children and Media Research Advancement Act (CAMRA). She has also consulted for Nickelodeon Online, Sesame Workplace, *Blue's Clues*, and Out of the Blue Enterprises.

Barbara J. Wilson is the Paul C. Friedland Professorial Scholar and Head of the Department of Communication at the University of Illinois at Urbana-Champaign. Her research focuses on the social and psychological effects of the mass media, particularly on youth. She is co-author of *Children, Adolescents, and the Media* (2002; second edition, in press) and three book volumes of the *National Television Violence Study* (1997–8). In addition, she has published more than 60 scholarly articles and chapters on media effects and their implications for media policy. Recent projects focus on preschoolers' attachment to media characters, parents' and children's fright reactions to kidnapping stories in the news, and children's attraction to media violence. She has served as a research consultant for Nickelodeon, the National Association of Television Program Executives, Discovery Channel Pictures, and the Centers for Disease Control and Prevention.

Alison Alexander (PhD, Ohio State University) is Professor and Senior Associate Dean for academic affairs at the Grady College of Journalism and Mass Communication at the University of Georgia. She was editor of the *Journal of Broadcasting and Electronic Media*, and is past President of the Association for Communication Administration, and the Eastern Communication Association. Her work focuses on children and media. She is the author of numerous book chapters and journal articles, and the co-editor of four books. She was named the 1998 Frank Stanton Fellow by the International Radio and Television Society for "outstanding contribution to broadcast education."

Daniel R. Anderson received his PhD from Brown University and is Professor of Psychology at the University of Massachusetts at Amherst. He has published numerous research articles concerning children's use of television and its impact, especially the cognitive aspects (attention and comprehension while watching television, impact on intellectual development and school achievement). His current research concerns the impact of television on infants and toddlers. Professor Anderson has worked extensively with television networks and production companies concerning the development of educational television programs including *Sesame Street, Allegra's Window, Gullah Gullah Island, The Wubbulous World of Dr Seuss, Blue's Clues, Bear in the Big Blue House, Dora the Explorer, The Fimbles* (BBC), *Go, Diego Go, It's a Big Big World*, and *Super Why*. He serves on numerous advisory boards in organizations concerned with children and media.

Rachel Barr, PhD, is an Assistant Professor at Georgetown University. She is currently the Director of the Georgetown Early Learning Project studying how infants learn from television, computers, or books and how the home environment influences such learning. She received her PhD in developmental psychology from the University of Otago, New Zealand, and completed a post-doctoral fellowship at Rutgers University before moving to Georgetown University in 2001.

David S. Bickham, PhD, was trained at the Center for Research on Interactive Technology, Television, and Children at the University of Texas at Austin where he studied with Aletha Huston, John Wright, Ellen Wartella, and Elizabeth Vandewater. His work ranges from an examination of the effects of the television rating system on children's viewing preferences to an exploration of the academic outcomes linked to children's educational and non-educational media use. Currently, he is developing an integrated model of the social effects of exposure to violent and non-violent television and videogames.

Dina L. G. Borzekowski, (EdD, Harvard, 1994), is an internationally recognized expert in the area of children, media, and health. She is a faculty member at the Johns Hopkins Bloomberg School of Public Health in the Department of Health, Behavior and Society. Borzekowski's research involves studying how youth come to use media and how media has an impact on children and adolescents. Besides conducting high-quality research, Borzekowski takes pride in the

teaching and advising awards she has received in working with Hopkins students interested in Health Communication.

Amy Branner, PhD, received a BA in Sociology and Interdisciplinary Studies at the University of Missouri-Columbia under the guidance of Mary Jo Neitz and Peter Hall. She then moved to the Annenberg Public Policy Center where she worked with Larry Gross and Amy Jordan. She now serves as the Research Manager for the Children's Media Use Study, a collaborative project between RTI International and the Centers for Disease Control and Prevention which examines how to reduce media use and sedentary behaviors.

Jane D. Brown (PhD, Wisconsin-Madison, 1977), is the James L. Knight Professor in the School of Journalism and Mass Communication at the University of North Carolina at Chapel Hill. Her research focuses on the uses and effects of the media on adolescents' health, including early sexual activity, aggressive behavior, and tobacco and alcohol use. She is the co-author or co-editor of four books about the effects of the media on children and adolescents, including *Sexual Teens, Sexual Media* (2002).

Moniek Buijzen (PhD, 2003) is an Associate Professor in the Amsterdam School of Communications Research, ASCoR, at the University of Amsterdam. Her research interests include adult mediation of children's responses to the media, parent–child communication about consumer decisions, and the intended and unintended effects of advertising on children. In 2003 she received a prestigious three-year Veni award for talented junior researchers from the Dutch National Science Foundation (NWO). Buijzen has received several awards from the International Communication Association.

