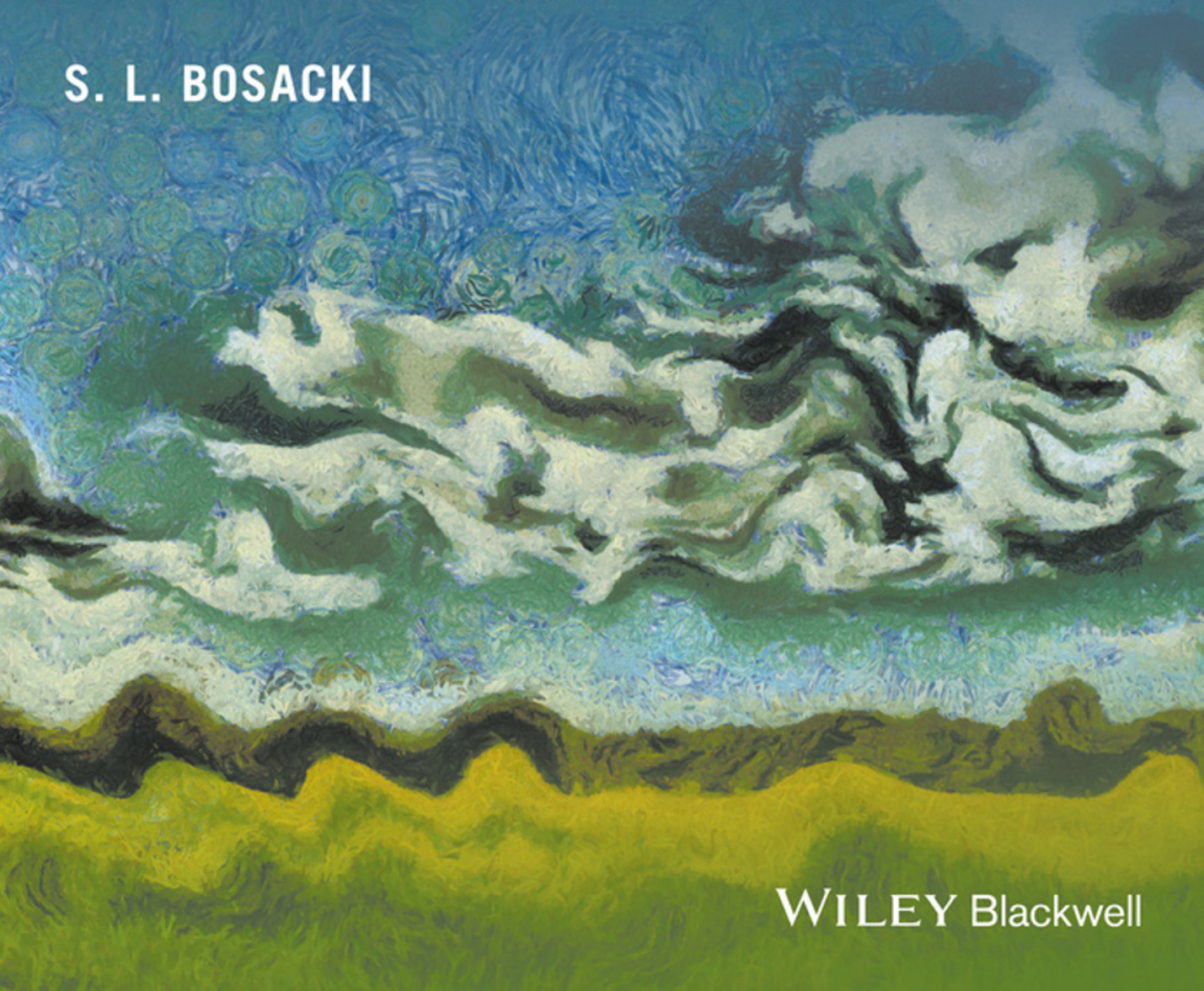


SOCIAL COGNITION IN MIDDLE CHILDHOOD AND ADOLESCENCE

INTEGRATING THE PERSONAL, SOCIAL,
AND EDUCATIONAL LIVES OF YOUNG PEOPLE

S. L. BOSACKI



WILEY Blackwell

Social Cognition in Middle Childhood and Adolescence

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Lives of Young People*

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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

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*In memory of my beloved late Mother, Ludmilla (Lucia) Olga Bosacki (née Szul)
who left us suddenly on February 28th, 2015. I exist because of her love.*

Her love taught me to share, help, and love others.

Contents

Preface	ix
Acknowledgments	xi
Introduction	1
Part I Foundations	13
1 Social Cognitive Abilities and School Experiences of Young People: Theory and Evidence	15
2 Developmental Social Cognition and Research Methodologies	34
Part II Social Cognitive Educational and Developmental Research: Self	55
3 The Cognitive Self: Language and Executive Functions	57
4 The Emotional Self: Self-Development and Emotional Regulation	82
5 The Moral Self: Morality, Spirituality, and Self-Development	109
Part III Social Cognitive Educational and Developmental Research: Social	133
6 Peer Relationships	135
7 Family Relationships	157
8 Gender and Culture	188
Part IV Ecologies of Social Cognitive Development	223
9 Digital Worlds and Social Media	225
10 Social Cognition and Behavioral and Emotional Challenges	248

Part V Future Questions and Implications for Practice: Helping Young People to Move Forward	277
11 Developmental Social Cognitive Pedagogy	279
12 Beyond Social Cognition	307
Conclusion: Closing Thoughts and New Questions	324
Index	328

Preface

As a developmentalist, I often see myself as a “developmentalist detective.” A kind of cautious, careful, meticulous and persistent researcher and explorer who is always searching to solve various puzzles of life. Why does this happen? Why did she feel that way? Why did he say that and what did he mean? Why did I say that? Why did I do that? Such personal questions have guided my thinking and provided my main motivation to dedicate my life to the exploration of why people do what they do and what are some of the reasons behind their actions—mostly involving their inner worlds.