Alice Cahn is Vice President of Programming and Development for Cartoon Network daytime. Prior to joining Cartoon Network, she served as a Managing Director of the Markle Foundation where she headed the Interactive Media for Children Program. Cahn came to Markle from Children's Television Workshop (now Sesame Workshop) where she served as President of the Television, Film, and Video group. Prior to that, she was Director of Children's Programming at the Public Broadcasting Service (PBS). Cahn did her master's degree work in Educational Technology at San Francisco State University and holds a Bachelor of Science in Education from New York University.

Jennifer L. Chakroff (MA, Michigan State University) is a doctoral candidate in the School of Communication at The Ohio State University. Her research interests include the social and psychological effects of the mass media on children. In particular, she studies how parental mediation may mitigate the negative effects of television including the harmful effects of violent television and the unintended effects of advertising.

Hope M. Cummings is a graduate student in the Department of Communication Studies at the University of Michigan. Her research interest addresses the

relationships between media and technology and human development across the lifespan. She is a Rackham Merit Fellow and a member of the Research Center for Group Dynamics at the Institute for Social Research. She is currently working under the supervision of Elizabeth Vandewater at the University of Texas at Austin, L. Rowell Huesmann, and Brad Bushman.

Douglas A. Gentile, PhD, is a developmental psychologist, and is Assistant Professor of Psychology at Iowa State University and the Director of Research for the National Institute on Media and the Family. As the Director of the Media Research Laboratory at Iowa State University, he is one of the country's leading researchers of media's impacts on children and adults (both positive and negative). Dr Gentile has authored numerous studies and is the editor of the book *Media Violence and Children: A Complete Guide for Parents and Professionals* (2003) and co-author of the book *Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy* (2007). His research has been reported widely in outlets such as National Public Radio's *Morning Edition*, NBC's *Today Show*, the *New York Times, Washington Post, Los Angeles Times*, and *USA Today*. He received his doctorate in child psychology from the Institute of Child Development at the University of Minnesota.

Bradley S. Greenberg is University Distinguished Professor Emeritus of Communication and Telecommunication, Information Studies, and Media at Michigan State University. Dr Greenberg's research career has centered on the social effects of contemporary mass media on children, adolescents, and adults.

Patricia Greenfield received her PhD from Harvard University and is currently Professor of Psychology at UCLA, where she directs the FPR-UCLA Center for Culture, Brain, and Development and the UCLA site of the Children's Digital Media Center. Her central theoretical and research interest is in the relationship between culture and human development. She is a past recipient of the American Association for the Advancement of Science Award for Behavioral Science Research, and has received teaching awards from UCLA and the American Psychological Association. She has held fellowships at the Bunting Institute, Radcliffe College, the School of American Research, Santa Fe, and the Center for Advanced Study in the Behavioral Sciences, Stanford. Her books include *Mind and Media: The Effects of Television, Video Games, and Computers* (1984), which has been translated into nine languages. In the 1990s she co-edited (with R. R. Cocking) *Interacting with Video* (1996) and *Cross-Cultural Roots of Minority Child Development* (1994). She has done field research on child development, social change, and weaving apprenticeship in Chiapas, Mexico, since 1969. This cumulative work is presented in a book entitled *Weaving Generations Together* (2004). Her research program includes basic and applied cross-cultural projects in Los Angeles, as well as cross-species and neural investigations linking the ontogeny and phylogeny of cultural processes in language and cognition.

Kristen Harrison (PhD, University of Wisconsin-Madison) is Associate Professor in the Department of Communication at the University of Illinois at Urbana-Champaign. She studies mass communication processes and effects, with an emphasis on child and adolescent health. The bulk of her research explores the role of the media in shaping children's self-perceptions, body image, eating behaviors, and conceptions of nutrition.

Veronica Hefner (MA, University of Illinois, Urbana-Champaign) is a doctoral student studying mass communication processes and effects. She is particularly interested in exploring the intersection between media effects and interpersonal communication. She plans to devote her dissertation to the study of romantic-ideal media effects on young adults' romantic expectations and perceptions.

Cynthia Hoffner (PhD, University of Wisconsin-Madison) is an Associate Professor in the Department of Communication, Georgia State University. Her research focuses on media uses and effects. Specific research areas have included children's and adults' emotional reactions to media entertainment and news, parasocial attachments to media characters, and the third-person effect.