As a child I often wished I could read others’ minds and I was always so grateful that no one could read mine. One of my main goals as a child and adolescent was to portray a mask of neutrality (always aiming for perfection), that would in no way provide clues as to what I was truly feeling in my heart and soul. I was too sensitive. My experiences as a youth have also motivated me to focus on the time period of middle childhood and early adolescence in my areas of research and teaching. Surprisingly, until the past decade, this age range of emerging adolescents or children approximately between the ages of 8 to 12 are often skipped over in the majority of developmental textbooks and research.

Although much work has now been done and continues to be done on this age range, there still remain large gaps in the literature and numerous unknowns or “puzzles”—a main impetus for this book. As an educator and scholar, I aim to provide a valuable source of critically reviewed research and suggestions for new directions regarding the area of social cognition in youth. That is, how do emerging adolescents make sense of their personal and social, moral, and educational worlds during the transition from late childhood to early adolescent years?

In sum—it is my aim as a developmental interventionist to provide you with an interesting and innovative read regarding cutting-edge research on the personal and social worlds of young people during late childhood and early adolescence. I hope this book inspires readers to continue to read critically like a detective—always asking what are the

missing pieces of the puzzle, where do they fit, how, and why. I encourage you to keep searching and never give up—and I invite you to join me on this journey through the “missing years” of youth. I hope you enjoy the adventure! I did, and continue to do so.

S. L. Bosacki, Hamilton, Ontario, January 20, 2015

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I wish to thank the schools within which I have conducted my past research studies on adolescents' thoughts and emotions over the years. I thank Fiona Blaikie and David Siegel, deans of the Faculty of Education, Brock University; Renee Kuchapski and Mary-Louise Vanderlee from the Department of Graduate and Undergraduate Studies in Education, Brock University, for their support of the book preparation process; and the Faculty of Education for their financial support of my communication with Wiley.

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Introduction

“You’re thinking about something, my dear, and that makes you forget to talk. I can’t tell you just now what the moral of that is, but I shall remember in a bit.” (Carroll, 1865/1984; p. 105)

Overview

The aim of this chapter is to provide the reader with a broad overview of the field of developmental social cognition, and a rationale for this book. In doing so, I touch upon some of the key issues that I will address in more depth later in the text. To provide the reader with a sense of what is to follow, in the closing section of this chapter I provide a concise overview of the structure and content of the book.

Rationale for the book

In general, this book focuses on some of the main questions of the personal, social, and educational lives of children as they approach adolescence. That is, how can we help young people grow emotionally and socially during the transition from later childhood to early adolescence? How can we encourage them to develop adaptive skills that will help them navigate their identity and relationships through the turbulent transition from approximately ages 7 or 8 to 12 or 13? Why is this important? What are the key issues and implications for children’s emotional health and educational lives? That is, how can educators and researchers draw on developmental theory and research to integrate the

emotional, cognitive, and social worlds of the child into the classroom, and develop innovative strategies for progressive educational practice?

Given the growth in research on developmental social cognition and emotion regulation, it is surprising that the majority of research in learning and development continues to focus largely on cognitive aspects. Challenging this dominant view, the proposed book discusses theoretical, empirical, and intervention issues relating to *emotional* and *social* aspects of emerging adolescents' educational experiences that may contribute to their broader emotional health and relationships. Drawing largely upon the social cognitive research field of Theory of Mind (ToM) or the ability to "read" others' mental states within the context of social action that allows us to grasp multiple perspectives and thus communicate effectively, I will explore young people's ability to understand or make meaning of human thoughts and feelings, and how such "psychological understanding" relates to their sense of self, peer relations, and sociocommunicative competence within the school setting.

Drawing on examples from recent research and findings from longitudinal studies on children's social cognition, the book will integrate emotional and social accounts of development during childhood and the transition to adolescence. In particular, this book will focus on the ambiguities and challenges young people experience as they navigate the uncharted waters of personal identity and relationships. The book will build on and move beyond traditional cognitive-developmental representations of how children and adolescents learn.

Specifically, the text will provide a critical analysis of cutting-edge empirical evidence from psychological studies, and then translate these research findings into practical suggestions for progressive education. The overriding aim of this book is to foster the growth of new ideas in developmental and educational psychology. Most importantly, this book aims to encourage innovative, forward-thinking strategies that will help young people to develop healthy minds and relationships in the classroom, community, and beyond.

Research has shown that the ability to make sense of the signs and symbols evident in human communication may influence children's self-conceptions and their social interactions in childhood and adolescence. The book will investigate which aspects of these experiences foster the growth of psychological understanding. That is, it will explore how young people understand mind, emotion, and spirit and use this ability to help them navigate their personal identity and relationships with the classroom. This book aims to bridge the gap between theory and practice within the fields of human development and education through a critical review of the literature from the perspective of a researcher and a practitioner.

In particular, this book will critically analyze empirical research evidence concerning aspects of adolescents' social and emotional worlds, including psychological understanding, self-conceptions, and peer relations, and then explore implications for educational practice. Unlike some books that focus either on theory and research or on education, this book seeks to integrate the two, encouraging educators and researchers to critically engage the two disciplines in an ongoing discourse. By combining research findings with real-world applications, the book aims to be of empirical, inspirational, and practical value to readers.

As one of the few existing books that examines social and emotional development during later childhood and early adolescence from a dual perspective of both research and practice, this book is targeted at a wide variety of researchers and educators that range from youth workers to academics. In particular, as the book explores the developmentally

appropriate needs of the “whole young person” in education, I hope that the topic will interest “developmental interventionists.” Given that the topics of cognition, spirituality, emotion, and education are of interest to educators across the globe, this book also aims to reflect the international scope of social cognitive developmental research.

What Is Social Cognition?

Social cognition research finds that most children between 5 and 8 years develop: (a) an understanding of self-conscious or complex emotions (e.g., pride, embarrassment); (b) complex self-understandings of people as psychological beings; (c) ideas about the nature of the divine, the concept of faith, and the meaning of prayer (Coles, 1990; Fowler, 1981); and (d) an understanding of ambiguity within social and personal contexts. Based on this research and our previous work, this book explores how children in late childhood and early adolescence use their understandings of mind to navigate their identity and relationships during the elementary to secondary school transition.

Why Is There So Little Research on Later Childhood and Early Adolescence?

Since the turn of the 21st century, the age-old debate of traditional, cognitive, and academic-focused versus more student-centered progressive education that recognizes the socioemotional and ethical aspects of learning (Malti & Krettenauer, 2013; Siegel, 2013) continues to remain somewhat contentious. Although there is a broad consensus among parents, educators, school administrators, academics, and community leaders that suggests schools need to help young people become productive, globally aware, and emotionally well citizens, at the same time there remains a group that suggests the main goal of education is to promote cognitive development and academic success. That is, although the majority of researchers and educators agree that young people need to learn how to share responsibility for nurturing social-emotional learning, character development, social engagement, and emotional health (Hughes & Devine, 2015; Neff, 2011), the disciplines of research and education have, until fairly recently, been focused on the cognitive aspects of learning.

Thus, many educators continue to face difficult choices about priorities between academic and socioemotional goals, and continue to be subjected to increasing pressure from policymakers regarding academic achievement (Goldstein & Winner, 2012). Given this demand, schools around the world have become highly demanding environments, and middle schools in particular may be vulnerable. That is, given that the middle-school grades include the student population that involves older children and emerging adolescents, past research suggests that this particular population has been associated with substantial academic and social stress and psychoemotional challenges among young adolescents (Siegel, 2013; Tough, 2012; Twenge, 2006, 2011; World Health Organization, 1999).

Past research shows that *juvenile transition*, or the transition between later childhood and early adolescence, involves simultaneous changes in school environments, social interactions, and academic expectations, and it coincides with other biological and social and emotional

changes associated with the transition from childhood to adolescence (Del Giudice, 2014). Past research from an evolutionary developmental approach claims that the transition encompasses all the major domains of behavior—from learning and self-regulation to attachment and sexuality. Moreover, this juvenile transition has been considered to represent a switch point in the development of life history strategies, which according to Del Giudice (2014) are coordinate suites of physiological, morphological, and behavioral traits that partly determine how organisms allocate their resources to key biological activities such as reproduction, growth, mating, and parenting. In particular, this approach claims that gonadarche and adrenarche are endocrinological events during which the adrenal glands are awakened, usually between the ages of 6 to 8 years when the adrenal glands begin to secrete increasing amounts of androgens, mainly dehydroepiandrosterone (DHEA).

According to this evolutionary developmental research, adrenal androgens have a relatively minor influence on a child's physical development, but more of a powerful influence on brain functioning, which has implications for social and cognitive development. According to recent research on pubertal changes in young children (Del Giudice, Angeleri, & Manera, 2009; Greenspan & Deardorff, 2014), gonadarche and adrenarche provide the foundation for the further hormonal changes in early adolescence (e.g., pubarche followed by menarche), and also coordinates the expression of individual differences in life history strategies through the integration of individual genetic variation with a child's social experiences and physical environment throughout infancy and early childhood (Belsky, Steinberg, & Draper, 1991). Similarly, the concept of differential or vantage susceptibility has also gained popularity and may help to explain why some children are framed as particularly sensitive (orchids) versus hardy (dandelions) to environmental context (Belsky & Pluess, 2009; Dobbs, 2009).

Despite this biomedical evolutionary developmental research on middle childhood and early adolescence, little is known about how the role of the environment, particularly the school environment and the transitions throughout grade school to later secondary school, plays a role in development (Greenspan & Deardorff, 2014). That is, how do environmental and biological and hormonal changes affect young people's social cognitive and emotional development during late childhood and early adolescence, including their abilities to cope adaptively with the physical, social, and emotional changes. Thus, building on these past studies, this book will discuss individual and developmental differences in the ways that older children and young adolescents develop within the social cognitive realm.

Understanding of the mind may grow from a foundation of understanding of emotions and develop in part through social relationships (Dunn, 2002). Few studies have examined these links beyond early childhood (Miller, 2012), and even fewer have explored emerging adolescents' understanding of social-emotional issues within the psychosocial context, and its role in understanding others' inner lives (Lopez, Driscoll, & Kistner, 2009; Siegel, 2013). Given the important role that mental state discourse plays in emotional, cognitive, spiritual, and social competence within the classroom (Amsterlaw, Lagatutta, & Meltzoff, 2009; de Rosnay & Hughes, 2006; de Rosnay, Fink, Begeer, Slaughter, & Peterson, 2014; Hughes, 2011), and the need to understand how the emerging adolescent mind and emotion connect (Damon, 2008; Larson, 2011; Siegel, 2013), this book addresses a much needed area of study. More specifically, this book is one of the first to unpack which aspects of these discourses foster the growth of understanding mind, spirit, and emotion within

late childhood and early adolescence. To provide a snapshot of the social cognitive landscape of young people, the following sections provide a brief outline of the theoretical and empirical foundations for the book.

What Can We Learn from Research on Social Cognition in Late Childhood and Early Adolescence?

Research on the understanding of mind, spirit, emotion, and morals

The development of the ability to represent and reason from second-order beliefs (two or more mental states) has received little attention during the childhood to adolescence transition. Surprisingly, given that this developmental transition affects our social-emotional experiences and our social cognitive abilities, little research explores how social communication depends mainly on what people believe about other people's beliefs during this developmental time (Hughes, 2011). For example, second-order or interpretive reasoning is important for children's and youths' ability to understand speech acts such as lies, jokes, sarcasm, and irony, as well as gestures (Filippova & Astington, 2008; Goldin-Meadow, 2014; O'Reilly, Peterson, & Wellman, 2014), moral and spiritual beliefs (Bosacki, 2013), and self-representational display rules (Banerjee, Watling, & Caputi, 2011). Such complex reasoning and its related skills continue to develop throughout the adolescent years until adulthood.