Stacey J. T. Hust (PhD. 2005, University of North Carolina at Chapel Hill) is Assistant Professor of Communication in the Edward R. Murrow School of Communication at Washington State University. Her research explores whether the mass media can be used for health promotion through strategies such as entertainment education and media advocacy. As a health communication scholar, Hust studies the media's effects on sexual and reproductive health and adolescents' alcohol, tobacco, and drug use. Her work has been published in *Journal of Health Communication, Health Communication, Journal of International Advertising, Women and Health Journal*, and *Mass Communication and Society.*

Aletha C. Huston is the Pricilla Pond Flawn Regents Professor of Child Development, the Co-Director of the Center for Research on Interactive Technology, Television, and Children (CRITC), and the Associate Director of the Population Research Center at the University of Texas at Austin. She currently specializes in understanding the effects of poverty on children and the impact of childcare and income support policies on children's development. She is a Principal Investigator in the New Hope Project, a study of the effects on children and families of parents' participation in a work-based program to reduce poverty, and collaborator in the Next Generation Project, a cross-study investigation of childcare, income, and employment effects of welfare and employment policies. She is an Investigator for the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development, a longitudinal study following a national sample of children from birth through middle childhood. Her books include *Children in Poverty: Child Development and Public Policy, Big World, Small Screen: The Role of Television in American Society*, and *Developmental Contexts of Middle Childhood: Bridges to Adolescence and Adulthood*. She is past President of the Society for Research in Child Development and has won numerous research awards, including the Urie Bronfenbrenner Award for Lifetime Contributions

to Developmental Psychology, the Nicholas Hobbs award for Research and Child Advocacy, and the SRCD award for contributions to Child Development and Public Policy.

Joah G. Iannotta is a Senior Policy Analyst in the US Government Accountability Office (GAO). Her work at GAO has covered a broad range of topics, including child welfare, national adoption policy, and transportation issues such as fuel economy standards. Prior to GAO, she was a Research Associate at the National Academy of Sciences and completed her PhD at the University of Minnesota. Iannotta completed her master's degree at Smith College and received a BA from Wesleyan University.

Terry Kalagian is president of Kalagian Productions, a US-based television and media consulting company. In this role, she assists both US and international entertainment companies in developing, acquiring, and producing new properties for both the children and non-children audience. Prior to this, she spent over 10 years with Cartoon Network US in varying capacities from heading up research to programming, scheduling, acquiring and co-producing for the network. Kalagian came to Cartoon Network with several years of agency and local television affiliate experience. Kalagian earned a Master of Business Administration degree from Fontbonne College and a Bachelor's degree in Business Administration from National University.

Heather L. Kirkorian received her PhD in Developmental Psychology from the University of Massachusetts at Amherst. Her dissertation was the first in a series of studies on children's eye movements during video viewing. Currently she is a post-doctoral fellow at the University of Massachusetts. Her research interests include young children's attention to and comprehension of video and the impact of television on cognitive development and parent–child interaction.

Catherine Lyon is a children's media development consultant in Alexandria, Virginia. Her clients include commercial and public broadcasters in the US and abroad. Previously, she was the Associate Director of Children's Programming at the Public Broadcasting Service. She holds a BA in Theology from Georgetown University and an MA in Applied Developmental Psychology from George Mason University.

Marie-Louise Mares is an Assistant Professor in the Department of Communication Arts at the University of Wisconsin-Madison. Her research interests focus on the interface between media and cognitive and socio-emotional development across the lifespan. With regard to children, she is interested in the role of comprehension in children's responses to prosocial television content.

Dana E. Mastro (PhD, Michigan State University) is an Associate Professor in the Department of Communication at the University of Arizona. Her research documents depictions of race/ethnicity in the media and assesses the extent to which exposure to these images influences stereotyping and racial/ethnic cognitions as well as a variety of intergroup and identity-based outcomes.

Emily J. Moyer-Guse is currently a PhD candidate in the Communication Department at the University of California, Santa Barbara. She received her MA in Communication at Michigan State University. Her research focuses on mass media effects on individuals, with a particular emphasis on youth and the cognitive, emotional, and developmental processes that underlie these effects. More specifically, she is interested in how young people's emotions, attitudes, health-risk behaviors, and well-being can be affected by the mass media.

Amy I. Nathanson (PhD, University of Wisconsin) is an Associate Professor of Communication at The Ohio State University. She studies the uses and effects of television among children. In particular, she investigates the role of parental mediation in mitigating some of the harmful effects of television on children. Her work has appeared in outlets such as *Communication Research, Human Communication Research, Journal of Broadcasting and Electronic Media, Journal of Communication*, and *Media Psychology*.

Edward Palmer is Wayne M. and Carolyn A. Watson Professor of Psychology at Davidson College. He has been a Visiting Scholar at Harvard University's Center for Research in Children's Television, UCLA, the University of North Carolina at Chapel Hill, the University of Exeter (United Kingdom), and the College of Communication at the University of Alabama. His professional works include *Children and the Faces of Television: Teaching, Violence, Selling* (with Aimee Dorr); *Children in the Cradle of Television*; *GRE: Psychology* (with Sharon Thompson-Schill); *Faces of Televisual Media: Teaching, Violence, Selling to Children* (with Brian Young); "Food and beverage marketing to children and youth: Trends and issues" (with Courtney Carpenter); and several other research articles and book chapters in the children's televisual media field. He served on the American Psychological Association's Task Force on Advertising and Children, authoring their report on commercialism in schools. He is a member of Phi Beta Kappa, the American Psychological Association, the American Psychological Society, Southeastern Psychological Association, and the Society for the Psychological Study of Social Issues.

Katherine M. Pieper (MA, University of Southern California) is a PhD candidate at the University of Southern California. Her research interests include the effects of the mass media on children and the use of media for health and social change. She currently works as a Partnership Coordinator for World Relief Cambodia.

Michael Rich, MD, MPH, is founder and Director of the Center on Media and Child Health at the Children's Hospital Boston. The Center pursues research, develops interventions on negative health effects of media, and creates health-positive media. Dr Rich is an Assistant Professor of Pediatrics at Harvard Medical School, Assistant Professor in Society, Human Development, and Health at the Harvard School of Public Health, and practices adolescent medicine at Children's Hospital Boston. As a leading pediatrician addressing the issue of media effects

on children's health, he has authored or co-authored four policy statements on that topic for the American Academy of Pediatrics, presented to decision-makers in the fields of media production and healthcare, and testified numerous times before the United States Congress, various state legislatures, and city governments. Dr Rich was honored by the Society for Adolescent Medicine with their New Investigator Award for developing Video Intervention/Prevention Assessment, which explores the illness experience through patient-created visual illness narratives. He also received the prestigious Holroyd-Sherry Award from the American Academy of Pediatrics for his contributions to children, adolescents, and the media.

Ronda Scantlin is an Assistant Professor in the Department of Communication at the University of Dayton, in Dayton, Ohio. Her teaching and scholarship focus on mass media effects, media policy, and family communication. One area of specialization includes examining how children and adolescents use media in their daily lives and how that use influences their development. Prior to holding the position at the University of Dayton, Scantlin completed a post-doctoral fellowship at the Annenberg Public Policy Center at the University of Pennsylvania, during which time she was a member of the research team examining the impact of V-Chip technology on dynamics within the family and on children's viewing. She received her BA in Psychology from Bethany College, MA in Human Development from the University of Kansas, and PhD in Child Development and Family Relationships from the University of Texas at Austin.

Marie Evans Schmidt, PhD, began studying the effects of media on children as an undergraduate at Georgetown University, where she worked with Sandra Calvert. After graduating magna cum laude from Georgetown with a BA in Psychology and English, she received a PhD in Developmental Psychology from the University of Massachusetts at Amherst, under the mentorship of Dan Anderson. She has served as an Assistant Professor of Cognitive Development at Hampshire College and as a consultant to Sesame Workshop. Her research interests include: preschoolers' understanding and use of symbolic media, the effects of television on infants and toddlers' cognitive development, how environmental factors like media exposure influence the development of attention in children, and the development of interventions on unhealthy media use by very young children.

Dorothy G. Singer is Senior Research Scientist, Department of Psychology, Yale University. She is also Co-Director, with Jerome L. Singer, of the Yale University Family Television Research and Consultation Center. An expert on early childhood development, television effects on youth, and parent training in imaginative play, she has written 20 books and over 150 articles. Dr Singer is a Fellow of the American Psychological Association (APA), and received the award for Distinguished Scientific Contributions to the Media by Division 46 of the APA in 2004. She received the Distinguished Alumni Award from Teachers College, Columbia University, in 2006.

Jerome L. Singer received his doctorate in Clinical Psychology from the University of Pennsylvania. He is Professor Emeritus of Psychology at Yale University, where he served for many years as Director of the Graduate Program in Clinical Psychology and also as Director of Graduate Studies in Psychology. Dr Singer has authored more than 270 technical articles on thought processes, imagery, personality, and psychotherapy as well as on children's play and the effects of television. He is a past President of the Eastern Psychological Association. He is also a past President of the APA Division of Personality and Social Psychology and the APA Division of Psychology of Aesthetics, Creativity, and the Arts.