Research suggests that emerging adolescents' sense of identity may influence their developing sense of self, particularly ethnicity and gender (Lopez et al., 2009). Given that higher order social reasoning may help adolescents understand the ambiguous nature of personal and social silences (Bosacki, 2013), this book also explores how higher order reasoning may also play a fundamental role in adolescents' understanding of moral and spiritual beliefs, self-conscious moral emotions (e.g., embarrassment, pride), their sense of self and other persons, and social interactions. Recent evidence suggests that emotional understanding continues to develop during early adolescence and beyond, particularly the understanding of complex and ambiguous emotions (Lagatutta, 2014; Pons, Lawson, Harris, & de Rosnay, 2003; Pons, Harris, & de Rosnay, 2004). In contrast to simple emotions (e.g., happiness, sadness), to understand complex sociomoral emotions, children must hold in mind two separate pieces of information: other people's beliefs and societal norms (Saarni, 1999).

Older children and young adolescents may imagine how others judge their actions, and may self-evaluate their behavior against internalized or self-imposed behavioral standards. Thus, the moral imperatives derived from spiritual beliefs (e.g., honesty, beneficence) may also impact emerging adolescents' attitudes and behaviors that could lead to positive or negative self-adjustment. Although complex emotion understanding hinges partly on cognitive abilities such as second-order sociomoral reasoning and self-evaluation, to date no studies have investigated the links between these social and emotional abilities during the transition to adolescence (Larson, 2011). Accordingly, this book aims to discuss the emergence and development of mental state processing that may help young people to navigate the complex and ambiguous self-development and social relationship challenges across the transition from elementary school to high school.

Research on identity and relationships

Despite the theoretical connection linking ToM understanding and self-perceptions, including a sense of a spiritual self (Wellman, 2014), few studies have investigated the links among ToM, self-perceptions, and social interactions directly, especially developmentally across older childhood and adolescence (Wellman, 2014). In relation to ToM, no studies have looked at verbal or graphical self-representations, or other aspects of the self-system such as self-evaluation or self-agency, and self-compassion and care (Bruner, 1996; Neff, 2011; Neff & Germer, 2013). Although research supports positive links between emotional understanding and self-concept (Selman, 1980; Siegel, 2013), spirituality, positive emotional regulation and coping skills, and resilience (Aldwin, Park, Jeong, & Nath, 2014; Neff, 2011; Ream & Savin-Williams, 2003), some studies suggest that relations among ToM, self, and social and emotional competencies may not be uniformly positive (Bosacki, Bialecka-Pikul, & Spzak, 2015; Hughes, 2011).

These contradictory findings have inspired the examination of the complex connection between understanding of others' inner lives and self. Although social interactions and the understanding of complex emotions require second-order reasoning, these areas have been studied separately in the past. Despite the increasing number of studies on ToM and children's friendships and peer interactions, the majority of studies focus on young children (Bosacki, 2013; Miller, 2012; Walker, 2005), with a growing number of studies on older children and emerging adolescents (Banerjee, Watling, & Caputi, 2011; Bosacki, 2013; Bosacki & Astington, 1999; Devine & Hughes, 2013; Fink, Begeer, Hunt, & de Rosnay, 2014; Fink, Begeer, Peterson, Slaughter, & de Rosnay, 2015; Hughes & Devine, 2015).

Although past results suggest that a sophisticated ToM may be linked to greater social competence, it remains unclear as to what kind of role friendships and peer networks play. Yet, the extent to which moral and spiritual competence plays a role remains unexplored. This book extends the exploration of the associations of ToM, self-development, and social relationships during ambiguous or new social situations during the elementary to secondary school transition.

Research on diversity and social cognitive development

Although gender and cultural identity and gender-role orientation may influence young people's ability to understand the mental, emotional, social, moral, and spiritual lives of others, despite investigations of gender differences in sociocognition (Bilewicz, Mikolajczak, Kumagai, & Castano, 2010; Hyde, 2014), results remain contradictory and inconclusive. While some studies show girls to possess higher levels of ToM understanding and emotion understanding (Bosacki & Astington, 1999; Bosacki, 2013; Bosacki & Moore, 2004), others show boys to possess higher levels of emotion understanding, or no gender differences at all (Bosacki, 2015). Differences have also been found across cultures regarding ToM and self-concept in which Canadian youth were found to focus on the role of self in ToM, whereas Polish youth focused on the role of the

other (Bosacki, 2013). In sum, more research is needed in the area of gender and cultural diversity within the area of social cognitive development.

What Are the Educational Implications of this Research?

The unique contribution of this book is that it will systematically discuss and analyze how older children and early adolescents learn to understand more about others' thoughts and emotions and how they influence the way they think and feel about themselves and how they relate to others. More specifically, to discuss the emerging field of social cognition that explores ToM, self, and social relations across later childhood and early adolescence, this book will outline past and current research in this area and the implications for educational practice.

The ability to use ToM to help relate mental states to behaviors in others provides a framework to help explain and predict others' behaviors (Hughes, 2011; Wellman, 2014). Given the complex and ambiguous nature of the social and self experiences of older children and early adolescents in the school, interventions that strengthen ToM may serve as a valuable method to help youth develop sensitivity to social information and to develop control and a sense of responsibility over their personal and social lives. This ability to reason about the connections among mind, world, and behavior is important given the difficulties that some young people face when transitioning from elementary to secondary school.

Theoretically, this book illustrates the bidirectional patterns between intra- and interpersonal features of psychological understanding concurrently and longitudinally, and provides the most comprehensive discussion regarding psychological understanding in older children and early adolescents. Practically, the results will help to build positive youth developmental intervention programs and curricula that encourage the use of mental state talk to promote adolescents' sociocognitive and emotional competencies. Such abilities are also referred to as life history strategies or skills such as self-regulation and the development of supportive and caring relationships (Del Giudice, 2014).

This book will further the discourse on the psychological and social lives of young people (Bosacki, 2008; Goleman, 1995; Nelson, Henseler, & Plesa, 2000), and provide implications for practice. For example, some recommendations for practice discussed later in the book (see Chapter 11), include an empirically based framework for an integrated, developmentally appropriate curriculum aimed to foster inter- and intrapersonal competencies through critical enquiry and dialogue. Overall, this book aims to help educators to design and apply timely interventions to enhance emerging adolescents' emotional health and well-being over the course of school transitions.