Stacy L. Smith (PhD, University of California, Santa Barbara, 1999) is an Associate Professor of Entertainment at the Annenberg School for Communication at the University of Southern California. Her research interests include examining media content patterns and effects, with a particular focus on children and their understanding of and reactions to different types of messages (i.e., portrayals of violence, hypersexualization). She has published over 40 journal articles and book chapters, with her work appearing in the *Journal of Communication, Communication Research, Media Psychology*, and the *Journal of Broadcasting and Electronic Media*.

Victor C. Strasburger (MD, Harvard Medical School, 1975) is Professor of Pediatrics, Professor of Family and Community Medicine, and Chief of the Division of Adolescent Medicine at the University of New Mexico School of Medicine. He is the author of eight books and more than 120 peer-reviewed articles, reviews, and book chapters on adolescent medicine and effects of media on children and adolescents, including *Children, Adolescents, and the Media* (with Barbara Wilson and Amy Jordan, 2008).

Kaveri Subrahmanyam is a Professor of Psychology at California State University, Los Angeles, and the Associate Director of the Children's Digital Media Center at the UCLA site. She received her PhD in Developmental Psychology from UCLA in 1993. She studies youth and digital media and uses developmental theory to understand the effects of their interactions with these new media forms. She has examined a variety of digital media including computer/videogames and Internet communication forms such as chat rooms, blogs, and social networking sites. She is currently studying adolescent use of blogs and social networking sites such as MySpace and Facebook.

Tia Sullivan graduated from Furman University with a BS in Psychology. She was a recipient of the Furman Advantage Summer Research Fellowship and worked with Edward Palmer to investigate the child-based effects of prosocial media. She is a member of the Psi Chi and Alpha Epsilon Delta National Honor Societies and received a Psi Chi regional research award in May 2006 for her work on self-presentation. She currently works as a research assistant investigating public education in South Carolina for the Riley Institute's Center for Education Policy and Leadership. She also works as a counselor in a residential

treatment facility that encourages behavior modification among 6–13-year-old children.

Michael Robb is a doctoral student in Psychology at the University of California, Riverside. His research focuses on the impact of electronic media on very young children.

Patti M. Valkenburg is a Professor in the Amsterdam School of Communications Research, ASCoR, and Director of CAM, the center of research on Children, Adolescents, and the Media at the University of Amsterdam, http://www2.fmg.uva.nl/cam/. Her research interests include children's likes and dislikes of entertainment, their development as consumers, and the cognitive, emotional, and/or social effects of television, advertising, computer games, and the Internet on children and adolescents. In 2003, she received a five-year Vici award for talented senior researchers from the Dutch National Science Foundation (NWO) to form a research group and investigate the social implications of the Internet for children and adolescents.

Elizabeth A. Vandewater is Director of the Children and Media Research Center, Associate Director of the Population Research Center, and Associate Professor of Human Development and Family Sciences at the University of Texas at Austin. Her research interests include the impact of media and technology on children's health outcomes and health behaviors, particularly obesity. She is currently conducting research on the developmental linkages between media use and obesity across childhood and adolescence funded by the William T. Grant Foundation and the National Institute of Child Health and Human Development.

Ellen Wartella is the Executive Vice Chancellor and Provost and Distinguished Professor of Psychology at the University of California Riverside. Dr Wartella earned her PhD in Mass Communication from the University of Minnesota in 1977 and completed her post-doctoral research in development psychology in 1981 at the University of Kansas. Dr Wartella, a leading scholar of the role of media in children's development, was a Co-Principal Investigator on the National TV Violence Study (1995–8) and is currently Co-Principal Investigator of the Children's Digital Media Center project funded by the National Science Foundation (2001–11). She serves on the Kraft Food Global Health and Wellness Advisory Council, the Decade of Behavior National Advisory Board, the Board of Trustees of the Sesame Workshop, the National Educational Advisory Board of the Children's Advertising Review Unit of the Better Business Bureaus, and the National Academy of Sciences Board on Children Youth and Families. She recently served on the Institute of Medicine's Panel Study on Food Marketing and the Diets of Children and Youth (2006). She is a member of the American Psychological Association and the Society for Research in Child Development and she is a past President of the International Communication Association.

Brian Young is an economic psychologist in the School of Psychology at the University of Exeter. He has published extensively in the area of children and advertising with several books such as *Television Advertising and Children* (1990) and, most recently, *The Faces of Televisual Media: Teaching, Violence, Selling to Children* (co-edited with E. L. Palmer; 2nd edn., 2003). He has also published extensively in academic journals. He is the Editor of *Young Consumers* which covers economic and consumer socialization of children, and marketing to children. He teaches courses in developmental and consumer psychology to undergraduate and postgraduate students at the University of Exeter.