The ability to understand mind, spirit, and emotion in school is foundational to older children and young adolescents' educational experiences, yet few have studied the influence of understanding mind in school success beyond the age of 7 or 8 (Bosacki, 2013; Devine & Hughes, 2013). Regarding academic competence, research suggests that ToM is associated with the production of stories and general language ability (Hughes, 2011). In addition, research suggests that children's ToM facilitates children's ability to self-monitor their cognitive process and engage in reflexive thinking and develop positive peer relations (Fink et al., 2014; Hughes, 2011).

Taken together, these claims suggest that understanding of mind is linked to higher-order thinking or more advanced mental state reasoning (Hughes, 2011). That is, emerging adolescents who possess high levels of psychological understanding may be more likely to think about their own and others' thinking and engage in critical philosophical enquiry and shared dialogue during the school day (Bruner, 1996). Given that teaching, learning, and relationships play a key role in understanding mind and self-development (Bruner, 1996), this book will explore how emerging adolescents' discourse about inner states including private speech, understanding of mind, spirit, and emotion play a role in the transition from elementary to secondary school (Siegel, 2013).

As I will explain within this book, programs that focus on social-emotional learning (SEL) have become increasingly popular across the globe over the past few decades (Humphrey, 2013). For example, the Roots of Empathy program in Canada is a universal social-emotional learning (SEL) elementary school (K-8) program that promotes specific skills such as empathy, compassion, and self-regulation with the aid of real-life examples, as caregivers and infants visit the classroom and lessons are worked on with the children in the classroom (Gordon, 2005; Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2012). Additional examples include various mindfulness programs (Schonert-Reichl et al., 2015), and recent neuroscience and educational programs (Pincham et al., 2014).

Such programs focus on a preventative approach that helps young people to acquire skills to assist them to develop healthy relationships with self and others, such as coping strategies and resilience. Although evaluative research findings of these programs as to how they improve learners' social-emotional competencies are mixed and are ongoing (Humphrey, 2013), the majority of past evaluations suggest that the majority of the programs are more helpful than harmful in young learners' social and emotional development.

The Structure of this Book

This book is divided into five main sections consisting of 12 chapters. Specifically, the book begins with an Introduction, followed by five conceptually organized sections, or "parts," that frame the 12 chapters on social cognitive development. The book ends with a conclusion. Each of the five "parts" represent a conceptual organizer containing two or three chapters that provide in-depth analysis of relevant topics on social cognitive development in late childhood and early adolescence. In the following paragraphs, I will outline the five organizing sections and their corresponding chapters.

Part I focuses on the conceptual foundations of social cognitive developmental research within later childhood and early adolescence. Part I contains two chapters, with the first chapter providing a critical overview of developmental and educational frameworks that aim to explain young people's social and emotional growth. In particular, Chapter 1 focuses on the definitions and theories of social cognition, and the social cognitive abilities and school experiences of youth. Chapter 2 highlights the importance of developmental research methods within the field of social cognition.

Parts II and III provide a critical overview of developmental social, cognitive research on the social cognition of self and others. The focus of Part II is the self, and each chapter

focuses on various aspects of the self in terms of cognition (Chapter 3), emotionality (Chapter 4), and morality (Chapter 5). Part III details past research on young people's social worlds that involve their relationships with peers (Chapter 6), family (Chapter 7), and issues of diversity such as gender and culture (Chapter 8).

Part IV explores how youth apply their social cognitive abilities to diverse social ecologies. Chapter 9 focuses on the importance of the digital world and social media navigation and habits. Chapter 10 highlights the social cognition research on the various behavioral and emotional challenges experienced by young people.

Part V focuses on future questions and implications for practice that aim to help young people to move forward toward a healthy and balanced life. This section will address key future questions for researchers and practitioners that include queries such as: "How do we work with youth to promote a wise and caring critical adolescent listener within the global cultural mosaic?" and "How can we help emerging adolescents to develop a healthy sense of self and relationships?" and finally, "How can we help young people to cope in healthy ways with growing diversity and technology?"

Chapter 11 expands on the connections between social cognitive developmental research and pedagogy, and includes social and emotional learning programs that promote emotional and social learning. Chapter 12 introduces topics that move beyond the category of social cognition through the exploration of nascent but promising areas of research. For example, Chapter 12 outlines research on young people's understanding of the complex moral emotions for self and other including compassion, gratitude, remorse, among others, and emotional sensitivities and internalizing challenges such as unsociability, and social anxiety. Finally, Chapter 12 concludes with a section on future research topics that are in need of further investigation.

Although I have only touched upon a selection of the fundamental issues that will be explored in the ensuing chapters, I hope that this brief introduction has convinced you of the need for a critical appraisal of the field of developmental social cognition. The organization of the text aims to provide a comprehensive coverage of the fundamental issues that pertain to social cognitive development during late childhood and early adolescence.

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Part I

Foundations

“...such beautiful, sacred memory, preserved from childhood, is perhaps the best education.” (Dostoevsky, 1990/1880, p. 774)

Section Overview

Based upon the assumption that children’s capacity to think about themselves and others both influences, and is influenced by, their social interactions and peer relationships (Wellman, 2014), I will discuss theoretical and empirical literature that supports plausible correlates of social cognitive development including (a) self-cognitions and emotions, and (b) social interactions and peer relationships. This book also addresses the need to examine gender and culture in the links among higher-order social reasoning, emotionality, spirituality, and social behavior. Within the context of a relational and developmental theoretical approach, the next two chapters will describe research studies on social cognition in late childhood and early adolescence. Chapter 1 provides a critical overview of developmental and educational frameworks that aim to explain social and emotional growth in young people. Building on theory and conceptual foundations, Chapter 2 will focus on research methods used to study advanced social cognitive skills such as Theory of Mind (ToM) in late childhood and early adolescence.