Foreword

Aletha C. Huston

Over the past 100 years, as Ellen Wartella and Michael Robb point out in this volume, scholars and social pundits have reacted to every new set of media with a mixture of panic and optimism about potential influences on children. Radio and film each generated some research and social commentary, but the advent of television in the 1950s ushered in a new level of media pervasiveness in children's lives and the first wave of solid, theoretically-based research on the topic. In the 1960s through the 1980s, psychologists and communication scholars forged a field that spanned disciplines as they examined the effects of both the formal features and content of the media that children were using several hours a day. In the last 15 or 20 years, media forms have proliferated, with new technologies transforming how children and adolescents use media as well as blurring the old distinctions among telephones, computers, television sets, radio, and records.

The chapters in this volume represent the state-of-the-art knowledge about young people's media use and the roles that media play in their lives. Despite the dramatic technological changes of the last several years, many of themes are familiar from earlier work. One of the fundamental tensions throughout the years has been form versus content. Some theorists have emphasized the importance of the qualities of the medium itself (e.g., visual versus auditory, interactive versus unidirectional); others have argued that content messages have similar effects across different forms of presentation. These questions about form and content remain central to the research presented in this book.

Many content issues are perennial and familiar, including the effects of violence, sexually explicit material, social stereotypes, and advertising on aggression, fear, imagination, and beliefs about the social world. The potential for positive effects of prosocial and educational content continues to be supported by evidence as well. Health concerns have increased considerably, as indicated by a whole section devoted to research on health effects, much of which is inspired by the obesity epidemic and societal awareness of the role of social influences on young people's health behavior. Chapters on attention and learning, cognitive processing of media

symbol systems, and learning from educational media have ancestors in earlier media research. In each case, the new work described here has advanced our understanding of the processes and issues involved, but the continuity with the past is nonetheless striking. These topics represent important, fundamental questions that form the core of efforts to understand young people's uses of media and the ways in which their thinking, behavior, and lives are influenced by those media.

In the past several years, media forms have expanded, proliferated, and morphed at a startling rate, opening up new uses and functions. Some of the most striking changes are the increase in user agency and control and the increasing opportunity for interactivity. Media devices are now small and portable, making them available for filling time while waiting in line, traveling from place to place, or just sitting. When television was the dominant entertainment medium, the viewer was exposed to a world "out there," whether it was fictional stories or real-life events. These functions have not disappeared, as evidenced by young people's devotion to favorite comedy and drama series, but the newer media offer opportunities for developing and expanding one's own internal identities and thoughts, interacting with individual friends or family, and interacting with groups in cyberspace. The chapter on parasocial and online relationships presents what we have learned about these functions. The Internet, cell phones, and text messaging have become integral parts of young people's social interactions, and we are just beginning to understand how such mediated relationships may or may not be similar to face-to-face interactions. The first wave of social commentary about these new media functions was predictable – fears about children being exposed to predators or exploitation through the Internet along with optimism about children being able to find compatible friends and activities across cyberspace, but the chapters in this book indicate that research has begun to move beyond such simplistic formulations.

Media studies of children have always straddled the boundaries between basic research on developmental processes on the one hand and policy and practice on the other. Many of the policy and practice issues have remained stubbornly similar over the years, in part because media are big business, particularly in the United States. The chapter on business models goes beyond the "bad" business image to consider a variety of modes for producing and distributing children's media. Several chapters on policy and interventions, however, remind us of some intractable issues, both old and new. It has long been clear that government regulation can play a minor role at best in protecting children from inappropriate content. Government has more potential to promote high-quality positive media content through requirements imposed on broadcasters (e.g., the Educational Children's Television Act) and through funding production, though neither of these options is used extensively in the United States, largely because of the absence of political will to do so.

Educating viewers in media literacy and related skills is one solution outside government, but our overall progress in maximizing the positive and minimizing the negative effects of media is discouraging. The reasons are undoubtedly

complex, but I believe that part of the problem is that, at some level, researchers and the public alike trivialize media. Although there is periodic public outrage about violence, sex, or Internet predators, most adults do not consider television and other media to be sufficiently serious that they are willing to modify their own use (e.g., to limit children's exposure) or to support the use of their tax dollars to alter the menu of content available. Both research and policy on media are in isolated silos. Discussions of poverty and children, for example, invoke a range of social contexts including family environments, neighborhoods, schools, childcare, and after-school programs, but virtually never mention media despite the fact that children in low-income families use television and other media extensively. Similarly, education policies focus on school climate and curriculum, family environments, access to libraries, and the like, but almost never include media – educational or otherwise. Media are important components of children's social ecology; their role could be understood and expanded if scholars and policy makers integrated them into these larger social discussions. Maybe the next handbook will contain some progress on this front.