Social Cognitive Abilities and School Experiences of Young People

Theory and Evidence

“... education is a leading out what is already there in the pupil’s soul.” (Spark, 1962/2009, p. 36)

Introduction

This chapter provides a critical overview of developmental and educational theoretical frameworks that aim to explain social and emotional growth in young people. In addition, I will address the recent applied neurocognitive research’s interest in the transition between middle childhood and adolescence, and how this guides empirical research and neuroeducational programs.

Research

The maturation of social cognitive research

In the quarter-century that followed the first wave of developmental social cognitive science of the 1970s and 1980s, human resilience science has expanded and matured, becoming more global and multidisciplinary in scope. Advances in the measurement of genes and biological processes have also boosted research on the neurobiology of resilience. Models, methods, and findings have become more dynamic and more nuanced with a focus on multiple levels of analysis. And finally, as international and multicultural social cognitive research has gained traction, global perspectives on resilience have emerged and stimulated

the need to constantly review and refine developmental theory and research methods. Key changes are highlighted in the next section.

Resilience and social cognitive research in developmental science has deep roots in research and theory in child development, clinical sciences, and the study of individual differences (Luthar, Barkin, & Crossman, 2013; Masten, 2014a, 2014b). The history of research on resilience is closely tied to the history of developmental psychopathology (see Masten, 2014a; Moffitt, 2006), and the relational developmental systems theory (RDST) and evolutionary developmental systems theory that infuses this integrative approach to understanding variations in human adaptation over the life course (Del Giudice, 2014; Lerner, Lerner, Von Eye, Bowers, & Lewin-Bizan, 2011; Mueller, 2014; Overton, 2013).

Over the decades since the science on resilience in children began, the conceptualization of the construct grew more dynamic and reflected a broader systems transformation in developmental science (Lerner et al., 2011; Mueller, 2014; Zelazo & Lyons, 2012). This relational developmental systems framework (RDST; Overton, 2013) integrated ideas from developmental systems theory (Lerner et al., 2005), ecological-developmental systems theory (Bronfenbrenner & Morris, 2006; Del Giudice, 2014), family systems theory (Bretherton, 2010), biological systems (Kim & Sasaki, 2014), and developmental psychopathology (Cicchetti, Toth, & Handley, 2015; West-Eberhard, 2003). Contemporary systems models assume that many systems interact or “co-act” to shape the course of development, across levels of function, from the molecular to the macro levels of physical and sociocultural ecologies.

The resilience of an individual over the course of development depends on the function of complex adaptive systems that remain in constant interaction and transformation. As a result, the resilience of a person remains fluid and dynamic and enables an individual to remain flexible within, and adapt to, multiple interacting systems and contexts. Many of the widely observed protective factors for individual resilience in children reflect adaptive systems shaped by biological and cultural evolution (Del Giudice, 2014; Masten, 2014a, 2014b).

Research has suggested that protective factors that strengthen one’s emotional resilience include the development of close and secure attachment relationships, reward systems and mastery motivation, intelligence and executive functions, and forms of cultural belief systems and traditions including religion (Masten, 2014a, 2014b). Each of these adaptive systems are considered at various levels of analysis from multiple disciplinary perspectives, including anthropology, biology, ecology, economics, psychology, and sociology. Thus, overall, multilevel dynamics or processes that link levels of function within and across systems hold considerable interest in resilience theory.

For example, there remains great interest in the processes by which adversity is biologically embedded and mitigated (Kim & Sasaki, 2014); researchers are interested in how violence at the community level influences family function and thus may cascade to affect children (Main & Solomon, 1990). Other resilience researchers explore how good parenting influences the development of executive function skills in children at the neural and behavioral levels (e.g., Masten, 2014a).

In addition, research on environmental or ecological disasters underscore the interdependence of individual, family, and community systems, as well as biological, physical, and ecological systems across levels (Masten, 2014b). Large-scale catastrophic life events like

the 2006 hurricane in the United States, or the 2011 tsunami in Japan, challenge or may impair many adaptive systems simultaneously across large areas and groups of people. Consequently, recovery and growth can take some time, and adequate preparation for disasters usually requires an integrated perspective with consideration of multiple, interdependent systems.

Why emerging adolescence? Recently, the academic discourse of middle to late childhood and early adolescence has become increasingly complex and multivoiced (Blakemore & Mills, 2014; Del Giudice, 2014; Siegel, 2013). The assumptions that underlie the developmental period known as emerging adolescence help shape teaching practices, curricular decisions, and social roles. However, such discourse has the potential to construct “terministic screens” that may homogenize students, and may render many of their behaviors invisible to school personnel and researchers. As Burke (1990) explains, terministic screens work like multicolored photographic lenses to filter attention toward and away from a version of reality: “Even if any given terminology is a reflection of reality, by its very nature as a terminology it must be a selection of reality; and to this extent it must function also as a deflection of reality” (p. 1035).

Researchers have suggested that in addition to biological and physical changes such as adrenarche (Del Giudice, Angeleri, & Manera, 2009; Geary, 2010), students’ gender stereotypic beliefs may also help explain gender differences in academic self-belief (Bosacki, 2015) and peer relations (Hughes & Devine, 2015). However, given the complexity of the social world of older children and emerging adolescents, research on why girls and boys may view self-confidence and competencies in multiple contexts through different lens remains sparse (Rose & Rudolph, 2006). For example, recent findings suggest that stereotypic gender-role and cultural expectations may influence emerging adolescents’ developing sense of self and their social relations. Furthermore, the lack of attention on sociocultural issues in developmental social cognitive science advocates the need for the exploration of sociocultural influences such as race, ethnicity, and gender (Hyde, 2014). In Chapter 8 I will discuss the role of gender and culture in social cognitive development among emerging adolescents.