In summary, this handbook represents the state of our current knowledge about media, demonstrating both how far we have come and how many questions remain. The authors are to be congratulated for a comprehensive and balanced presentation of theory, research, policy, and applied issues. It is an excellent source summarizing scholarship in depth in a readable form.

Acknowledgments

We gratefully thank the following people who gave generously of their time to make this handbook possible. Tiffany Pempek assisted us in organizing, proofing, and providing support in all phases needed to get the final materials completed. Samantha Goodrich, Yevdokiya Yermolayeva, Alexis Lauricella, Mary Katherine Ciccodicola, Lisa Alvy, Natasha Birnbaum, Joanne Hathaway, Catherine Lally, and Amber Hornick also worked on various tasks that assisted us as we completed this handbook.

Sandra L. Calvert
Barbara J. Wilson

Introduction: Media and Children's Development

Sandra L. Calvert and Barbara J. Wilson

From the beginnings of life, children in the twenty-first century typically develop in front of a screen (Wartella & Robb, Chapter 1). Once solely television based, these screen media have now evolved to be digital, interactive, pervasive, and increasingly under the control of those who use them. Media continue to advance rapidly, making it challenging for scholars to keep pace with the rate of adaptation and adoption of technologies in children's lives. This handbook is an effort to address the role of digital media in children's development at this point in time, and to place media in context with what we know from the past as well as what we expect as we look forward to the future.

In this handbook, experts in the interdisciplinary field of children and the media bring their diverse perspectives to bear on the range of topics associated with young people's media experiences. The handbook is divided into six sections. Part I addresses the historical and financial underpinnings of children's media. In Part II, access patterns as a function of viewer qualities and family constellations are considered. Part III focuses on the cognitive influences of media. Social influences of media are examined in Part IV. Media and health issues are the topic of Part V. We end with a discussion of media and policy issues in Part VI. Chapters are designed to be concise overviews of a rapidly changing field. Because so much of the research has strong interdisciplinary roots, our authors come from the fields of psychology, communication, health, and business. Each chapter brings major theoretical paradigms to bear on the literature, including uses and gratifications theory, social cognitive theory, cognitive developmental theory, cultivation theory, and social identity theory. Indeed, many theories can and have been used to understand the role that media play in children's development.

The empirical literature is rich in places, but sparse in others. Although there is a vast literature on how observational screen media affect preschool-aged children, how screen exposure affects the early development of infants and toddlers is a major source of controversy. Organizations such as the American Academy of Pediatrics recommend that very early development should be based solely

in experiences with live adults (Evans Schmidt et al., Chapter 22). Others, by contrast, argue that screen media, with their audio-visual representational devices, are ideally suited for how young children think in visual, iconic forms of thought (Subrahmanyam & Greenfield, Chapter 8). Still others find that background media content made for adults is detrimental to development (Kirkorian & Anderson, Chapter 9; Barr, Chapter 7), but that the verdict is still out on foreground programs made for a child audience (Barr, Chapter 7). One point is perfectly clear: screen media are now the normative experience in Western cultures, and there will be no turning back.

As each new cohort has emerged, time spent with media has increased. Indeed, media are now so pervasive that youth multitask as they divide their time and attention across many different windows and media simultaneously (Scantlin, Chapter 3).

Time spent with media, however, is only part of the story. Indeed, the content is the story, beginning with the cultural messages beamed into children's living rooms and learned within the context of the family (Alexander, Chapter 6). Content drives interest and it also drives the types of learning that take place for infants, children, and youth. Although toddlers have difficulty transferring the representations that they view on a screen to real-life situations, under certain circumstances even babies can imitate the behaviors that they see others perform on a screen (Barr, Chapter 7). For children, exposure to violent content involves harmful outcomes such as increased aggression (Wilson, Chapter 11), increased fear (Smith, Pieper, & Moyer-Guse, Chapter 10; Valkenburg & Buijzen, Chapter 15), and reductions in imagination (Singer & Singer, Chapter 13). Exposure to typical media content can also lead to increased stereotypical beliefs and behaviors (Greenberg & Mastro, Chapter 4; Hust & Brown, Chapter 5), increased obesity (Vandewater & Cummings, Chapter 16), and increased materialism (Young, Chapter 18). By contrast, exposure to prosocial content yields constructive outcomes like increased helping and sharing (Mares, Palmer, & Sullivan, Chapter 12), and exposure to educational content yields long-term cognitive benefits (Kirkorian & Anderson, Chapter 9). With development, children increasingly create their own online content through blogs, online diaries, social networks, and other digital forms of expression. Thus, the cultural stories created by others are increasingly displaced by each child's own unique story.

As digital devices become smaller and better integrated, cell phones and future iPods can serve as around-the-clock links to peers and families. As youth walk down the street or drive in their cars, they are connected to, and at home in, a digital world that they use to communicate with others, to explore who they are, and to play with one another in spaces that are not confined to the here and now. Music, television programs, and movies are downloaded and played on demand. Youth construct their own language systems, creating forms of Internet speak that allow them to communicate at the speed of talking while sending text messages or instant messages to one another through abbreviated language codes such as "u" for "you" and "brb" for "be right back" (Subrahmanyam & Greenfield,

Chapter 8). Although documented effects of newer digital media are emerging, much more research remains to be done in this area.

Who children are – that is, their personal and social identity – plays an important role in what they learn from media (Hoffner, Chapter 14). Gender, ethnicity, and age all influence what children take away from media experiences, in part because children tune into the characters they see and the people with whom they interact. Indeed, the very nature of relationships is shifting due to media experiences. For example, if children think they are interacting with a cartoon character, known as a parasocial interaction, does it influence them in the same way that face-to-face interactions do? If an adolescent pretends to be someone else online, even altering his or her own gender, does it change who that adolescent becomes? These are questions yet to be answered, but grappling with such issues is fundamental to our understanding of developmental outcomes in the twenty-first century.

Because media are such a pervasive aspect of children's daily lives, it is not surprising that there are serious health concerns surrounding this topic. The obesity epidemic that currently influences many youth and their families in Western cultures can be partly explained by media use, particularly exposure to advertising (Vandewater & Cummings, Chapter 16). Similarly, eating disorders are explained in part by exposure to very thin media models; in fact, youth can readily find groups to acerbate their eating problems via online websites that support anorexic behaviors (Harrison & Hefner, Chapter 17). Drug, tobacco, and alcohol exposure leads to addictive behaviors that can set a trajectory for lifelong health risks. Although there have been some government efforts to curtail exposure to media portrayals of alcohol, tobacco, and drugs, access to these substances via online websites remains readily available (Borzekowski & Strasburger, Chapter 19).

Government policies in the media area have made some progress in improving the media experiences of youth. The Children's Television Act, for instance, requires commercial broadcasters in the United States to provide educational and informational programming for children and also limits the amount of commercial advertising that can take place during children's television programming (Calvert, Chapter 20). Efforts have been made to control exposure to sexually explicit content, to advertisements of low nutritional foods, to advertisements of alcohol, tobacco, and drugs, and to violent content (Evans Schmidt et al., Chapter 22; Gentile, Chapter 23, Iannotta, Chapter 21). The US government, however, has been reluctant to create restrictive media policies, due to First Amendment issues that guarantee freedom of speech, or to finance children's programs; this reluctance has led to ongoing issues of who is willing to pay for quality content (Cahn, Kalagian, & Lyon, Chapter 2).

In the United States where First Amendment rights are a fundamental marker of our individual and collective freedom as a people, censorship is not a preferred mode for eliminating marginal content. Instead, media ratings systems that identify quality content and that mark problematic content have emerged to try to help parents monitor their children's media experiences (Gentile, Chapter 23).

Media literacy programs and parental mediation efforts also seem to benefit children by encouraging critical thinking skills (Chakroff & Nathanson, Chapter 24; Singer & Singer, Chapter 13). In fact, censorship no longer works in a world that is global and where inappropriate content – such as sexually explicit material – can simply move beyond national borders and be readily available via the Internet (Iannotta, Chapter 21).

Two major themes that permeate this handbook remain to be explored. In a world in which media fill the daily lives of our youth, a world in which media have gone from background to foreground experiences each and every day (Wartella & Robb, Chapter 1), why is there so little empirical research about the long-term effects of these mediated experiences on developmental outcomes? In addition, as we begin to differentiate beneficial content more clearly from that which is potentially harmful, why is there not more prosocial and educational material available for youth in the media landscape? These are the challenges that lay ahead as our children grow up in a "multidevice, multiplatform, multichannel world" (Carr, 2007).

References

Carr, D. (2007). Do they still want their MTV? *New York Times*, February 19. Retrieved April 3, 2007, from http://www.nytimes.com/2007/02/19/business/media/19carr.html?ex=1178683200&en=f925807ad304b5a6&ei=5070.

Part I

Historical, Conceptual, and Financial Underpinnings of Media