Why is social cognitive development in emerging adolescence special? Over the past decade, psychoeducational research has come to envision older children and adolescents as interpretive psychologists who depend upon a mentalistic construal of reality to make sense of their social world (Blakemore & Mills, 2014; Bruner, 1996). This psychocultural approach to education provides a new framework in which to investigate the phenomenon of adolescents’ social understanding or social cognition, including studies that explore: “theories of mind” (Astington, 1993; Byom & Mutlu, 2013), various aspects of the “self” (Harter, 1999; Marshall, Parker, Ciarrochi, & Heaven, 2014), and how these areas of social reasoning are connected to social behavior. Although there is a growing body of evidence to show that a positive link exists between social cognitive thought and social action (Hughes, 2011; Laible, McGinley, Carlo, Augustine, & Murphy, 2014), few studies have examined such a link in children beyond the early school-age years (Devine & Hughes, 2013). Given these past findings with younger children, it can be expected that such links may also exist between social cognitive thought and behavior among emerging adolescents.

Despite the fact that the school is a complex social institution that provides a data-rich environment in which to explore how young adolescents' make sense of their social world, little is known about the role that social cognitive processes play in self-development and social relations within the school context (Eccles & Roeser, 2003; Hughes, 2011). Given that schools are formal organizations and have their own characteristics (values, activities, rituals, norms), the school as a culture can have an influence on all aspects of adolescents' development. As Bruner (1996) states, viewed as a "culture," schools can create an atmosphere or climate that can either promote or impede self-expression, cognitive and emotional growth, and self-compassion.

A psychocultural and relational developmental systems approach to social understanding focuses on emerging adolescents' ability to recognize themselves and other people as psychological beings. It can draw on various social cognitive and epistemological theories and research (Selman, 1980; Tomasello, 2014a, 2014b), and may shed some light on the wealth of findings from psychosocial studies that show a significant drop in self-worth and an increase in reflection and self-conscious emotions approximately between the ages of 10 to 12 (Harter, 1999; Rochat, 2009). Similarly, there is substantial evidence of declines in academic motivation, attachment to school, and academic achievement across the emerging adolescence years (approximately ages 10 to 13 or 14) (Eccles & Roeser, 2003; Simmons & Blyth, 1987). Such developments can have a direct influence on adolescents' inner world, and how they choose to express themselves. In other words, schools have an important impact on how adolescents choose to "voice" their thoughts and avoid being silent.

Given the complexities surrounding the emerging adolescent experience (both personal and social), the adolescent personal fable has often been discussed in negative terms because of its potentially self-harmful consequences. That is, some risk-taking older children and adolescents may believe that they are immune to social and emotional problems experienced by others (Blakemore & Mills, 2014; Elkind, 1967; Finy, Bresin, Korol, & Verona, 2014). As a result, they may tend to disregard natural physical limitations, sometimes even the permanence of death. Moreover, such beliefs of infallibility may lead to the engagement of risk-taking behaviors (e.g., driving while inebriated or texting, engagement in extreme risk sports).

The personal fable, however, may also have protective value against suicidal, self-harming, and depressive behavior. For example, Cole (1989) found that adolescents who endorsed optimistic views of the future and life-affirming values were less likely to resort to suicidal thoughts or behavior. Cole hypothesized that adolescents who have a strong sense of their own invulnerability, and who do not see themselves as possible targets for silencing, nor feel the need to silence their own voices, will likely see themselves as capable of effectively coping with life challenges. Thus, Cole supports the idea that aspects of the adolescent personal fable may act as a buffer against suicidal thoughts and behavior (Larson, 2011).

In contrast, sometimes impulsivity, fueled by the belief of invincibility and coupled with a failure to recognize one's own limitation, has the potential to lead the young person who feels alienated from parent, family, and peers. Such impulsive tendencies may also lead the youth to develop self-critical, punitive, and cruel thoughts and perhaps attempt self-harmful behaviors such as suicide (Nock, Prinstein, & Sterba, 2009). For example, the report on adolescent suicide formulated by the Group for the Advancement of

Psychiatry (1996) suggested that the changes that characterize late childhood and early adolescence may leave some young people at risk.

A heightened sense of self-consciousness, fluctuating levels of self-esteem and incoherent, unstable sense of self, and a degree of impulsivity may set the stage for the development of future social and emotional difficulties such as conduct and impulse challenges (Del Giudice et al., 2009), and anxiety and internalizing or self-harm tendencies (Brinthaup, Hein, & Kramer, 2009). The developmental characteristics may place particular youth at a heightened risk for an inappropriate response to stress under the most optimal or ideal circumstances. (Larson, 2011; Rose, 2014; Siegel, 2013). Even a relatively minor perceived loss or rejection or disappointment in oneself has the potential to trigger self-destructive urges and thoughts, which can lead to self-silencing, self-alienation, and self-harm (Callan, Kay, & Dawtry, 2014).

Later childhood and early adolescence is also a special time when many youth establish a degree of autonomy from their family and take significant steps in personal identity formation. At the same time, peer relationships become increasingly important. Family and peers may have positive and negative consequences for a young person's private speech and experiences of social silences. In the cases where emerging adolescents do not feel comfortable to voice their own opinions, they may distance themselves from their friends and families.

Also, given North America's relatively age-stratified society, emerging adolescents and their peers may interact within a social milieu that may not be a positive source of support (Blakemore & Mills, 2014; Robbins, 1998). Thus, emerging adolescents may feel that their personal voice is silenced and not valued by their family or peers, which, in turn, may lead to greater self-silencing, and consequent social and emotional challenges such as depression, self-harming behavior, or aggressive and impulsive behaviors (Del Giudice, 2014; Larson, 2011; Nock, 2009; Nock et al., 2009).

Social cognitive research: Theory of mind

Over the past decade, social cognitive research has increasingly come to envision the child as an interpretative psychologist (Astington & Olson, 1995; Tomasello, 2014a). That is, this research approach views the child as an intersubjective theorist (Bruner, 1996); one who depends on a mentalistic construal of reality to make sense of the social world. Based on the collective works of various social constructivists (Gergen & Walhrus, 2001; Tomasello, 2014b; see Harter, 1999 for review), and symbolic-interactionists (Mead, 1934; see Bruner, 1996), such an approach proposes that children come to understand or make meaning from their experiences guided by the tenets of relativism, constructivism, narrative and self-agency. Moreover, the Vygotskian notion that cognitive growth stems from social interaction is congruent with humanistic and psychobiological-cultural approaches to development (Bruner, 1996; Rochat, 2009).

Also referred to as a psychocultural or social ecological developmental approach (Bronfenbrenner & Morris, 2006; Sternberg, 2014; Tomasello, 2014a), this approach draws on various theories that assume children create and then rely on both emotional and cognitive structures to make sense of the world (Del Giudice et al., 2009; Piaget,

1967/1929; Rochat, 2009). Such an integrative approach may assist researchers to answer the increasingly common question of how children come to make meaning from their social experiences and eventually become “socio-emotionally literate” or socially intelligent (Goleman, 1995). Thus, the larger question becomes which conceptual framework can provide a unifying developmental theory that emphasizes the interactions among thought, emotion, and action in emerging adolescents?

In search of such a theory, developmental social scientists continue to investigate the social cognitive underpinnings of young people’s ability to understand the social and personal world. The main goal of such research is to find a theory that will assist in their exploration of how children acquire the knowledge that others are thinking and feeling beings. Accordingly, over the past three decades, many researchers have approached the area of social cognition from what is referred to as a “Theory of Mind” (ToM) perspective. This unique way of viewing social understanding has also been referred to as folk psychology, commonsense psychology, or belief-desire reasoning (Apperly, 2012; Bjorklund & Ellis, 2014; Byom & Mutlu, 2014).

A ToM perspective on social cognitive development is unique in that it is founded on the premise that all humans are folk or commonsense psychologists. That is, humans understand social information by means of ascribing mental states to others and thinking that overt behavior is governed by these states. This ability to “read” others’ minds, and to predict how people will act in social situations, focuses on the understanding of mental states such as beliefs, desires, and intentions (Devine & Hughes, 2014; Hughes, 2011; Ruffman, 2014).

More specifically, to understand social behavior, children must first understand mental representation. That is, they must understand that there is a difference between thoughts in the mind and things in the world (Astington, 1993). The inference of mental states from people’s actions enables children learn to understand that minds are active and contain mental states that can bring about events in the world. Thus, the same world can be experienced in different ways by different people. Each person may have a distinctive belief about reality.

A ToM approach to social cognition claims that a largely implicit conceptual framework with intentional elements allows us to understand, explain, and predict our own and other people’s behavior and mental states (Blakemore & Mills, 2014; Ruffman, 2014). Consistent with this view is the assumption that this mentalizing ability allows children to make sense of social behavior by ascribing desires and intentions to others’ actions for the specific purpose of regulating their interactions with others (Tomasello, 2014a). Moreover, research suggests that the ability to recognize, represent, and understand others’ thoughts and emotions in early childhood provides the social cognitive foundation for the later development of social and emotional competency (Rochat, 2009).

Interestingly, although the interest in the development of folk psychology has been paralleled by an interest in the social cognitive processes of the adolescent (Larson, 2011; Siegel, 2013), the two research areas have failed to connect. Perhaps the greatest impediment that has prevented researchers from adapting a ToM approach to social cognitive development beyond early childhood has been the lack of conceptual and methodological agreement among ToM theorists. Examples of some of the ongoing conceptual debates include the argument of how exactly a “Theory of Mind” develops beyond preschool, and what exactly *are* the processes or systems that develop (Apperly, 2012; Devine & Hughes, 2014)?

Although ToM research could enrich investigations of social cognition in older children and adolescence, particularly in the areas of self-concept (Wellman, 2014), perspective-taking (both affective and cognitive) (Hughes, 2011), and person perception (Bosacki & Astington, 1999), the two research areas (ToM and developmental social cognitive research including social information-processing; Dodge, 1986), have now started to collaborate and build on each other's findings (Ibanez et al., 2013; Lagattuta, 2014; Lagattuta, Nucci, & Bosacki, 2010).

Given that ToM understanding, or the ability to "read" others' mental states within the context of social action, can also be referred to as psychological understanding (Bruner, 1996) this ability enables children to understand multiple perspectives and to communicate with others (Nelson, Henseler, & Plesa, 2000). Recent research in children's ToM shows that, by age 5, children begin to understand that people have desires that lead them to actions, and that these actions are based on beliefs. Beyond the age of 5, however, little is known about the links between psychological understanding and social experience (Lagattuta, 2014).

Given that children who possess an advanced psychological understanding are more likely to think about their own and others' thinking during the school day, such an ability has important educational implications (Pincham et al., 2014). For example, recent research shows that this ability to make a meaningful story out of people's thoughts and actions plays a role in self-regulated learning and language competence such as storytelling. Moreover, research has shown that the ability to "read others," or to make sense of the signs and symbols evident in human communication, has an influence on children's self-conceptions and their social interactions.

Emerging adolescents' theories of mind: A case for complexity

Despite the claim that late childhood and early adolescence is a pivotal time in many areas of social cognitive development including cognitive reflexivity (Piaget, 1929), self-concept formation (e.g., Erikson, 1968; Harter, 1999), and interpersonal relations (e.g., Rosenberg, 1965; Selman, 1980), a relational developmental systems approach to help explain the links among these social cognitive areas remains to be taken. This inquiry promotes a better understanding of the two main tasks of later childhood and adolescence which are: (1) the intrapersonal task of constructing a coherent psychosocial identity (Erikson, 1968; Larson, 2011), and (2) the interpersonal task of understanding the multiple and contradictory intentions of others, allowing judgments to be made in an uncertain and ambiguous world (Bosacki, 2012). Thus, drawing on various social cognitive (Selman, 1980) and epistemological theories and research (Wellman, 2014), a folk psychological approach to social cognition may help to illustrate the linkages among the understanding of mental states in others, self-concept, and social relations.

Past research studies have focused mainly on the aspect of children's ToM development which involves their recognition of false belief (Wimmer & Perner, 1983). Around 4 years of age, children understand that people act on their representation of the world, even in situations where it misrepresents the real situation. That is, at this age children can represent and reason from people's first-order beliefs (one mental state): X believes p. From as young